



## Company Profile:

Sunkye International Co., Limited.(Connector) Business Group, with sixty five years of experience, specializes in designing and producing connectors, related components and cables. A wide range of connector products, twist pin connector, optical fiber connector, RF coaxial connector, separable connector, custom and application-

# *Company profile*

specific connector, etc, which are widely used in military area: aerospace, aviation, electrical, ship-building, defense system, etc and civil area: communication, telecom, automotive, rail, etc.

Design team focuses on meeting customers' requirement with continuous innovative technology, manufacture team provides high quality products by utilizing advanced equipments in standardized processes to ensure customers' benefits.

Sunkye is ISO 9001 certified, UL, VDE, CE certification passed, and ensures products quality by testing in realistic conditions with advanced test facilities, professional test employees.

Sunkye team is committed to offering high quality products, best service, prompt delivery and competitive price for you.



## Manufacture Equipment:

Five-Axis CNC, AGIE EDM, SODICK WEDM-LS, 40G Vector Network Analyzers, Vacuum Heat Treatment Equipment, Glass-sintered System, Laser Processing Center, High Velocity Ram Machine, Gold, Nickel and Cadmium Plating Production Line, Thermosetting Injection Machine, Thermoplastic Injection Machine, Swiss Automatic Lathe, etc.

## Test Facilities:

Comprehensive Test Instrument of Temperature, Humidity and Vibration; Experimental Box of Temperature and Shock; layer thickness meter; Coordinate Measurement Machine, etc.





MIL-DTL-32139 Nano D-sub connectors

**SUNKYE**



# CONTENT



## **MIL-DTL-32139 Nano D-sub connectors**

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# MIL-DTL-32139 Nano D-sub Connectors

## R06 Right Angle to PCB Series

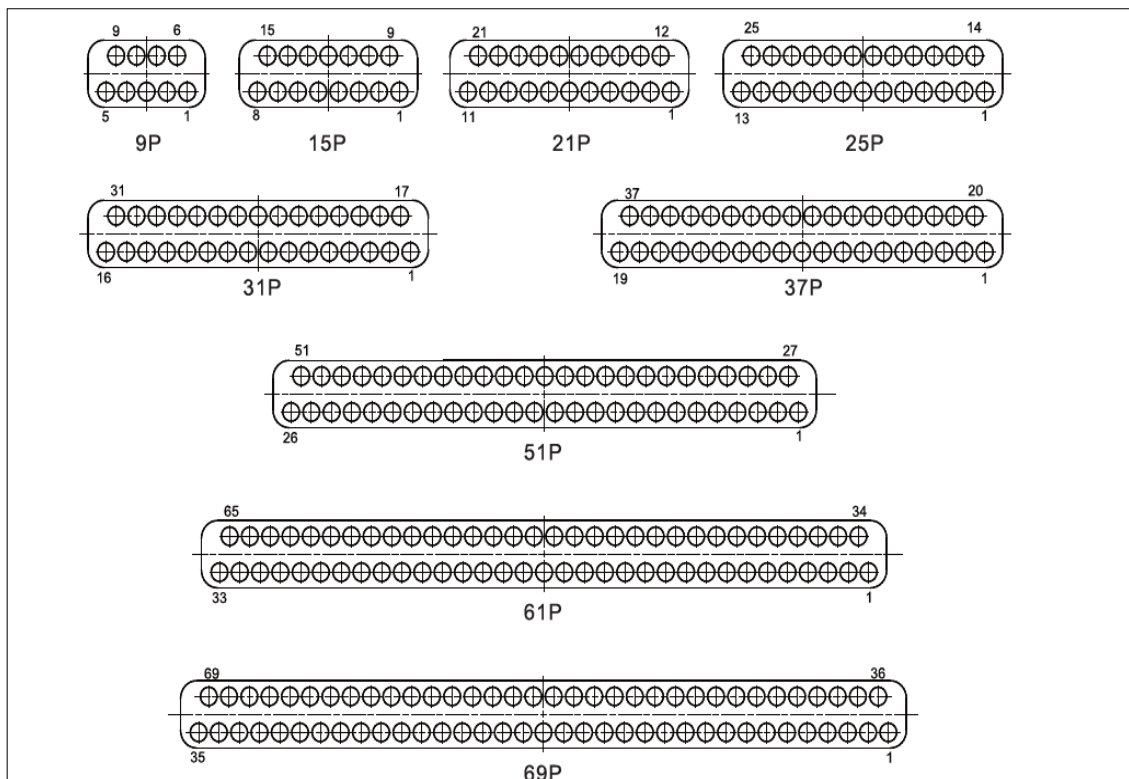
### Brief introduction

- Contacts:9,15,21,25,31,37,51,65,69
- Twist flexible micro pin (twist pin), 0.635mm pitch, micro miniature outline dimension
- Screw nut locking, it is gently when insert and extract, stably locked
- It is used for all kinds for electric circuit system interconnection which have high density, micro, light, highly reliable requirement, it can meet light and miniaturize demand
- Plug with twist pin, receptacle with socket, free terminal with locking screw, fixed terminal with nut, standard mated connector locked by screw and nut
- Standard: MIL-DTL-32139
- Undefined tolerance is $\pm 0.13$

### Specification

- |                     |   |                          |                                  |
|---------------------|---|--------------------------|----------------------------------|
| ■ Environment:      | -55°C~+125°C  | ■ Contact resistance:    | $\leq 21\text{m}\Omega$          |
| ■ Vibration:        | 10Hz~2000Hz 196m/s <sup>2</sup>   | ■ Insulation resistance: | $\geq 5000\text{M}\Omega$ 100VDC |
| ■ Shock:            | 980m/s <sup>2</sup> 6ms   | ■ Dielectric strength:   | 250V                             |
| ■ Rated current:    | 1A  | ■ Machine life:          | 200 times                        |
| ■ Random vibration: | power spectrum density 0.4G <sup>2</sup> /Hz, r.m.s value of total acceleration 23.1G |                          |                                  |

### Contact layout


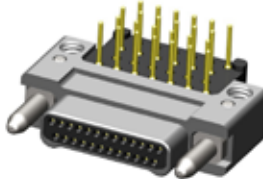


Remark: The above layout is view from plug mate side end face



# R06 Right Angle to PCB Plug Series

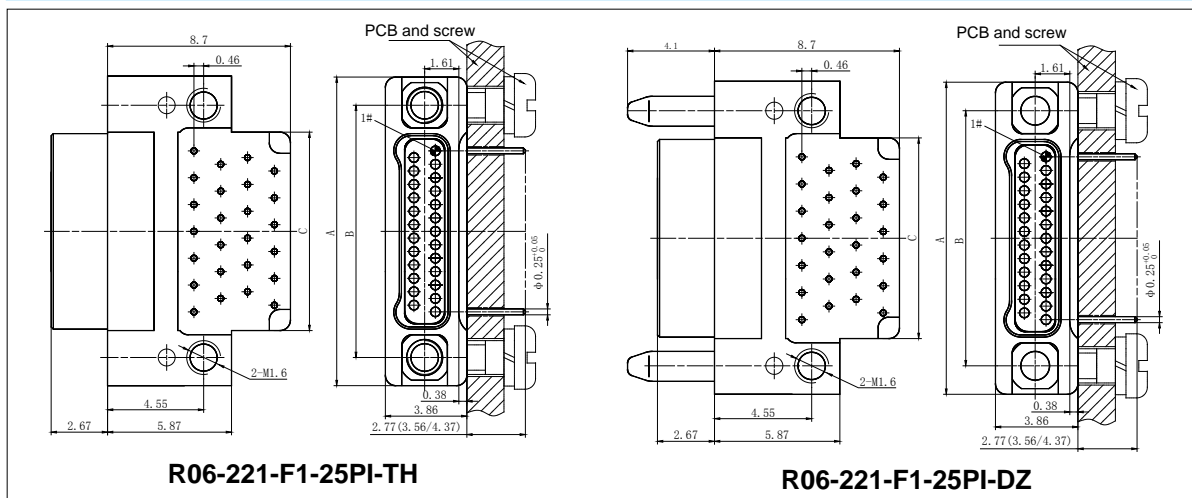
## Order marks

<b>Series</b>	R06	-2	2	1	-F	1	-25	PI	-TH	 <p><b>R06-221-F1-25PI-TH</b></p>  <p><b>R06-221-F1-25PI-DZ</b></p>
<b>Contact row:</b>										
2 — tow rows										
<b>Shell plating:</b>										
2 — nickel plating										
<b>Contact plating:</b>										
1 — gold plating										
<b>Tail termination type :</b>										
F — 90° right angle to PCB										
<b>Tail length:</b>										
1 — 2.77mm										
2 — 3.56mm										
3 — 4.37mm										
<b>Contact number:</b>										
9、15、21、25、31、37、51、65、69										
<b>Contact type :</b>										
PI — pin in plug										
<b>Locking type:</b>										
DZ — guide pin      TH — connect nut										

### Remark

- R06-221-F\*-\*\*PI-TH usually mated with receptacle which have locking screw, R06-221-F\*-\*\*PI-DZ usually mated with receptacle which have guide hole
- 3 kinds of tail length, customized produce for other length

## Outline dimension

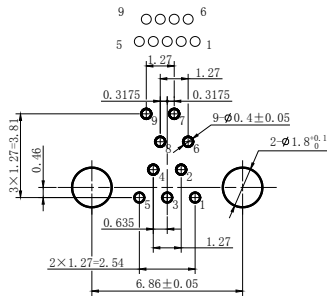
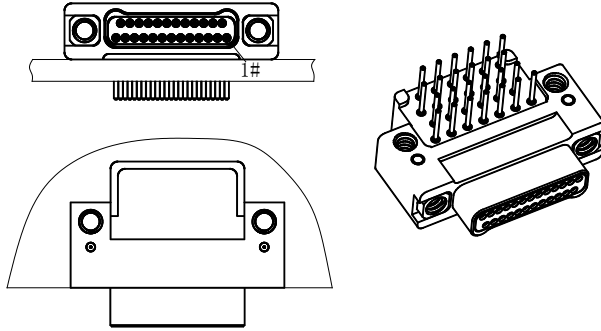


Pin count	Dimension			Pin count	Dimension			Pin count	Dimension		
	A	B	C		A	B	C		A	B	C
9pins	9.63	6.86	4.25	15pins	11.53	8.76	6.15	21pins	13.44	10.67	8.06
25pins	14.71	11.94	9.33	31pins	16.61	13.84	11.23	37pins	18.52	15.75	13.14
51pins	22.96	20.19	17.58	65pins	27.41	24.64	22.03	69pins	28.68	25.91	23.3

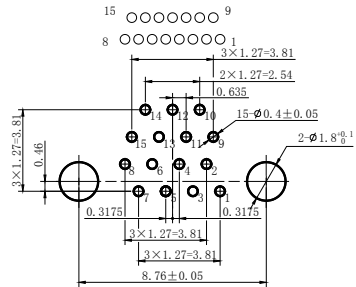
Remark: All dimensions are in mm



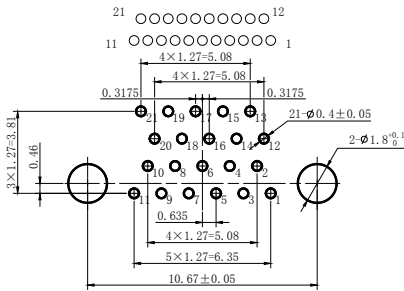
## Suggested PCB Layout



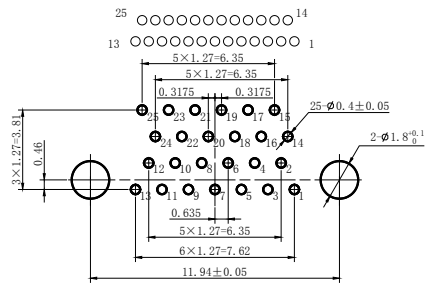
**R06-221-F1/F2/F3-9PI-TH**



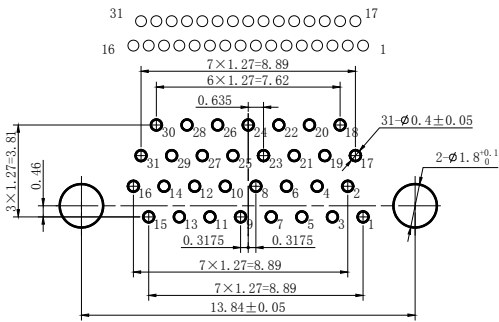
**R06-221-F1/F2/F3-15PI-TH**



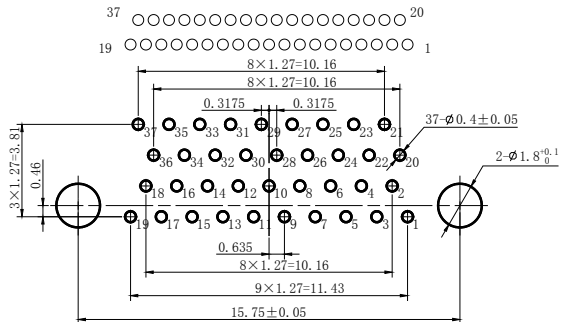
**R06-221-F1/F2/F3-21PI-TH**



**R06-221-F1/F2/F3-25PI-TH**



**R06-221-F1/F2/F3-31PI-TH**



**R06-221-F1/F2/F3-37PI-TH**

Remark: All dimensions are in mm



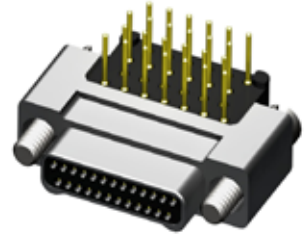




## R06 Right Angle to Flexible PCB Plug with Locking Screw Series

### Order marks

<b>Series</b>	R06	-2	2	1	-F	1	-25	PI	- JC
<b>Contact row:</b>	2 — tow rows								
<b>Shell plating:</b>	2 — nickel plating								
<b>Contact plating:</b>	1 — gold plating								
<b>Tail termination type :</b>	F— 90° right angle to PCB								
<b>Tail length:</b>	1— 2.77mm 2 — 3.56mm 3 — 4.37mm								
<b>Contact number:</b>	9、15、21、25、31、37、51、65、69								
<b>Contact type :</b>	PI — pin in plug								
<b>Locking type:</b>	JC— locking screw(straight slot,C dimension=1.5mm) JC1— locking screw(hex, not recommend,C dimension=2.1mm)								

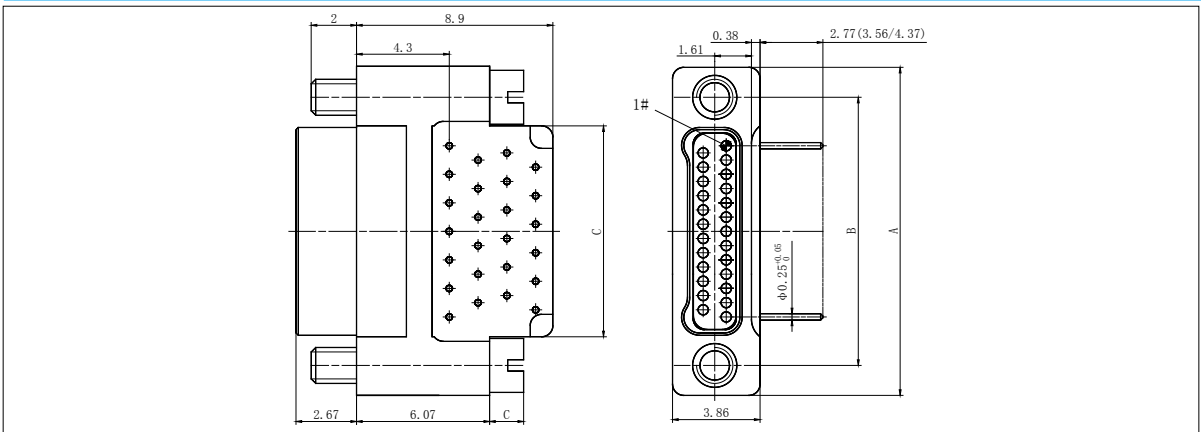


R06-221-F1-25PI-JC

### Remark

- 3 kinds of tail length,customized produce for other length
- Connector is free mounted,not fixed,usually mated with receptacle which have nut
- Tail soldered in the Flexible PCB
- Recommended JC(straight slot screw) types of screws,tight by miniature straight screwdriver
- When choose JC1(hex) type of screws,tight by 1.27mm subtense hex screwdriver.

### Outline dimension

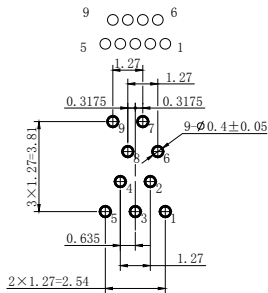
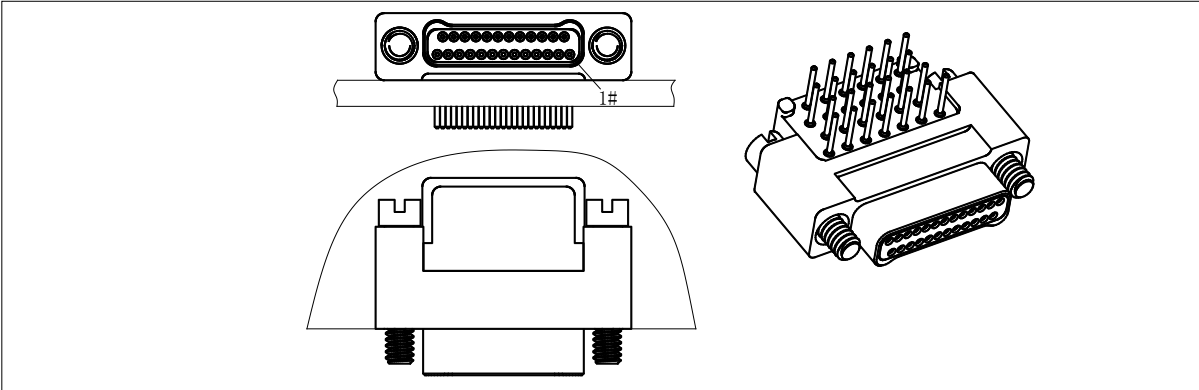


Pin count	Dimension			Pin count	Dimension			Pin count	Diension		
	A	B	C		A	B	C		A	B	C
9pins	9.63	6.86	4.25	15pins	11.53	8.76	6.15	21pins	13.44	10.67	8.06
25pins	14.71	11.94	9.33	31pins	16.61	13.84	11.23	37pins	18.52	15.75	13.14
51pins	22.96	20.19	17.58	65pins	27.41	24.64	22.07	69pins	28.68	25.91	23.3

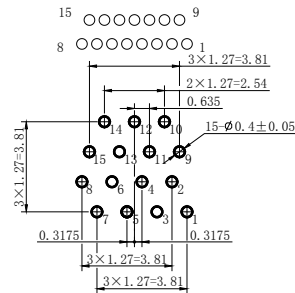
Remark: All dimensions are in mm



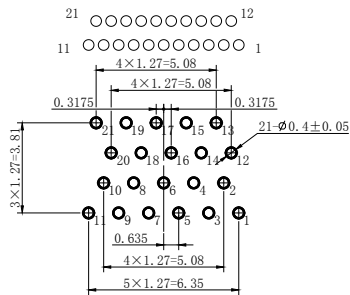
### Suggested PCB Layout



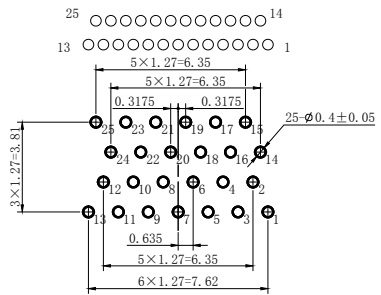
**R06-221-F1/F2/F3-9PI-JC**



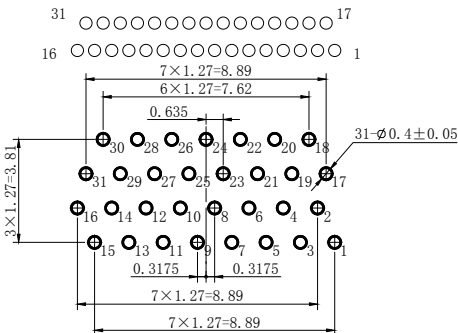
**R06-221-F1/F2/F3-15PI-JC**



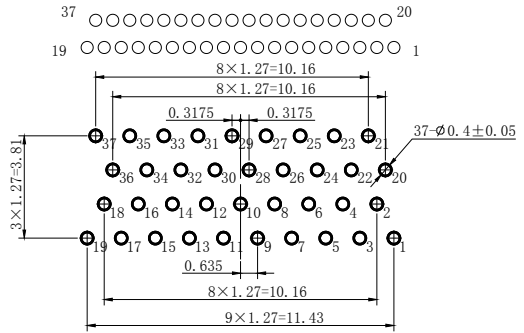
**R06-221-F1/F2/F3-21PI-JC**



**R06-221-F1/F2/F3-25PI-JC**



**R06-221-F1/F2/F3-31PI-JC**

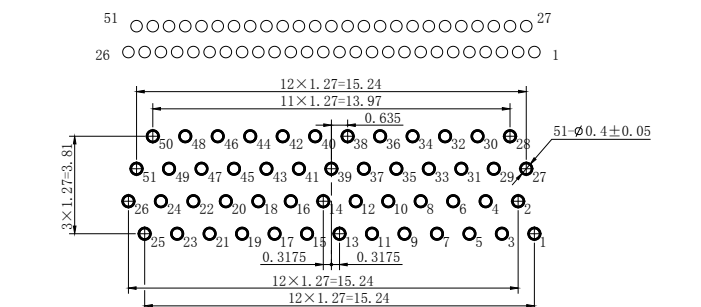
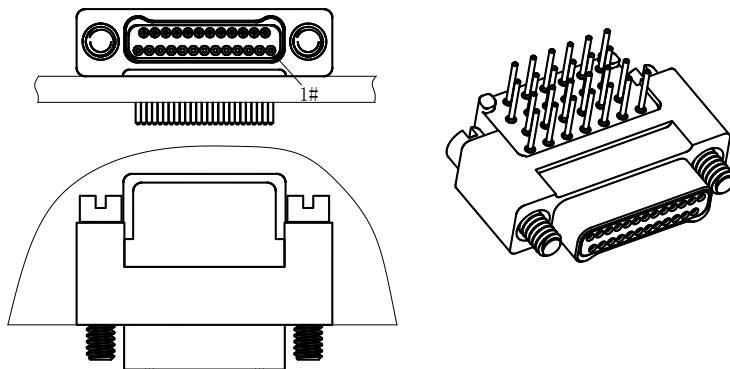


**R06-221-F1/F2/F3-37PI-JC**

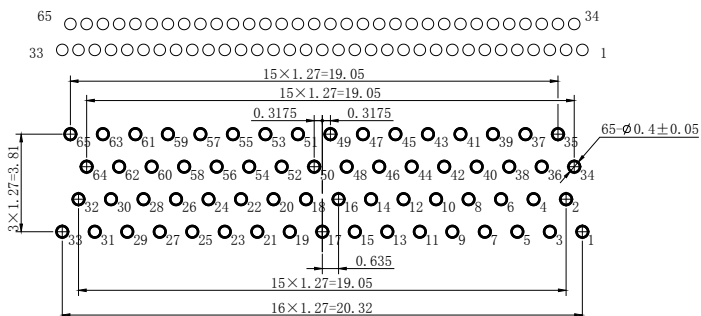
Remark: All dimensions are in mm



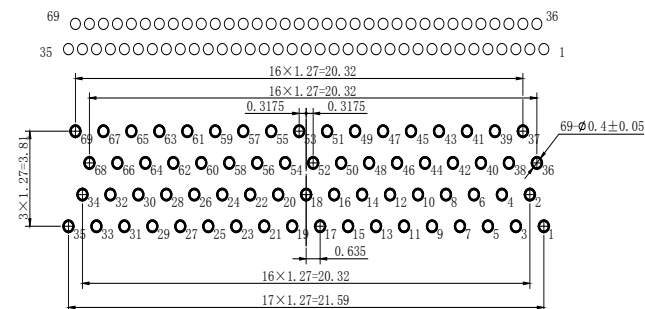
## Suggested PCB Layout



**R06-221-F1/F2/F3-51PI-JC**



**R06-221-F1/F2/F3-65PI-JC**




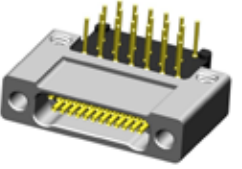
**R06-221-F1/F2/F3-69PI-JC**

Remark: All dimensions are in mm



# R06 Right Angle to PCB Receptacle Series

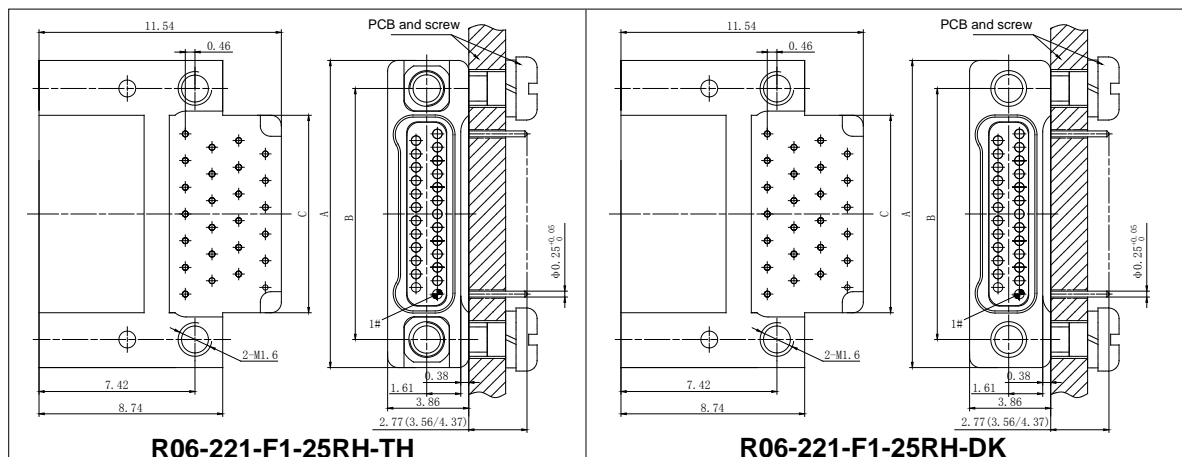
## Order marks

<b>Series</b>	R06	-2	2	1	-F	1	-25	RH	-TH	 <p><b>R06-221-F1-25RH-TH</b></p>  <p><b>R06-221-F1-25RH-DK</b></p>
<b>Contact row:</b>	2 — tow rows									
<b>Shell plating:</b>	2 — nickel plating									
<b>Contact plating:</b>	1 — gold plating									
<b>Tail termination type :</b>	F — 90° right angle to PCB									
<b>Tail length:</b>	1 — 2.77mm 2 — 3.56mm 3 — 4.37mm									
<b>Contact number:</b>	9、15、21、25、31、37、51、65、69									
<b>Contact type :</b>	RH — socket in receptacle									
<b>Locking type:</b>	DK — guide hole      TH — connect nut									

### Remark

- R06-221-F\*-\*\*RH-TH usually mated with plug which have locking screw, R06-221-F\*-\*\*RH-DK usually mated with plug which have guide pin
- 3 kinds of tail length, customized produce for other length

## Outline dimension

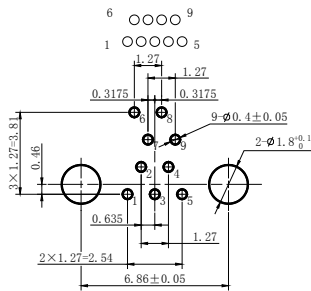
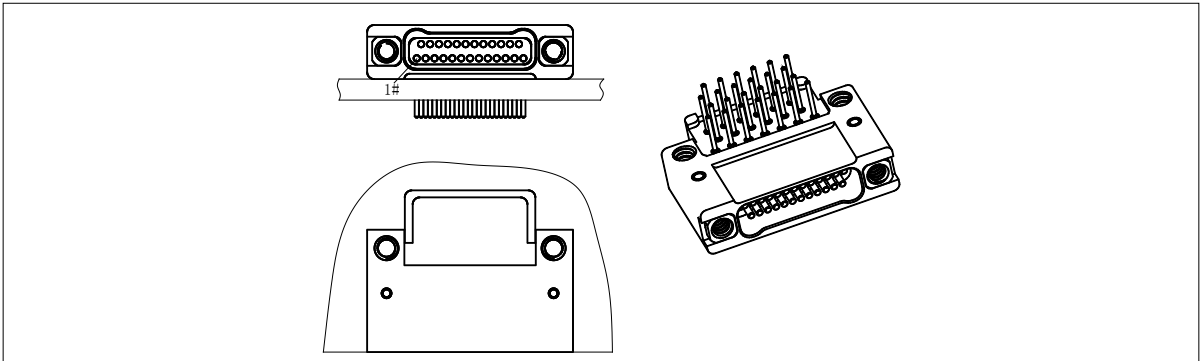


Pin count	Dimension			Pin count	Dimension			Pin count	Dimension		
	A	B	C		A	B	C		A	B	C
9pins	9.63	6.86	4.25	15pins	11.53	8.76	6.15	21pins	13.44	10.67	8.06
25pins	14.71	11.94	9.33	31pins	16.61	13.84	11.23	37pins	18.52	15.75	13.14
51pins	22.96	20.19	17.58	65pins	27.41	24.64	22.03	69pins	28.68	25.91	23.3

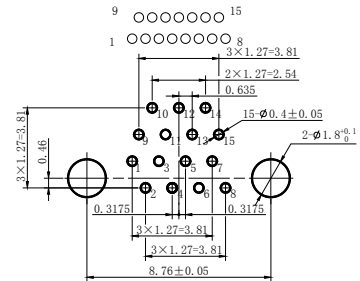
Remark: All dimensions are in mm



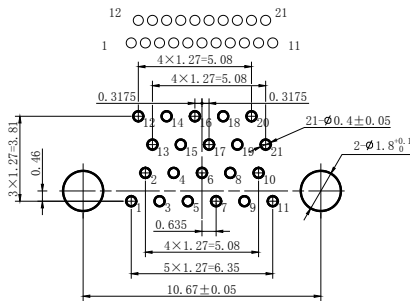
## Suggested PCB Layout



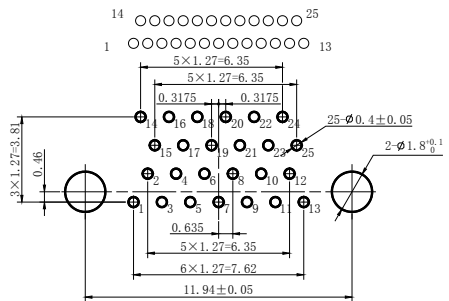
**R06-221-F1/F2/F3-9RH-TH**



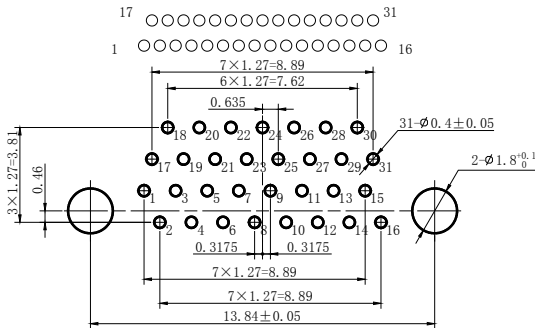
**R06-221-F1/F2/F3-15RH-TH**



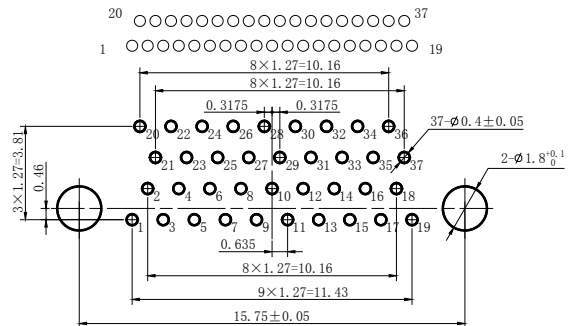
**R06-221-F1/F2/F3-21RH-TH**



**R06-221-F1/F2/F3-25RH-TH**



**R06-221-F1/F2/F3-31RH-TH**

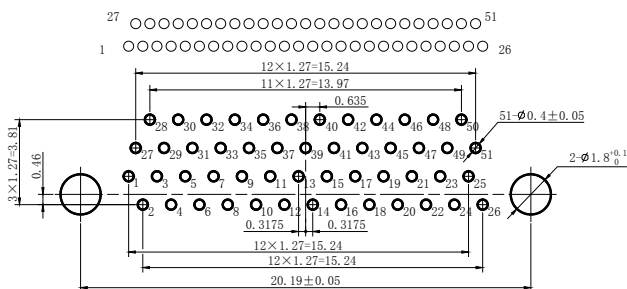
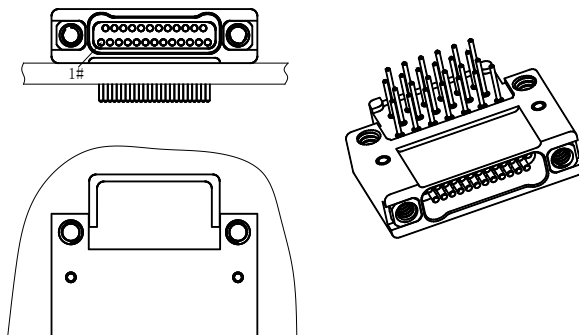


**R06-221-F1/F2/F3-37RH-TH**

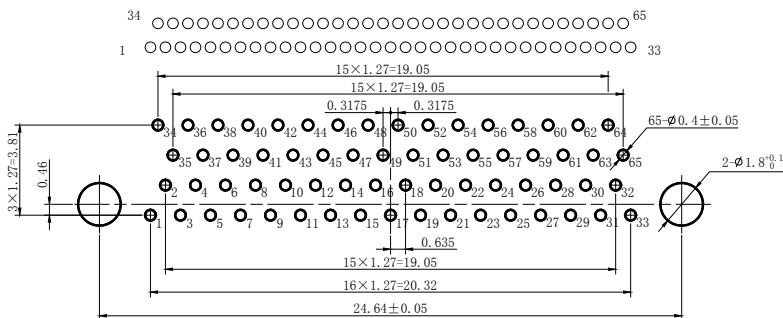
Remark: All dimensions are in mm



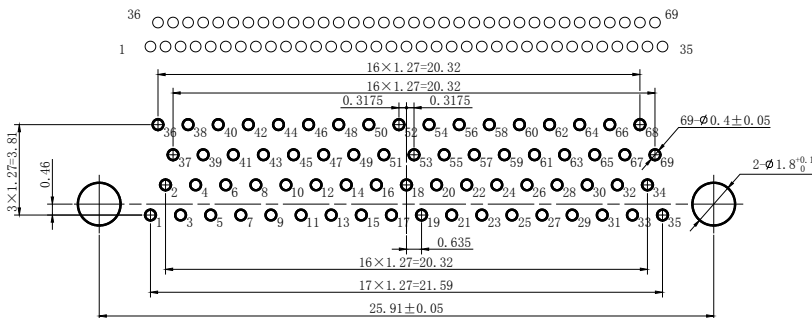
### Suggested PCB Layout



**R06-221-F1/F2/F3-51RH-TH**



**R06-221-F1/F2/F3-65RH-TH**



**R06-221-F1/F2/F3-69RH-TH**

Remark: All dimensions are in mm



# MIL-DTL-32139 Nano D-sub Connectors

## R06 SMT Series

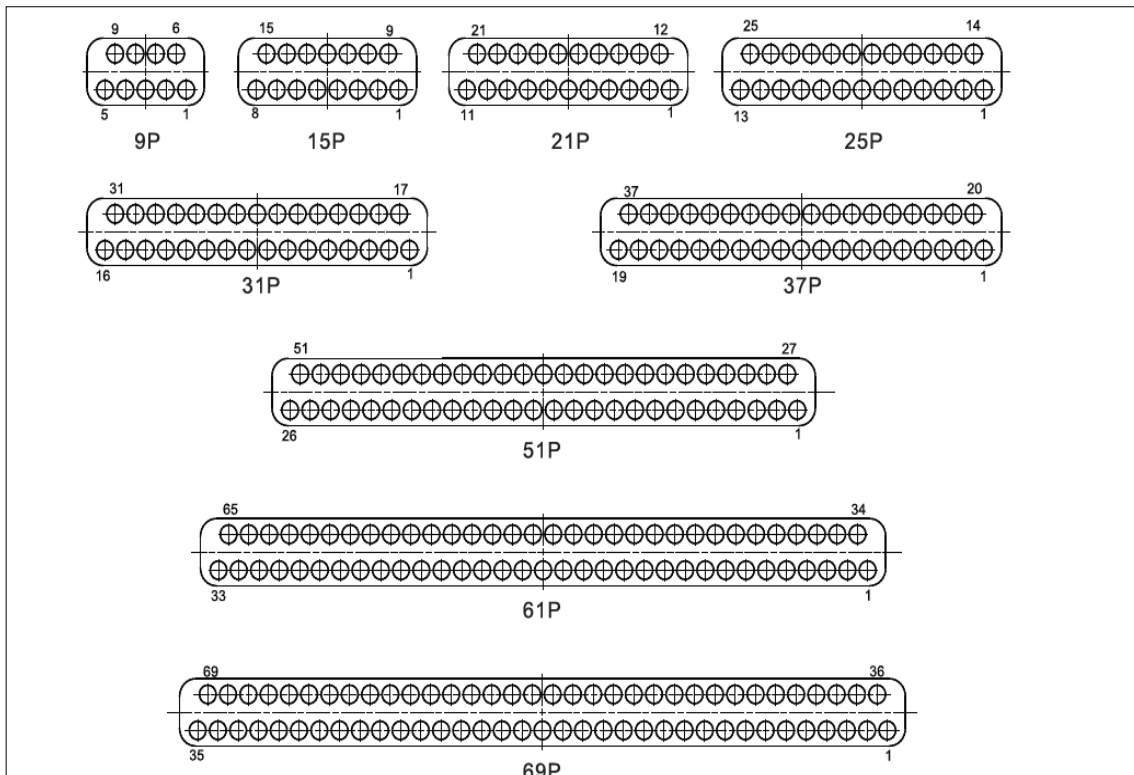
### Brief introduction

- Contacts:9,15,21,25,31,37,51,65,69
- Twist flexible micro pin (twist pin), 0.635mm pitch, micro miniature outline dimension
- Screw nut locking, it is gently when insert and extract, stably locked
- It is used for all kinds for electric circuit system interconnection which have high density, micro, light, highly reliable requirement, it can meet light and miniaturize demand
- Plug with twist pin, receptacle with socket, free terminal with locking screw, fixed terminal with nut, standard mated connector locked by screw and nut
- Standard: MIL-DTL-32139
- Undefined tolerance is $\pm 0.13$

### Specification

- |                     |   |                          |                                  |
|---------------------|---|--------------------------|----------------------------------|
| ■ Environment:      | -55°C~+125°C  | ■ Contact resistance:    | $\leq 21\text{m}\Omega$          |
| ■ Vibration:        | 10Hz~2000Hz 196m/s <sup>2</sup>   | ■ Insulation resistance: | $\geq 5000\text{M}\Omega$ 100VDC |
| ■ Shock:            | 980m/s <sup>2</sup> 6ms   | ■ Dielectric strength:   | 250V                             |
| ■ Rated current:    | 1A  | ■ Machine life:          | 200 times                        |
| ■ Random vibration: | power spectrum density 0.4G <sup>2</sup> /Hz, r.m.s value of total acceleration 23.1G |                          |                                  |

### Contact layout



Remark: The above layout is view from plug mate side end face



## How to order


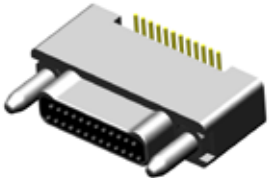
<b>Series</b>	R06	-2	2	1	-M	2	-9	PI	-TH
<b>Contact row:</b> 2 — tow rows									
<b>Shell plating:</b> 2 — nickel plating									
<b>Contact plating:</b> 1 — gold plating									
<b>Tail termination type :</b> M— SMT									
<b>Mounting style:</b> 2— vertical SMT 3 — horizontal SMT 8 — straddle flexible SMT									
<b>Contact number:</b> 9、15、21、25、31、37、51、65、69									
<b>Contact type</b> PI — pin in plug RH— socket in receptacle									
<b>Locking component type:</b> JC— locking screw(straight slot) JC1— locking screw(hex, not recommend) TH— connect nut NH— guide hole with nut mounted DZ— guide pin TH1— solder nut SH— solder guide hole									

## Choose mating connector

- When choosing mating connector with locking accessories usually choose the locking component which one side with connect nut(TH), the other side with locking screw(JC).
- When choosing product with guide accessories,connector without locked component but only with guide component,it need fix on mounting panel after mated,for avoiding connector take off. When choosing mating connector with guide components usually choose the guide component which one side with guide pin, the other side with guide hole

## R06 Vertical SMT Plug Series

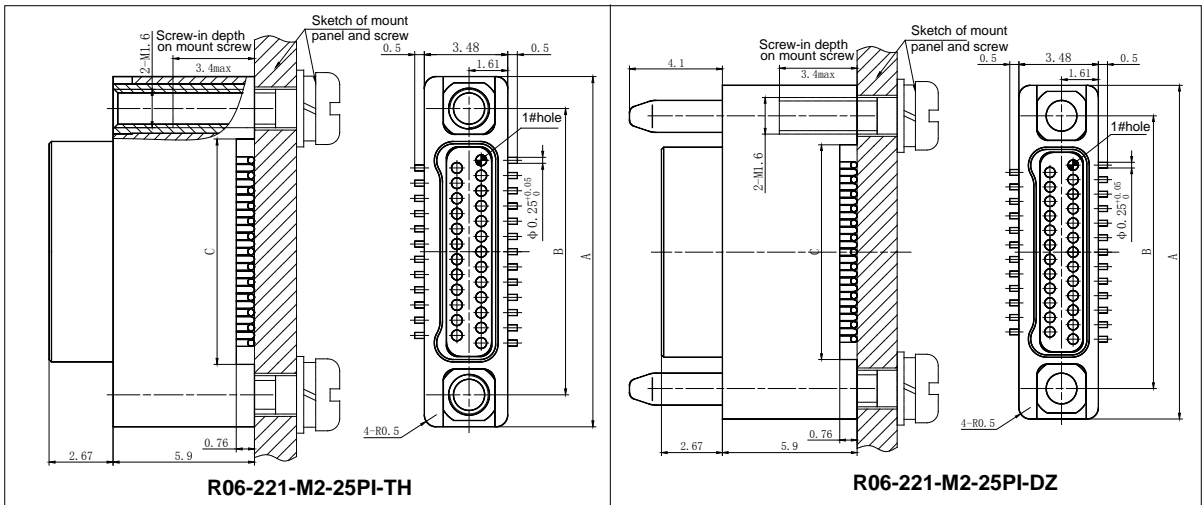
### Order marks

Series	R06	-2	2	1	-M	2	-25	PI	-TH	 <p>R06-221-M2-25PI-TH</p>  <p>R06-221-M2-25PI-DZ</p>
<b>Contact row:</b> 2 — tow rows										
<b>Shell plating:</b> 2 — nickel plating										
<b>Contact plating:</b> 1 — gold plating										
<b>Tail termination type :</b> M— SMT										
<b>Mounting style:</b> 2— vertical SMT										
<b>Contact number:</b> 9、15、21、25、31、37、51、65、69										
<b>Contact type:</b> PI — pin in plug										
<b>Locking component type:</b> TH— connect nut DZ— guide pin										

### Remark

- R06-221-M2-25PI-TH usually mated with receptacle which have locking screw, R06-221-M2-25PI-DZ usually mated with receptacle which have guide hole

### Outline dimension



Pin count	Dimension			Pin count	Dimension			Pin count	Dimension		
	A	B	C		A	B	C		A	B	C
9pins	9.63	6.86	4.31	15pins	11.53	8.76	6.22	21pins	13.44	10.67	8.13
25pins	14.71	11.94	9.4	31pins	16.61	13.84	11.3	37pins	18.52	15.75	13.21
51pins	22.96	20.19	17.65	65pins	27.41	24.64	22.10	69pins	28.68	25.91	23.37

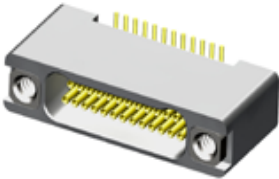
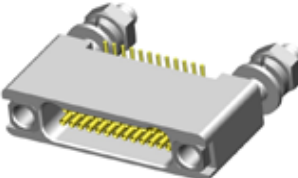
Remark: All dimensions are in mm





## R06 Vertical SMT Receptacle Series

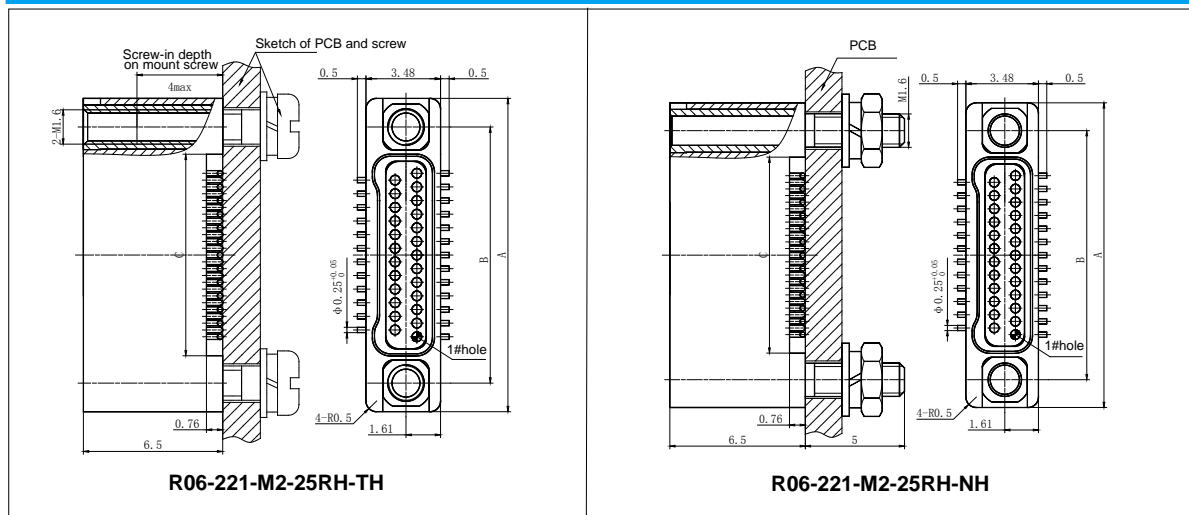
### Order marks

<b>Series</b>	R06	-2	2	1	-M	2	-25	RH	-TH	 <p><b>R06-221-M2-25RH-TH</b></p>  <p><b>R06-221-M2-25RH-NH</b></p>
<b>Contact row:</b> 2 — tow rows										
<b>Shell plating:</b> 2 — nickel plating										
<b>Contact plating:</b> 1 — gold plating										
<b>Tail termination type :</b> M— SMT										
<b>Mounting style:</b> 2— vertical SMT										
<b>Contact number:</b> 9、15、21、25、31、37、51、65、69										
<b>Contact type:</b> RH— socket in receptacle										
<b>Locking component type:</b> TH— connect nut NH— guide hole with nut mounted										

### Remark

- R06-221-M2-25RH-TH usually mated with plug which have locking screw, R06-221-M2-25RH-NH usually mated with plug which have guide pin

### Outline dimension

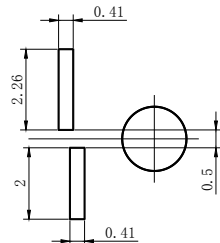


Pin count	Dimension			Pin count	Dimension			Pin count	Dimension		
	A	B	C		A	B	C		A	B	C
9pins	9.63	6.86	4.31	15pins	11.53	8.76	6.22	21pins	13.44	10.67	8.13
25pins	14.71	11.94	9.4	31pins	16.61	13.84	11.3	37pins	18.52	15.75	13.21
51pins	22.96	20.19	17.65	65pins	27.41	24.64	22.10	69pins	28.68	25.91	23.37

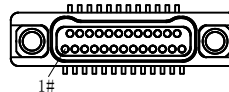
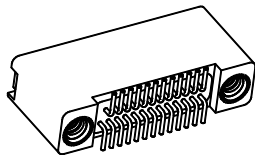
Remark: All dimensions are in mm



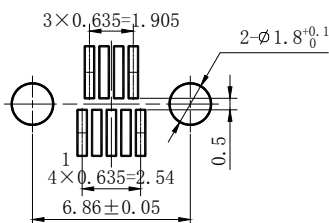
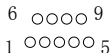
### Suggested PCB Layout



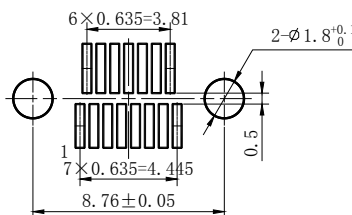
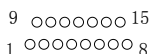
Lead footprint dimension



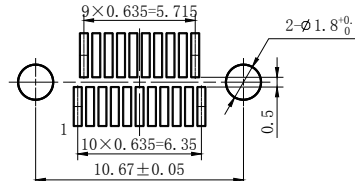
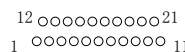
R06-221-M2-9RH-TH



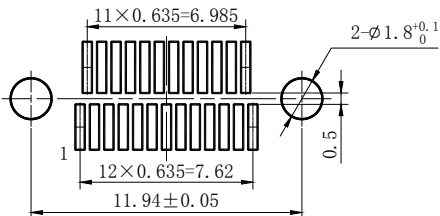
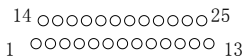
R06-221-M2-15RH-TH



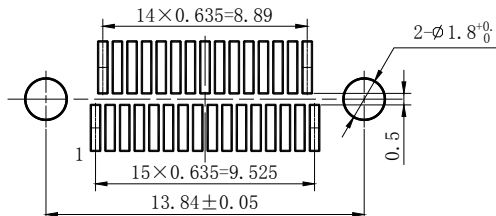
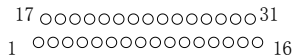
R06-221-M2-21RH-TH



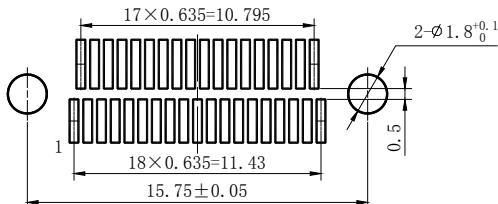
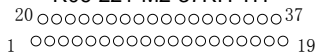
R06-221-M2-25RH-TH



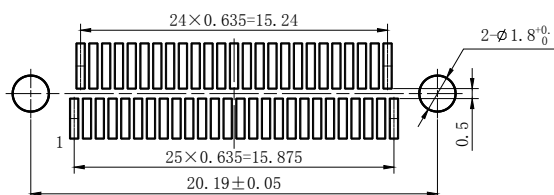
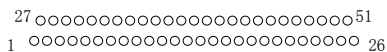
R06-221-M2-31RH-TH



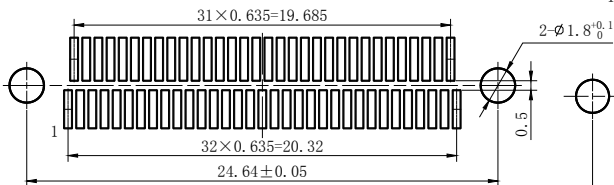
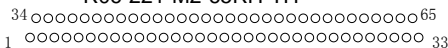
R06-221-M2-37RH-TH



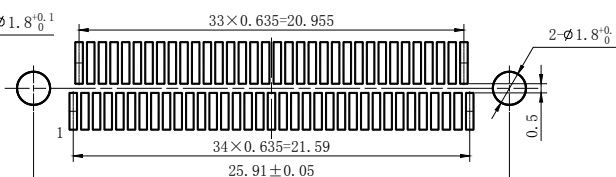
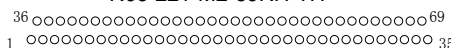
R06-221-M2-51RH-TH



R06-221-M2-65RH-TH



R06-221-M2-69RH-TH



Remark: All dimensions are in mm

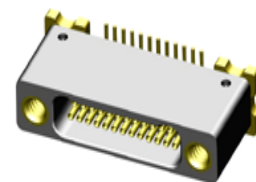




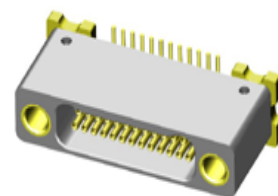
## R06 Vertical SMT Receptacle with Solder Locking Component Series

### Order marks

<b>Series</b>	R06	-2	2	1	-M	2	-25	RH	-TH1
<b>Contact row:</b>	2 — tow rows								
<b>Shell plating:</b>	2 — nickel plating								
<b>Contact plating:</b>	1 — gold plating								
<b>Tail termination type :</b>	M— SMT								
<b>Mounting style:</b>	2— vertical SMT								
<b>Contact number:</b>	9、15、21、25、31、37、51、65、69								
<b>Contact type:</b>	RH— socket in receptacle								
<b>Locking component type:</b>	TH1— solder nut SH— solder guide hole								



R06-221-M2-25RH-TH1

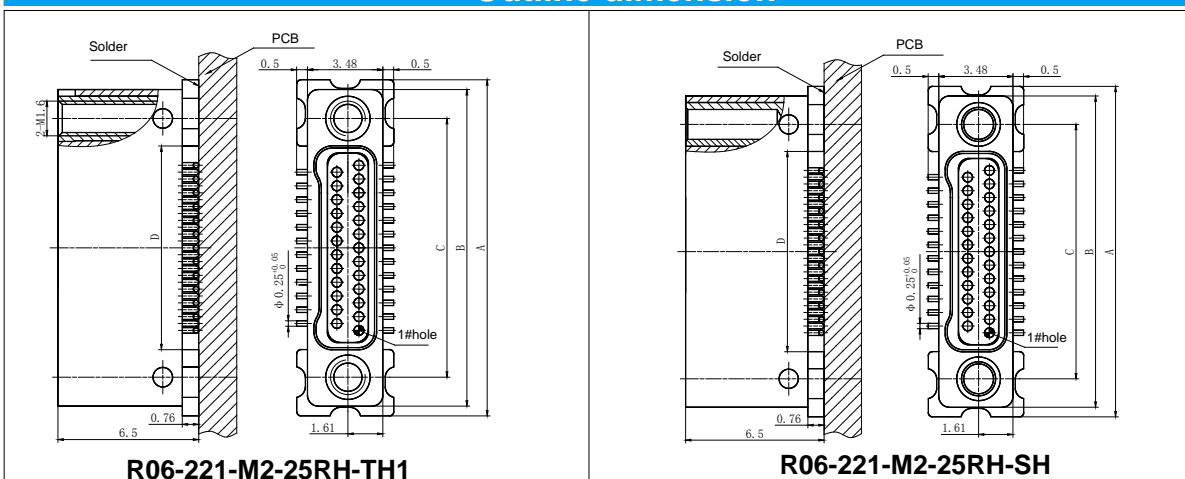


R06-221-M2-25RH-SH

### Remark

- Connector of mounting hole solder by SMT, suit for PCB which can't design mounting hole
- R06-221-M2-25RH-TH1 usually mated with plug which have locking screw, R06-221-M2-25RH-SH usually mated with plug which have guide pin

### Outline dimension



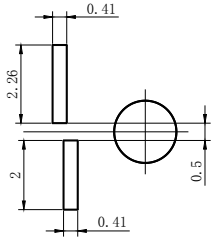
R06-221-M2-25RH-TH1

R06-221-M2-25RH-SH

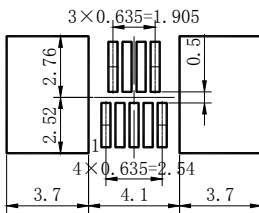
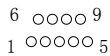
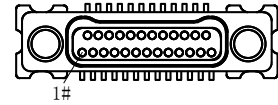
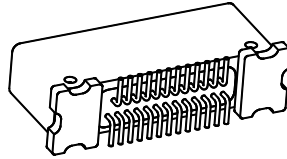
Pin count	Dimension				Pin count	Dimension			
	A	B	C	D		A	B	C	D
9pins	10.43	9.63	6.86	4.31	15pins	12.33	11.53	8.76	6.22
21pins	14.24	13.44	10.67	8.13	25pins	15.51	14.71	11.94	9.4
31pins	17.41	16.61	13.84	11.30	37pins	19.32	18.52	15.75	13.21
51pins	23.76	22.96	20.19	17.65	65pins	28.21	27.41	24.64	22.10
69pins	29.48	28.68	25.91	23.37					

Remark: All dimensions are in mm

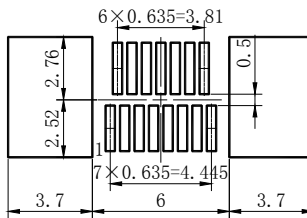
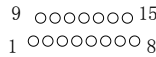
## Suggested PCB Layout



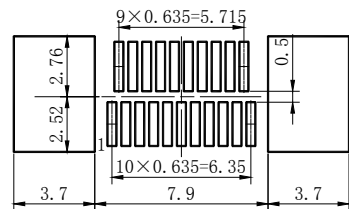
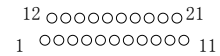
Lead footprint dimension



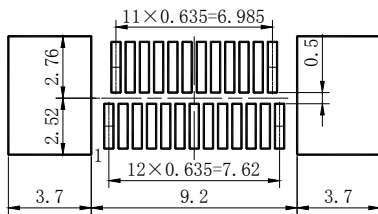
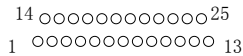
R06-221-M2-9RH-TH1



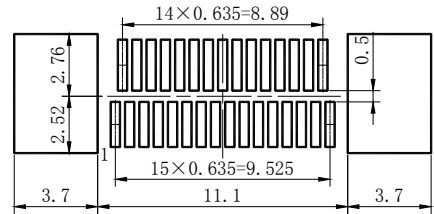
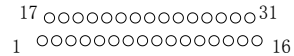
R06-221-M2-15RH-TH1



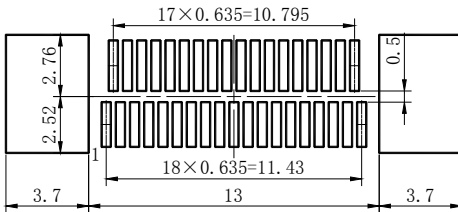
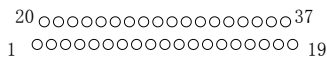
R06-221-M2-21RH-TH1



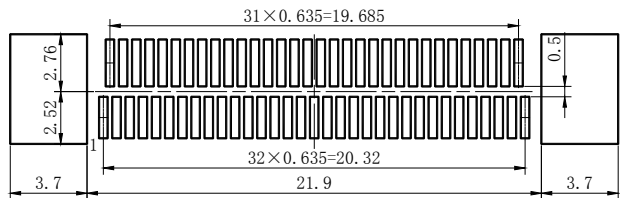
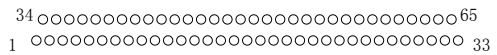
R06-221-M2-25RH-TH1



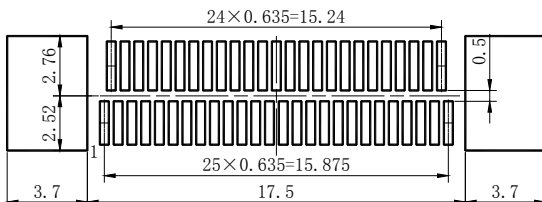
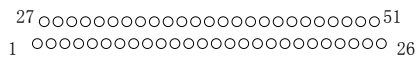
R06-221-M2-31RH-TH1



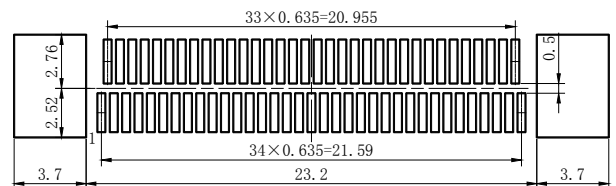
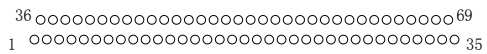
R06-221-M2-37RH-TH1



R06-221-M2-65RH-TH1



R06-221-M2-51RH-TH1




R06-221-M2-69RH-TH1

Remark: All dimensions are in mm

## R06 Horizontal SMT Plug Series

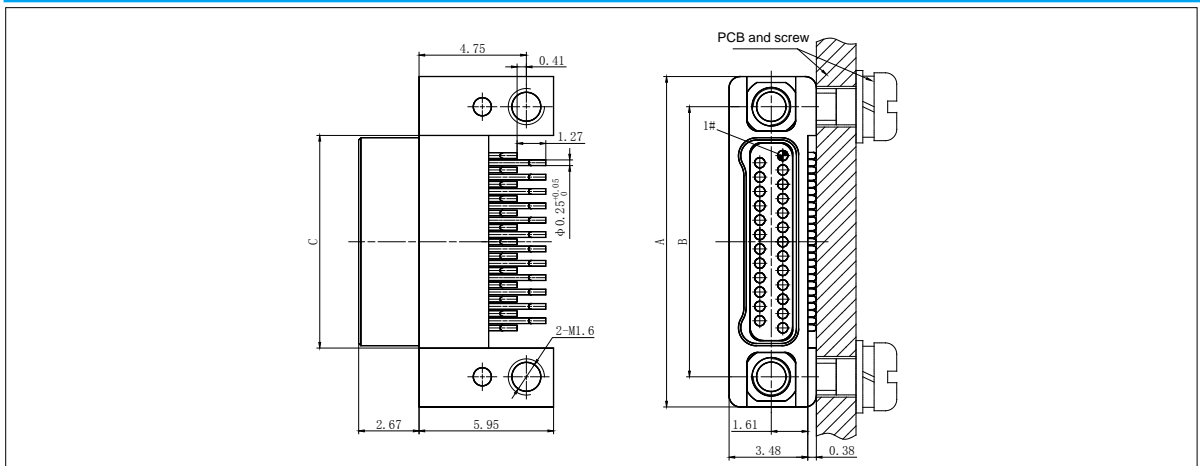
### Order marks

<b>Series</b>	R06	-2	2	1	-M	3	-25	PI	-TH	 <p><b>R06-221-M3-25PI-TH</b></p>
<b>Contact row:</b>										
2 — tow rows										
<b>Shell plating:</b>										
2 — nickel plating										
<b>Contact plating:</b>										
1 — gold plating										
<b>Tail termination type :</b>										
M — SMT										
<b>Mounting style:</b>										
3 — horizontal SMT										
<b>Contact number:</b>										
9、15、21、25、31、37、51、65、69										
<b>Contact type:</b>										
PI — pin in plug										
<b>Locking component type:</b>										
TH — connect nut										

### Remark

- R06-221-M3-25PI-TH usually mated with receptacle which have locking screw

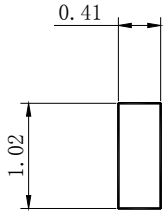
### Outline dimension



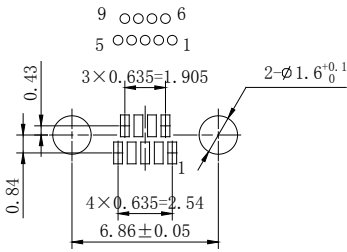
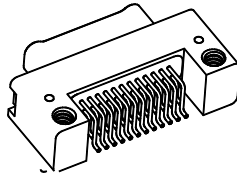
Pin count	Dimension			Pin count	Dimension			Pin count	Dimension		
	A	B	C		A	B	C		A	B	C
9pins	9.63	6.86	4.31	15pins	11.53	8.76	6.22	21pins	13.44	10.67	8.13
25pins	14.71	11.94	9.4	31pins	16.61	13.84	11.3	37pins	18.52	15.75	13.21
51pins	22.96	20.19	17.65	65pins	27.41	24.64	22.10	69pins	28.68	25.91	23.37

Remark: All dimensions are in mm

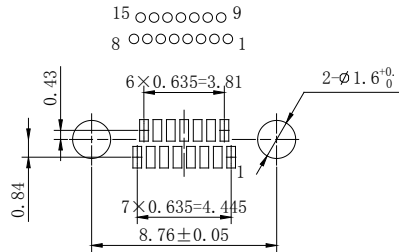
## Suggested PCB Layout



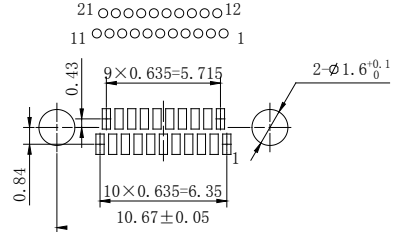
Lead footprint dimension



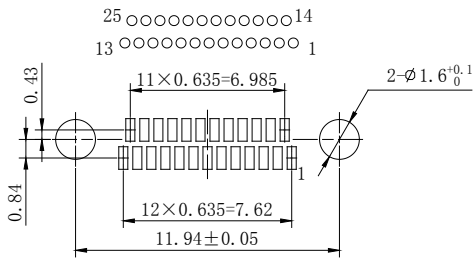
R06-221-M3-9PI-TH



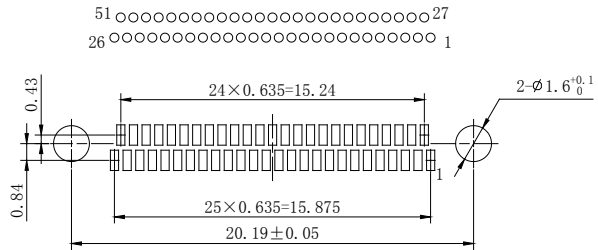
R06-221-M3-15PI-TH



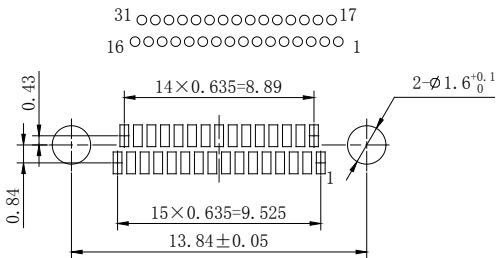
R06-221-M3-21PI-TH



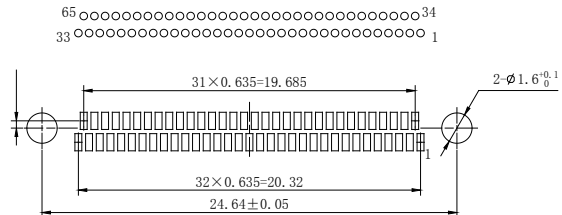
R06-221-M3-25PI-TH



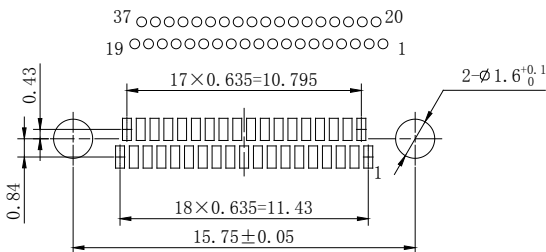
R06-221-M3-51PI-TH



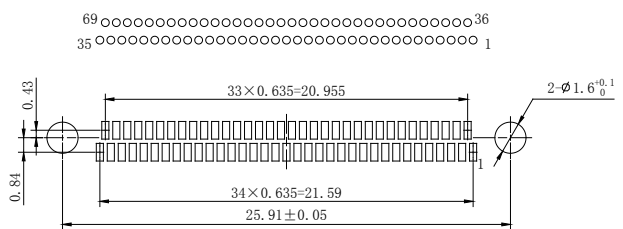
R06-221-M3-31PI-TH



R06-221-M3-65PI-TH



R06-221-M3-37PI-TH

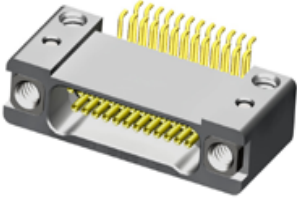


R06-221-M3-69PI-TH

Remark: All dimensions are in mm

## R06 Horizontal SMT Receptacle Series

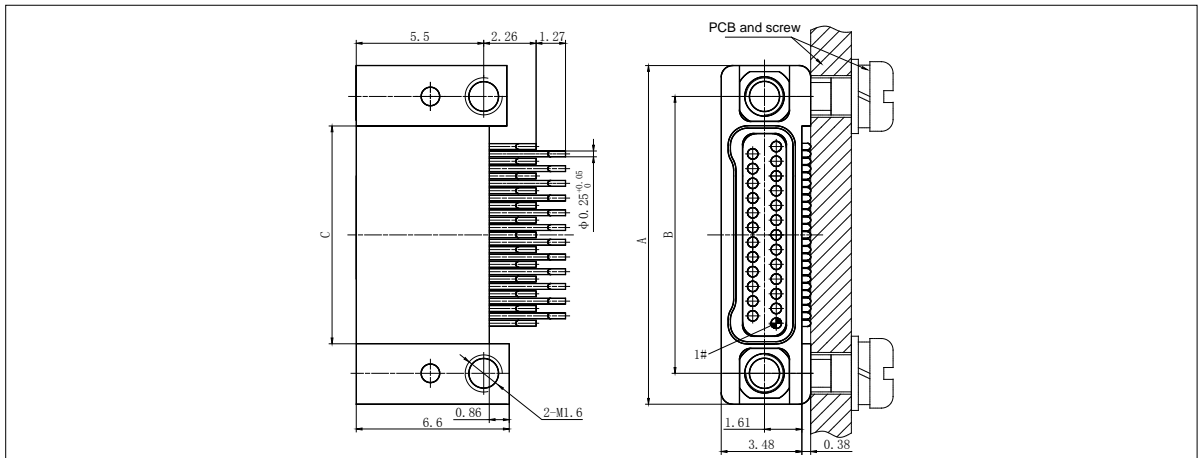
### Order marks

<b>Series</b>	R06	-2	2	1	-M	3	-25	RH	-TH	 <p><b>R06-221-M3-25RH-TH</b></p>
<b>Contact row:</b>										
2 — tow rows										
<b>Shell plating:</b>										
2 — nickel plating										
<b>Contact plating:</b>										
1 — gold plating										
<b>Tail termination type :</b>										
M— SMT										
<b>Mounting style:</b>										
3 — horizontal SMT										
<b>Contact number:</b>										
9、15、21、25、31、37、51、65、69										
<b>Contact type:</b>										
RH— socket in receptacle										
<b>Locking component type:</b>										
TH— connect nut										

### Remark

- R06-221-M3-\*RH-TH usually mated with plug which have locking screw

### Outline dimension

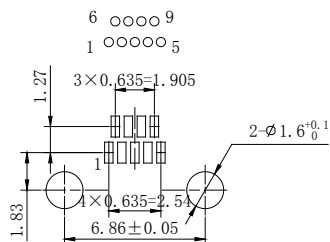
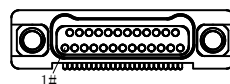
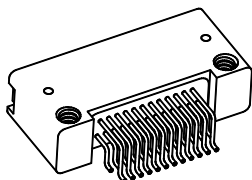
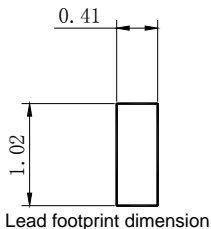


Pin count	Dimension			Pin count	Dimension			Pin count	Dimension		
	A	B	C		A	B	C		A	B	C
9pins	9.63	6.86	4.31	15pins	11.53	8.76	6.22	21pins	13.44	10.67	8.13
25pins	14.71	11.94	9.4	31pins	16.61	13.84	11.3	37pins	18.52	15.75	13.21
51pins	22.96	20.19	17.65	65pins	27.41	24.64	22.10	69pins	28.68	25.91	23.37

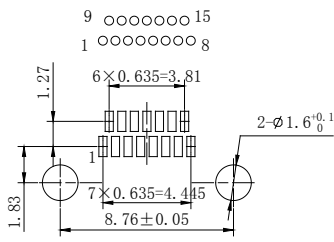
Remark: All dimensions are in mm



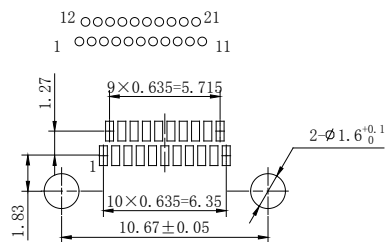
### Suggested PCB Layout



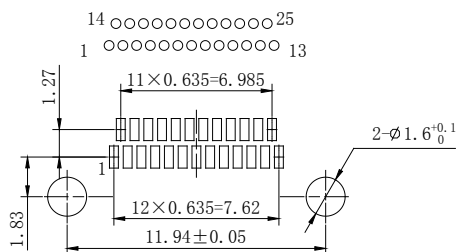
**R06-221-M3-9RH-TH**



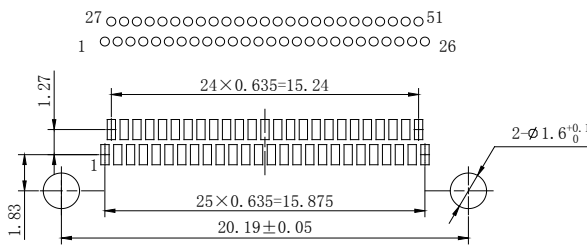
**R06-221-M3-15RH-TH**



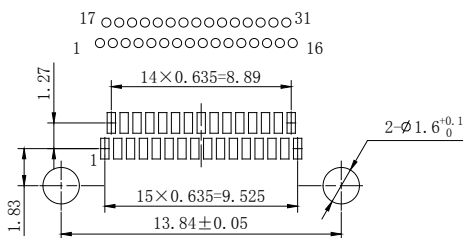
**R06-221-M3-21RH-TH**



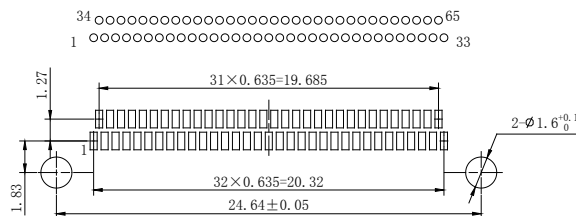
**R06-221-M3-25RH-TH**



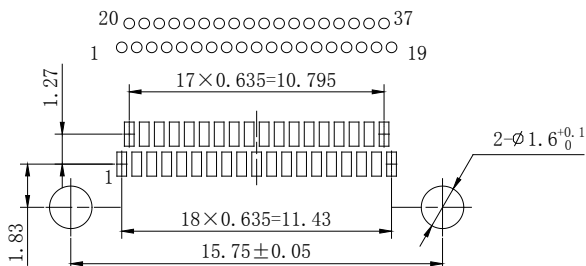
**R06-221-M3-51RH-TH**



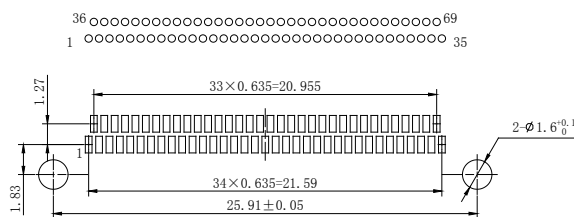
**R06-221-M3-31RH-TH**



**R06-221-M3-65RH-TH**



**R06-221-M3-37RH-TH**




**R06-221-M3-69RH-TH**

Remark: All dimensions are in mm



# R06 Straddle Flexible SMT Plug Series

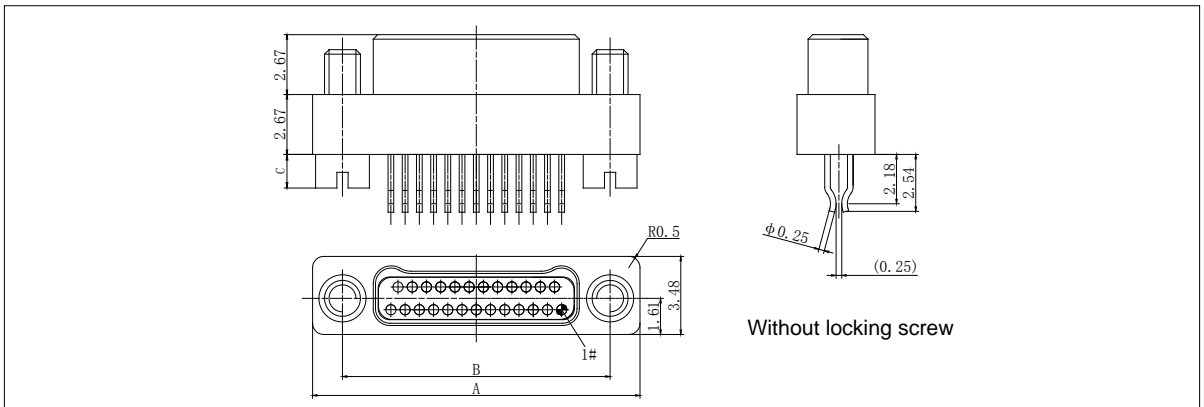
## Order marks

Series	R06	-2	2	1	-M	8	-25	PI	-JC	 <p><b>R06-221-M8-25PI-JC</b></p>
<b>Contact row:</b>										
2 — tow rows										
<b>Shell plating:</b>										
2 — nickel plating										
<b>Contact plating:</b>										
1 — gold plating										
<b>Tail termination type :</b>										
M— SMT										
<b>Mounting style:</b>										
8 — straddle flexible SMT										
<b>Contact number:</b>										
9、15、21、25、31、37、51、65、69										
<b>Contact type:</b>										
PI — pin in plug										
<b>Locking component type:</b>										
JC— locking screw(straight slot, C dimension=1.5mm)										
JC1— locking screw(hex, not recommend , C dimension=2.1mm)										

### Remark

- Connector is free mounted,not fixed,usually mated with receptacle which have nut
- Recommended JC(straight slot screw) types of screws,tight by miniature straight screwdriver
- When choose JC1(hex) type of screws,tight by 1.27mm subtense hex screwdriver.
- PC tail solder on flexible PCB,PCB thickness is 0.25MAX.

## Outline dimension

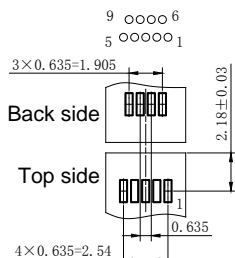
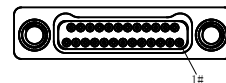
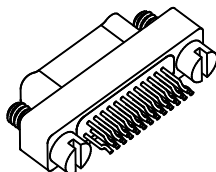
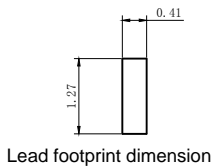


Pin count	Dimension		Pin count	Dimension		Pin count	Diension	
	A	B		A	B		A	B
9pins	9.63	6.86	15pins	11.53	8.76	21pins	13.44	10.67
25pins	14.71	11.94	31pins	16.61	13.84	37pins	18.52	15.75
51 pins	22.96	20.19	65pins	27.41	24.64	69pins	28.68	25.91

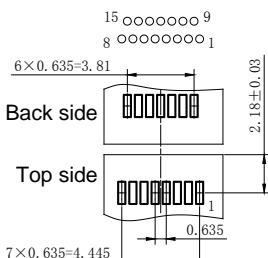
Remark: All dimensions are in mm



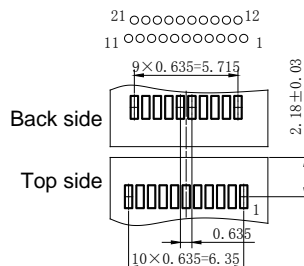
### Suggested PCB Layout



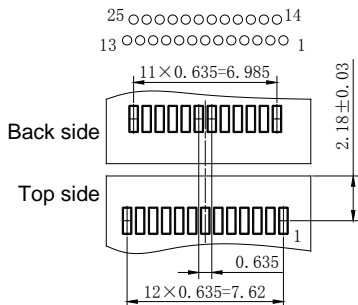
**R06-221-M8-9PI-JC**



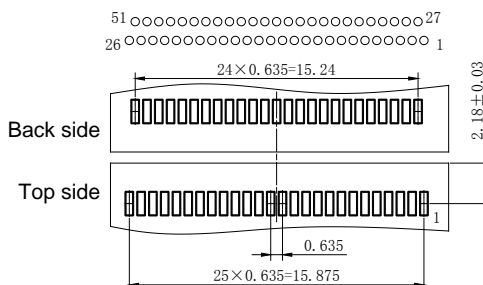
**R06-221-M8-15PI-JC**



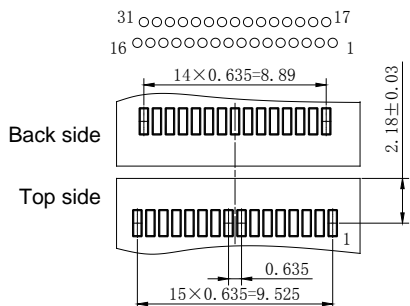
**R06-221-M8-21PI-JC**



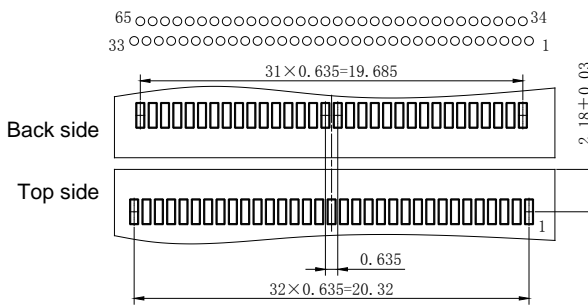
**R06-221-M8-25PI-JC**



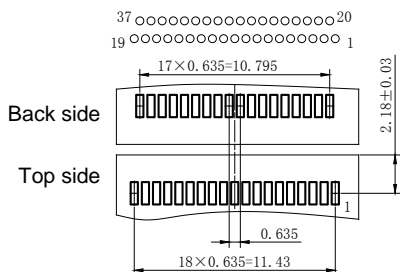
**R06-221-M8-51PI-JC**



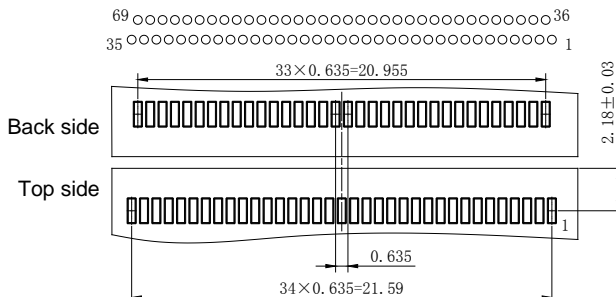
**R06-221-M8-31PI-JC**



**R06-221-M8-65PI-JC**



**R06-221-M8-37PI-JC**



**R06-221-M8-69PI-JC**

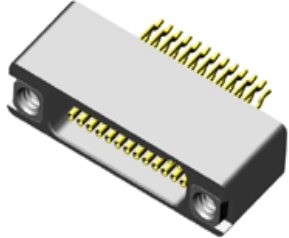
Remark: All dimensions are in mm



# R06 Straddle Flexible SMT Receptacle Series

## Order marks

<b>Series</b>	R06	-2	2	1	-M	8	-25	RH	-TH
<b>Contact row:</b> 2 — tow rows									
<b>Shell plating:</b> 2 — nickel plating									
<b>Contact plating:</b> 1 — gold plating									
<b>Tail termination type :</b> M— SMT									
<b>Mounting style:</b> 8 — straddle flexible SMT									
<b>Contact number:</b> 9、15、21、25、31、37、51、65、69									
<b>Contact type:</b> RH— socket in receptacle									
<b>Locking component type:</b> TH— connect nut									

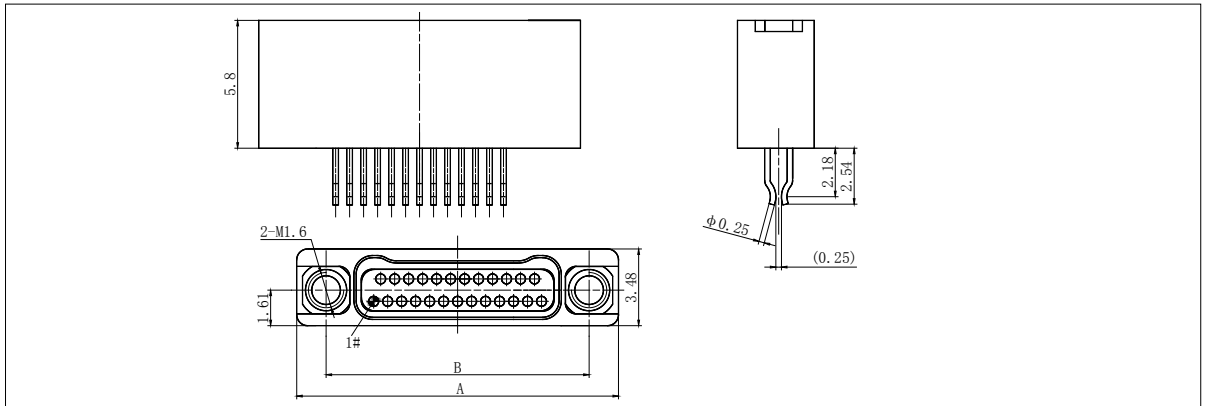


**R06-221-M8-25RH-TH**

### Remark

- Connector is free mounted,not fixed,usually mated with plug which have screw
- PC tail solder on flexible PCB,PCB thickness is 0.25MAX.

## Outline dimension

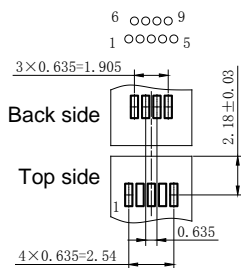
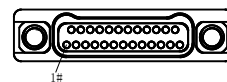
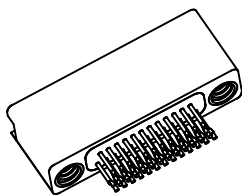
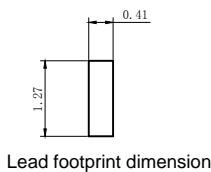


Pin count	Dimension		Pin count	Dimension		Pin count	Diension	
	A	B		A	B		A	B
9pins	9.63	6.86	15pins	11.53	8.76	21pins	13.44	10.67
25pins	14.71	11.94	31pins	16.61	13.84	37pins	18.52	15.75
51pins	22.96	20.19	65pins	27.41	24.64	69pins	28.68	25.91

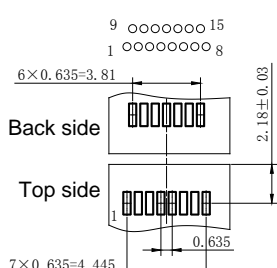
Remark: All dimensions are in mm



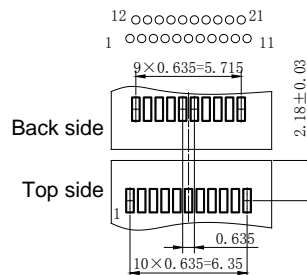
### Suggested PCB Layout



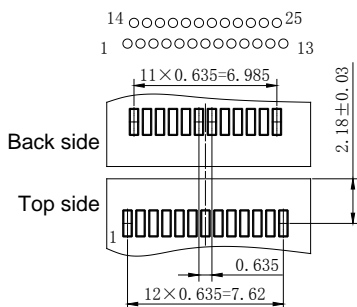
**R06-221-M8-9RH-TH**



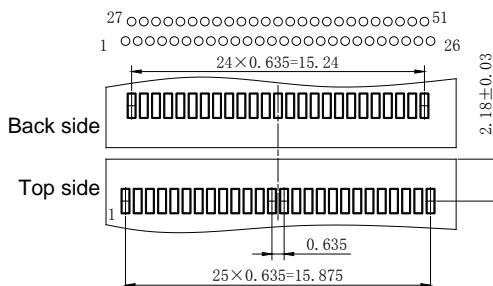
**R06-221-M8-15RH-TH**



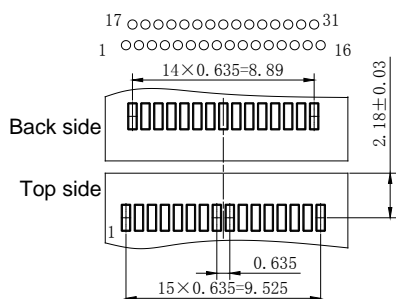
**R06-221-M8-21RH-TH**



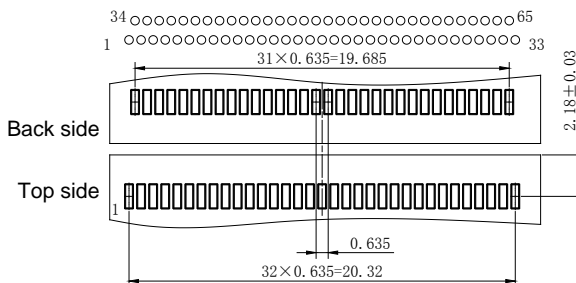
**R06-221-M8-25RH-TH**



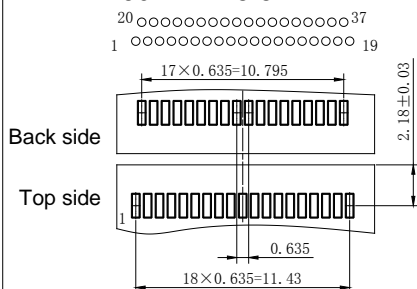
**R06-221-M8-51RH-TH**



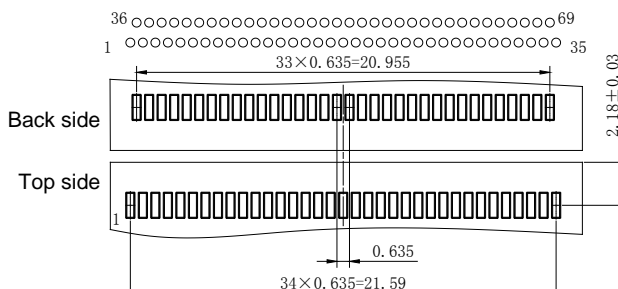
**R06-221-M8-31RH-TH**



**R06-221-M8-65RH-TH**



**R06-221-M8-37RH-TH**



**R06-221-M8-69RH-TH**

Remark: All dimensions are in mm



# MIL-DTL-32139 Nano D-sub Connectors

## R06 Crimp Contact Series

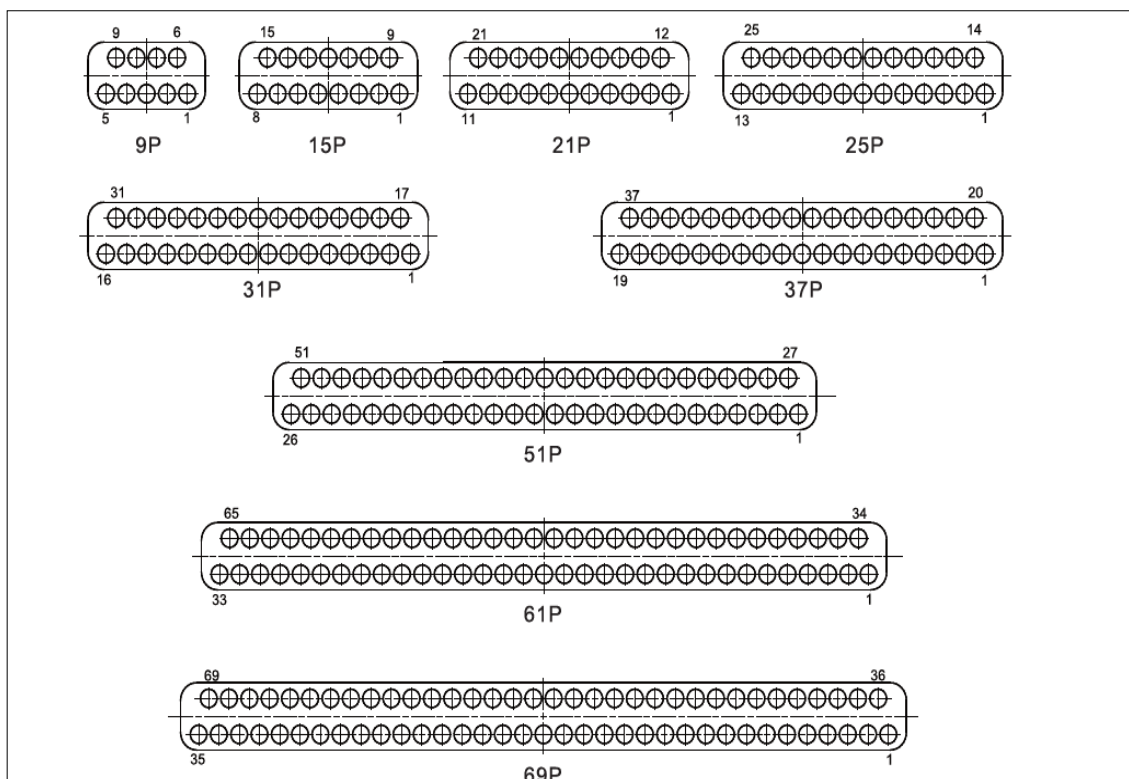
### Brief introduction

- Contacts:9,15,21,25,31,37,51,65,69
- Twist flexible micro pin (twist pin), 0.635mm pitch, micro miniature outline dimension
- Screw nut locking, it is gently when insert and extract, stably locked
- It is used for all kinds for electric circuit system interconnection which have high density, micro, light, highly reliable requirement, it can meet light and miniaturize demand
- Plug with twist pin, receptacle with socket, free terminal with locking screw, fixed terminal with nut, standard mated connector locked by screw and nut
- Standard: MIL-DTL-32139
- The sectional area of crimp conductive cable is 0.035mm<sup>2</sup>
- Undefined tolerance is±0.13

### Specification

- |   |                                 |                          |                |
|---|---------------------------------|--------------------------|----------------|
| ■ Environment:  | -55℃~+125℃                      | ■ Contact resistance:    | ≤21mΩ          |
| ■ Vibration:  | 10Hz~2000Hz 196m/s <sup>2</sup> | ■ Insulation resistance: | ≥5000MΩ 100VDC |
| ■ Shock:  | 980m/s <sup>2</sup> 6ms         | ■ Dielectric strength:   | 250V           |
| ■ Rated current:  | 1A                              | ■ Machine life:          | 200 times      |
| ■ Random vibration: power spectrum density 0.4G <sup>2</sup> /Hz, r.m.s value of total acceleration 23.1G |                                 |                          |                |

### Contact layout



Remark: The above layout is view from plug mate side end face

## How to order

<b>Series</b>	R06	-2	2	1	-C	2	-9	PI	0	-TH
<b>Contact row:</b>										
2 — tow rows										
<b>Shell plating:</b>										
2 — nickel plating										
<b>Contact plating:</b>										
1 — gold plating										
<b>Tail termination type :</b>										
C — crimp										
<b>Mounting style:</b>										
1 — free mounted										
2 — vertical mounted										
3 — horizontal mounted										
4 — crimp siamese										
5 — nut mounted										
6 — Flange mounted										
7 — Floating mounted										
<b>Contact number:</b>										
9, 15, 21, 25, 31, 37, 51, 65, 69										
<b>Contact type</b>										
PI — pin in plug										
RH — socket in receptacle										
PP — plug interconnect plug										
PS — plug interconnect receptacle										
SS — receptacle interconnect receptacle										
<b>Tail cover :</b>										
0 — without tail cover										
1 — with tail cover										
<b>Locking component type:</b>										
00 — without locking component										
JC — locking screw(straight slot)										
JC1 — locking screw(hex, not recommend )										
TH — connect nut										
NH — guide hole with nut mounted										

## Choose mating connector

- When choosing mating connector with locking accessories usually choose the locking component which one side with connect nut(TH), the other side with locking screw(JC).
- When choosing product with guide accessories,connector without locked component but only with guide component,it need fix on mounting panel after mated,for avoiding connector take off. When choosing mating connector with guide components usually choose the guide component which one side with guide pin, the other side with guide hole



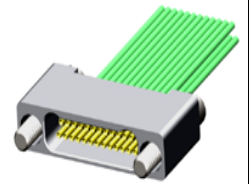
# Free Mounted Crimp Series

## Order marks

<b>Series</b>	R06	-2	2	1	-C	1	-25	PI	0	-JC
<b>Contact row:</b>	2 — tow rows									
<b>Shell plating:</b>	2 — nickel plating									
<b>Contact plating:</b>	1 — gold plating									
<b>Termination type :</b>	C — crimp									
<b>Mounting style:</b>	1 — free mounted									
<b>Contact number:</b>	9、15、21、25、31、37、51、65、69									
<b>Contact type</b>	PI — pin in plug					RH — socket in receptacle				
<b>Tail cover :</b>	0 — without tail cover									
<b>Locking type:</b>	JC — locking screw(straight slot, C dimension=1.5mm) JC1 — locking screw(hex, not recommend , C dimension=2.1mm)									



plug

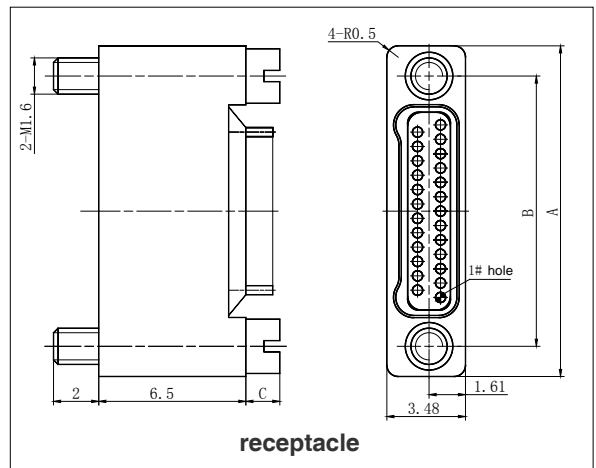
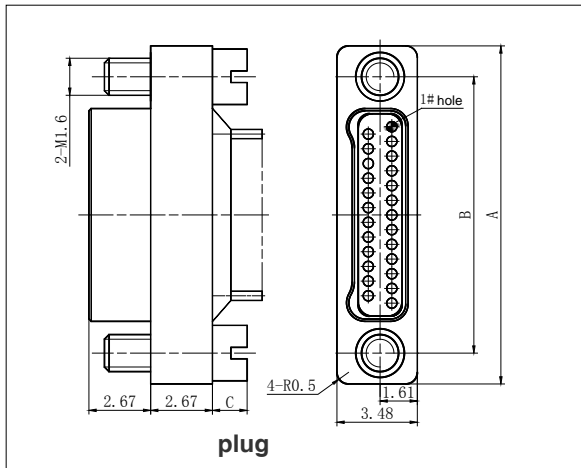


receptacle

### Remark

- Locking screw fixed on the outer shell, can't disassembly
- Connector is free mounted, not fixed, usually mated with connector which have nut
- Recommended JC(straight slot) types of screws, tight by miniature straight screwdriver
- When choose JC1(hex) type of screws, tight by 1.27mm subtense hex screwdriver.

## Outline dimension




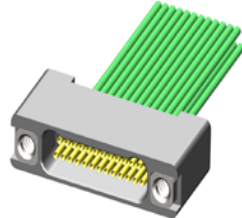
Pin count	Dimension		Pin count	Dimension		Pin count	Diension	
	A	B		A	B		A	B
9pins	9.63	6.86	15pins	11.53	8.76	21pins	13.44	10.67
25pins	14.71	11.94	31pins	16.61	13.84	37pins	18.52	15.75
51pins	22.96	20.19	65pins	27.41	24.64	69pins	28.68	25.91

Remark: All dimensions are in mm



## Vertical Mounted Crimp Series

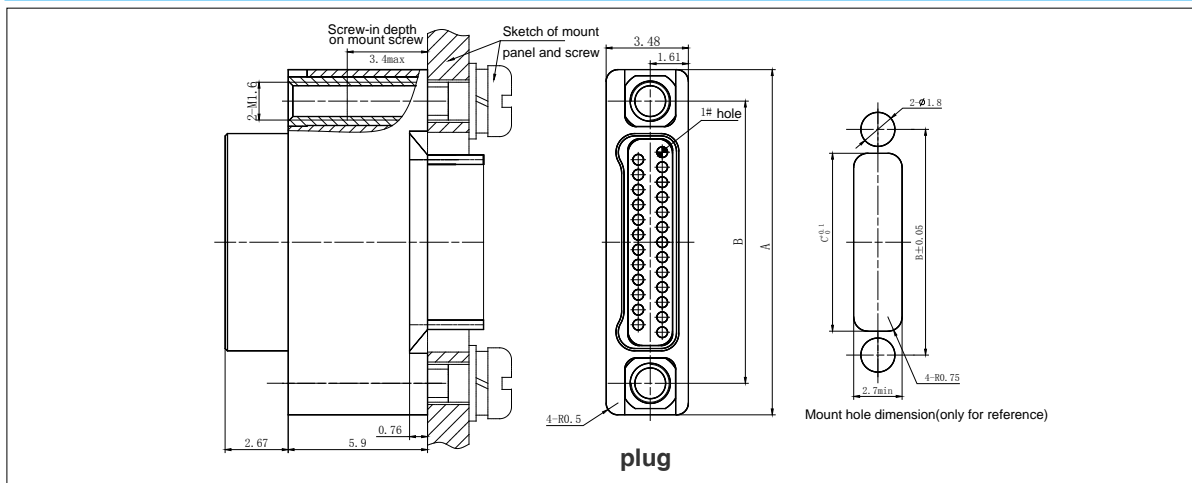
### Order marks

<b>Series</b>	R06	-2	2	1	-C	2	-25	RH	0	-TH	 <p>plug</p>  <p>receptacle</p>
<b>Contact row:</b>	2 — tow rows										
<b>Shell plating:</b>	2 — nickel plating										
<b>Contact plating:</b>	1 — gold plating										
<b>Termination type :</b>	C — crimp										
<b>Mounting style:</b>	2 — vertical mounted										
<b>Contact number:</b>	9、15、21、25、31、37、51、65、69										
<b>Contact type</b>	PI — pin in plug					RH — socket in receptacle					
<b>Tail cover :</b>	0 — without tail cover										
<b>Locking type:</b>	TH — connect nut										

### Remark

- Connecting nut with thread structure forepart used for locking screw,back part used for mounting
- The connector with connect nut that usually mated with connector which have locking screw

### Outline dimension



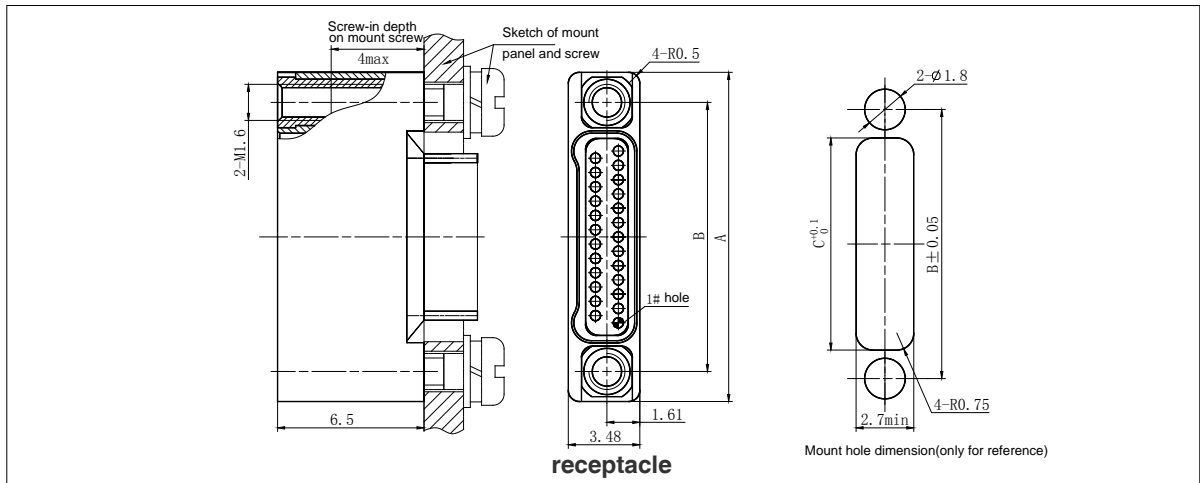
Pin count	Dimension			Pin count	Dimension			Pin count	Dimension		
	A	B	C		A	B	C		A	B	C
9pins	9.63	6.86	4.2	15pins	11.53	8.76	6.1	21pins	13.44	10.67	8
25pins	14.71	11.94	9.3	31pins	16.61	13.84	11.2	37pins	18.52	15.75	13.1
51pins	22.96	20.19	17.55	65pins	27.41	24.64	22	69pins	28.68	25.91	23.25

Remark: All dimensions are in mm



## Vertical Mounted Crimp Series

### Outline dimension




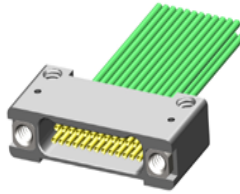
Pin count	Dimension			Pin count	Dimension			Pin count	Diension		
	A	B	C		A	B	C		A	B	C
9pins	9.63	6.86	4.2	15pins	11.53	8.76	6.1	21pins	13.44	10.67	8
25pins	14.71	11.94	9.3	31pins	16.61	13.84	11.2	37pins	18.52	15.75	13.1
51pins	22.96	20.19	17.55	65pins	27.41	24.64	22	69pins	28.68	25.91	23.25

Remark: All dimensions are in mm



# Horizontal Mounted Crimp Series

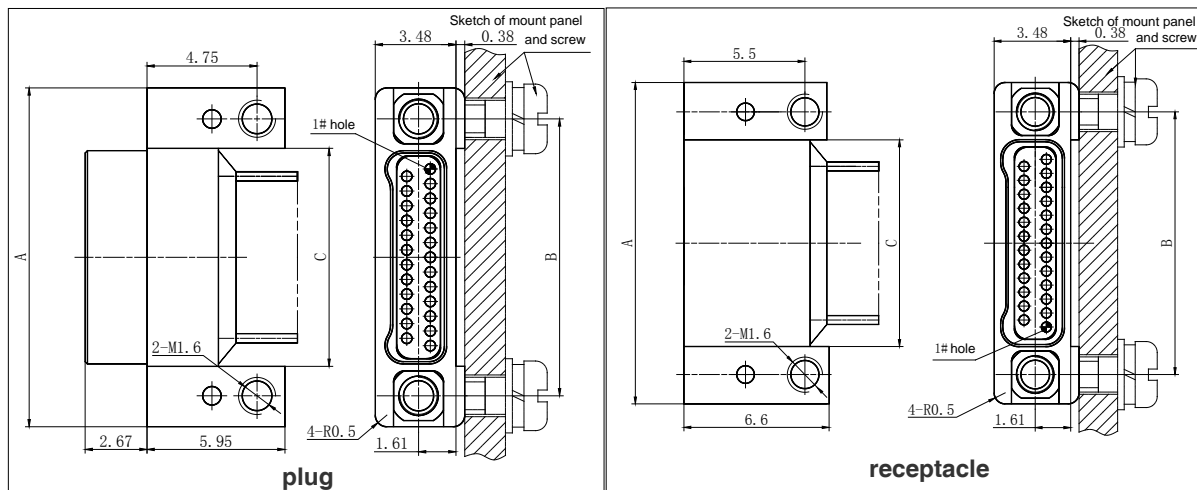
## Order marks

<b>Series</b>	R06	-2	2	1	-C	3	-25	RH	0	-TH	 <p>plug</p>  <p>receptacle</p>
<b>Contact row:</b>	2 — tow rows										
<b>Shell plating:</b>	2 — nickel plating										
<b>Contact plating:</b>	1 — gold plating										
<b>Termination type :</b>	C— crimp										
<b>Mounting style:</b>	3 — horizontal mounted										
<b>Contact number:</b>	9、15、21、25、31、37、51、65、69										
<b>Contact type</b>	PI — pin in plug      RH— socket in receptacle										
<b>Tail cover :</b>	0— without tail cover										
<b>Locking type:</b>	TH— connect nut										

### Remark

- Connector is horizontal mounted
- The connector with connect nut that usually mated with connector which have locking screw

## Outline dimension



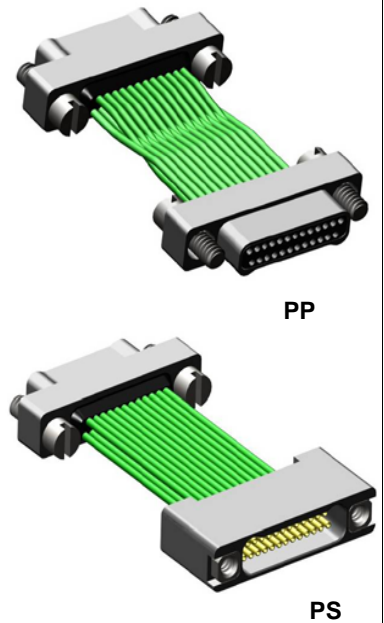
Pin count	Dimension			Pin count	Dimension			Pin count	Dimension		
	A	B	C		A	B	C		A	B	C
9pins	9.63	6.86	4.31	15pins	11.53	8.76	6.22	21pins	13.44	10.67	8.13
25pins	14.71	11.94	9.40	31pins	16.61	13.84	11.30	37pins	18.52	15.75	13.21
51pins	22.96	20.19	17.65	65pins	27.41	24.64	22.10	69pins	28.68	25.91	23.37

Remark: All dimensions are in mm

## Crimp Siamese Connection Series

### Order marks

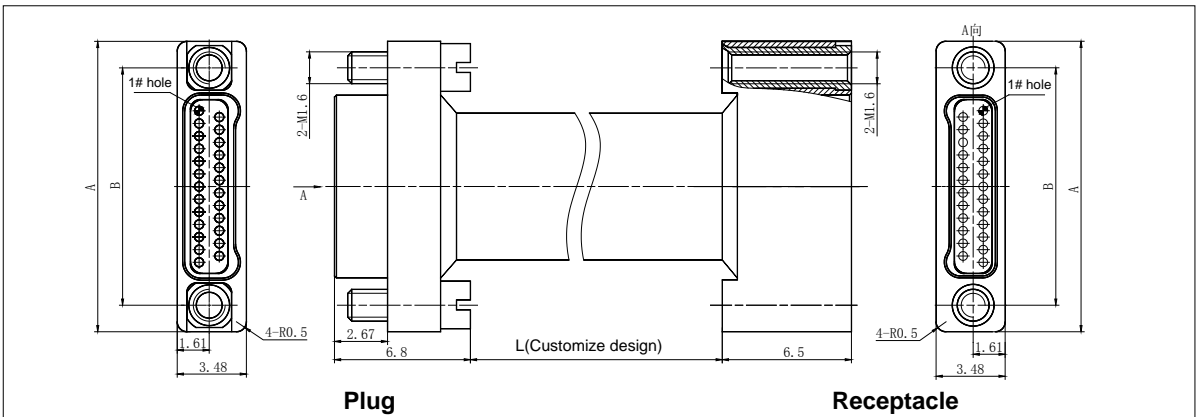
Series	R06	-2	2	1	-C	4	-25	PP
<b>Contact row:</b>	2 — tow rows							
<b>Shell plating:</b>	2 — nickel plating							
<b>Contact plating:</b>	1 — gold plating							
<b>Termination type :</b>	C— crimp							
<b>Mounting style:</b>	4 — crimp siamese							
<b>Contact number:</b>	9、15、21、25、31、37、51、65、69							
<b>Contact type:</b>	PP— plug interconnect plug PS— plug interconnect receptacle SS— receptacle interconnect receptacle							



### Remark

- The matching locking component for this series is single form. (1) Plug with locking screw (2) Receptacle with locking nut

### Outline dimension




Pin count	Dimension		Pin count	Dimension		Pin count	Dimension	
	A	B		A	B		A	B
9pins	9.63	6.86	15pins	11.53	8.76	21pins	13.44	10.67
25pins	14.71	11.94	31pins	16.61	13.84	37pins	18.52	15.75
51pins	22.96	20.19	65pins	27.41	24.64	69pins	28.68	25.91

Remark: All dimensions are in mm

## Nut Mounted Crimp Receptacle with Guid Hole Series

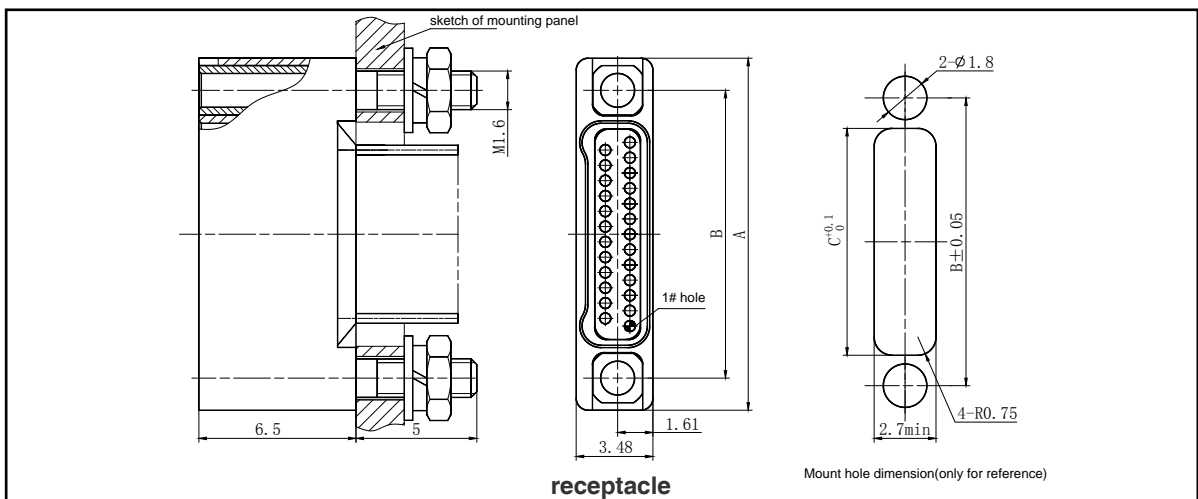
### Order marks

Series	R06	-2	2	1	-C	5	-25	RH	0	-TH	 <b>RH</b>
<b>Contact row:</b>											
2 — tow rows											
<b>Shell plating:</b>											
2 — nickel plating											
<b>Contact plating:</b>											
1 — gold plating											
<b>Termination type :</b>											
C— crimp											
<b>Mounting style:</b>											
5 — nut mounted											
<b>Contact number:</b>											
9、15、21、25、31、37、51、65、69											
<b>Contact type:</b>											
RH— socket in receptacle											
<b>Tail cover :</b>											
0— without tail cover											
<b>Locking type:</b>											
NH— guide hole with nut mounted											

### Remark

- Connector with guide hole, usually mated with plug which have guid pin

### Outline dimension



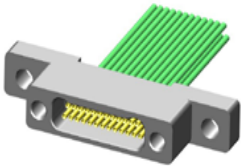
Pin count	Dimension			Pin count	Dimension			Pin count	Dimension		
	A	B	C		A	B	C		A	B	C
9pins	9.63	6.86	4.2	15pins	11.53	8.76	6.1	21pins	13.44	10.67	8
25pins	14.71	11.94	9.3	31pins	16.61	13.84	11.2	37pins	18.52	15.75	13.1
51pins	22.96	20.19	17.55	65pins	27.41	24.64	22	69pins	28.68	25.91	23.25

Remark: All dimensions are in mm



# Flange Mounted Crimp Receptacle with Guid Hole Series

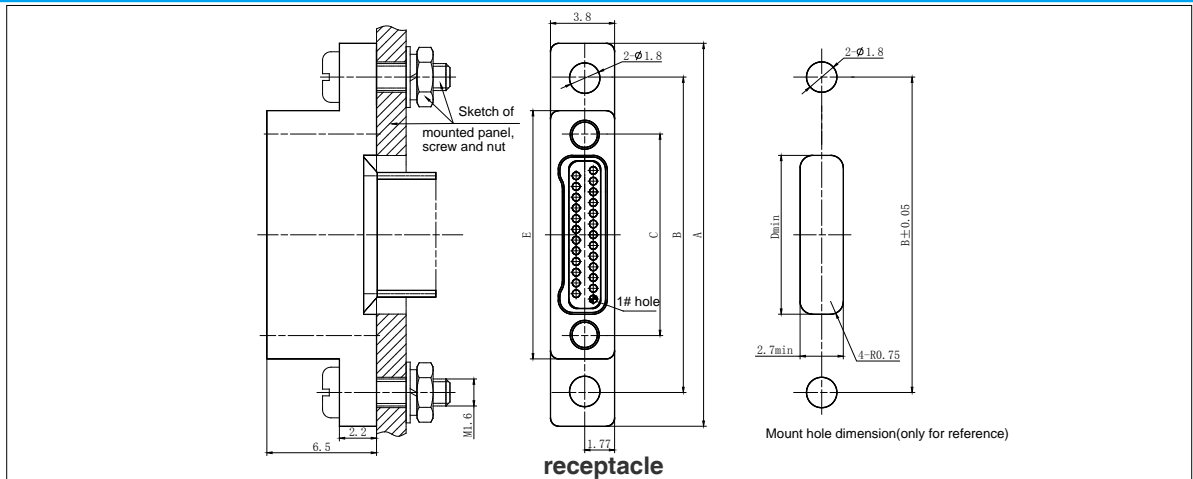
## Order marks

<b>Series</b>	R06	-2	2	1	-C	6	-25	RH	0	-00	 <p>RH</p>
<b>Contact row:</b>											
2 — tow rows											
<b>Shell plating:</b>											
2 — nickel plating											
<b>Contact plating:</b>											
1 — gold plating											
<b>Termination type :</b>											
C— crimp											
<b>Mounting style:</b>											
6 — flanget mounted											
<b>Contact number:</b>											
9、15、21、25、31、37、51、65、69											
<b>Contact type:</b>											
RH— socket in receptacle											
<b>Tail cover :</b>											
0— without tail cover											
<b>Locking type:</b>											
00 — without locking component											

### Remark

- Connector with guid hole, usually mated with plug which have guid pin

## Outline dimension

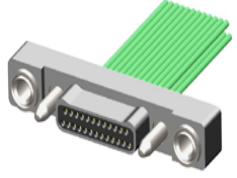


Pin count	Dimension					Pin count	Dimension				
	A	B	C	D	E		A	B	C	D	E
9pins	17.6	13.6	6.86	4.2	9.63	15pins	19.5	15.5	8.76	6.1	11.53
21pins	21.4	17.4	10.67	8	13.44	25pins	22.7	18.7	11.94	9.3	14.71
31pins	24.6	20.6	13.84	11.2	16.61	37pins	26.5	22.5	15.75	13.1	18.52
51pins	30.9	26.9	20.19	17.6	22.96	65pins	35.4	31.4	24.64	22	27.41
69pins	36.7	32.7	25.91	23.3	28.68						

Remark: All dimensions are in mm

## Floating Mounted Crimp Plug Series

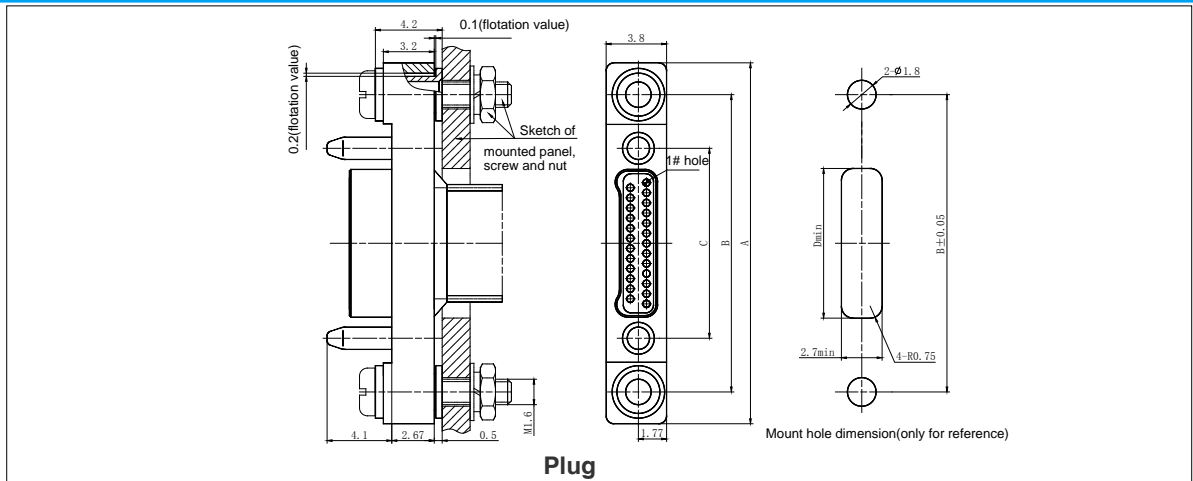
### Order marks

<b>Series</b>	R06	-2	2	1	-C	7	-25	PI	0	-00	 <p style="text-align: center;">PI</p>
<b>Contact row:</b>	2 — tow rows										
<b>Shell plating:</b>	2 — nickel plating										
<b>Contact plating:</b>	1 — gold plating										
<b>Termination type :</b>	C — crimp										
<b>Mounting style:</b>	7 — floating mounted										
<b>Contact number:</b>	9、15、21、25、31、37、51、65、69										
<b>Contact type:</b>	RH — socket in receptacle										
<b>Tail cover :</b>	0 — without tail cover										
<b>Locking type:</b>	00 — without locking component										

### Remark

- Connector with guid pin and floating tube, application on blind-mated connector
- Connector usually mated with receptacle which have guid hole

### Outline dimension



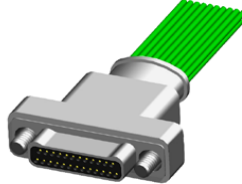

Pin count	Dimension				Pin count	Dimension			
	A	B	C	D		A	B	C	D
9pins	17.6	13.6	6.86	4.2	15pins	19.5	15.5	8.76	6.1
21pins	21.4	17.4	10.67	8	25pins	22.7	18.7	11.94	9.3
31pins	24.6	20.6	13.84	11.2	37pins	26.5	22.5	15.75	13.1
51pins	30.9	26.9	20.19	17.6	65pins	35.4	31.4	24.64	22
69pins	36.7	32.7	25.91	23.3					

Remark: All dimensions are in mm



## Free Mounted Crimp Connector with Tail Cover Series

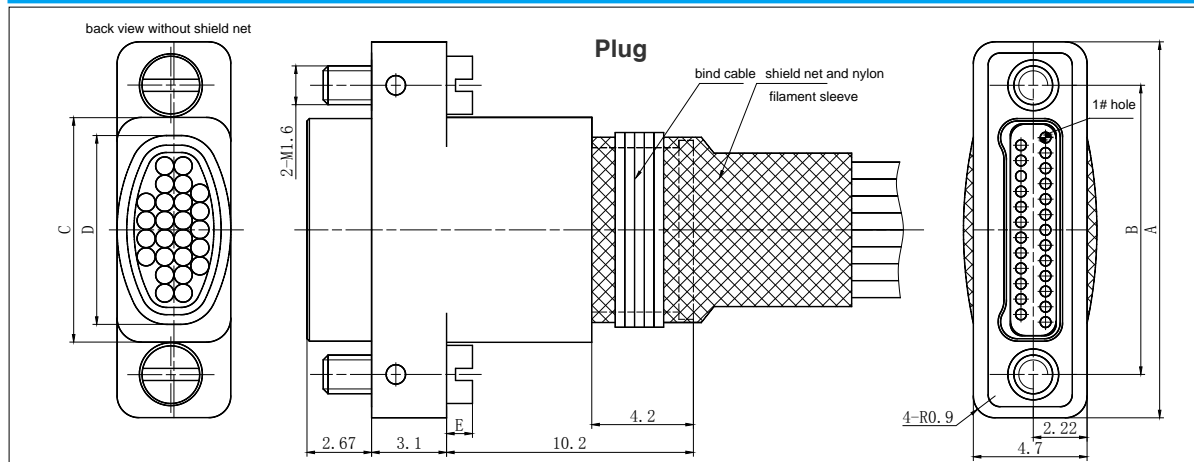
### Order marks

<b>Series</b>	R06	-2	2	1	-C	1	-25	PI	1	-JC	 <p>PI</p>  <p>RH</p>
<b>Contact row:</b>	2 — tow rows										
<b>Shell plating:</b>	2 — nickel plating										
<b>Contact plating:</b>	1 — gold plating										
<b>Termination type :</b>	C — crimp										
<b>Mounting style:</b>	1 — free mounted										
<b>Contact number:</b>	9、15、21、25、31、37、51、65、69										
<b>Contact type</b>	PI — pin in plug					RH — socket in receptacle					
<b>Tail cover :</b>	1 — with tail cover										
<b>Locking type:</b>	JC — locking screw(straight slot, E dimension=1mm) JC1 — locking screw(hex, not recommend , E dimension=1.6mm)										

### Remark

- Connector with integrated tail cover,bind shielding net on tail cover,shield whole connector,tail cover non-removable
- Connector is free mounted,not fixed,usually mated with connector which have nut
- Recommended JC(straight slot) types of screws,tight by miniature straight screwdriver
- When choose JC1(hex) type of screws,tight by 1.27mm subtense hex screwdriver.

### Outline dimension

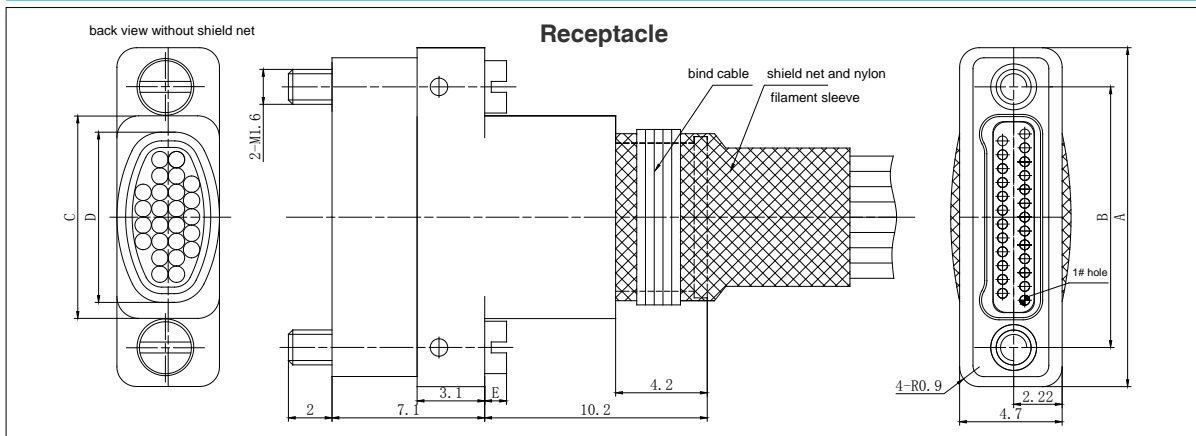


Pin count	Dimension				Pin count	Dimension			
	A	B	C	D		A	B	C	D
9pins	10.5	6.86	4.2	3.7	15pins	12.4	8.76	6.1	5
21pins	14.3	10.67	8	6.6	25pins	15.6	11.94	9.3	7.8
31pins	17.5	13.84	11.2	9.4	37pins	19.4	15.75	13.1	11.2
51pins	23.8	20.19	17.55	15.7	65pins	28.3	24.64	22	20.1
69pins	29.5	25.91	23.25	21.4					

Remark: All dimensions are in mm



## Outline dimension





Pin count	Dimension				Pin count	Dimension			
	A	B	C	D		A	B	C	D
9pins	10.5	6.86	4.2	3.7	15pins	12.4	8.76	6.1	5
21pins	14.3	10.67	8	6.6	25pins	15.6	11.94	9.3	7.8
31pins	17.5	13.84	11.2	9.4	37pins	19.4	15.75	13.1	11.2
51pins	23.8	20.19	17.55	15.7	65pins	28.3	24.64	22	20.1
69pins	29.5	25.91	23.25	21.4					

Remark: All dimensions are in mm

# Vertical Mounted Crimp Connector with Tail Cover Series

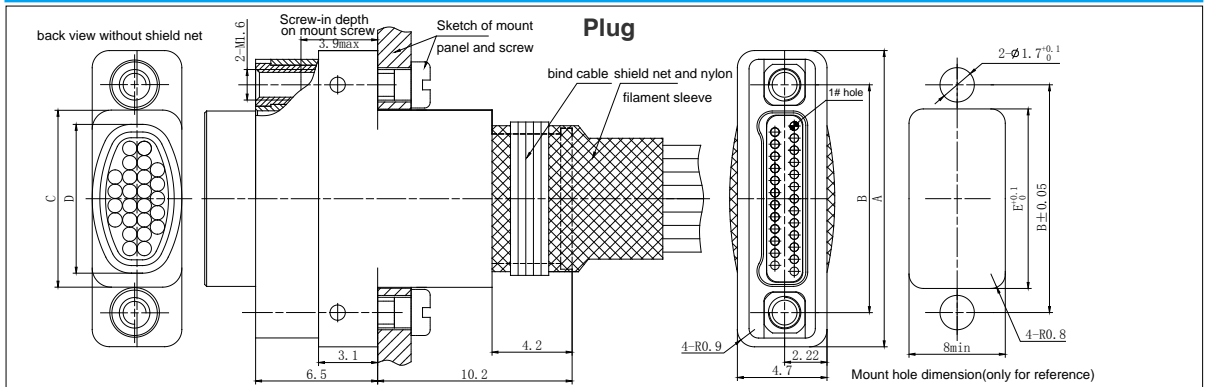
## Order marks

<b>Series</b>	R06	-2	2	1	-C	2	-25	RH	1	-TH	 <p>PI</p>  <p>RH</p>
<b>Contact row:</b>											
2 — tow rows											
<b>Shell plating:</b>											
2 — nickel plating											
<b>Contact plating:</b>											
1 — gold plating											
<b>Termination type :</b>											
C — crimp											
<b>Mounting style:</b>											
2 — vertical mounted											
<b>Contact number:</b>											
9、15、21、25、31、37、51、65、69											
<b>Contact type</b>											
PI — pin in plug      RH — socket in receptacle											
<b>Tail cover :</b>											
1 — with tail cover											
<b>Locking type:</b>											
TH — connect nut											

### Remark

- Connector with integrated tail cover,bind shielding net on tail cover,shield whole connector,tail cover non-removable
- Connector usually mated with connector which have screw
- As these series connector limited by dimension,it can't use standard M1.6mm screw,so we provide special-made M1.6\*6 mounted screw.

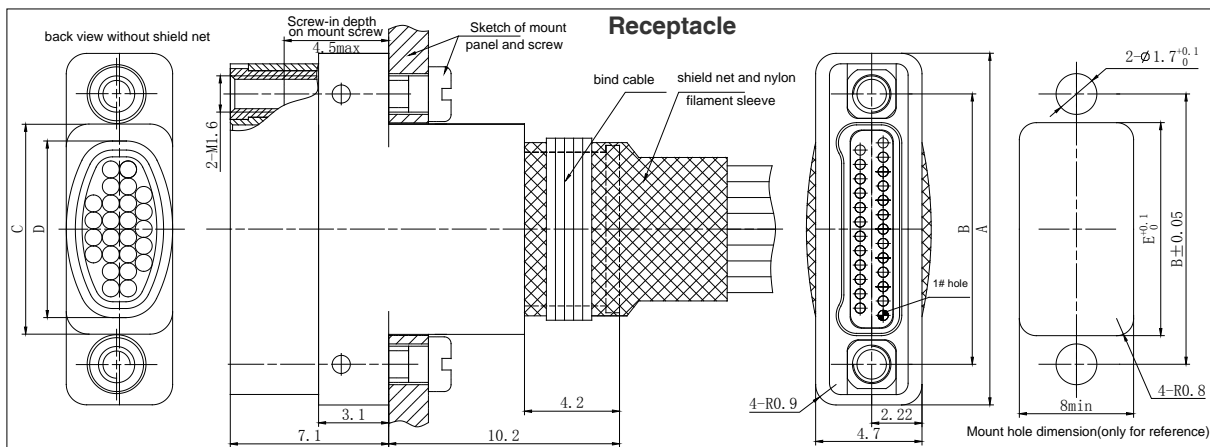
## Outline dimension



Pin count	Dimension					Pin count	Dimension				
	A	B	C	D	E		A	B	C	D	E
9pins	10.5	6.86	4.2	3.7	4.3	15pins	12.4	8.76	6.1	5	6.2
21pins	14.3	10.67	8	6.6	8.1	25pins	15.6	11.94	9.3	7.8	9.4
31pins	17.5	13.84	11.2	9.4	11.3	37pins	19.4	15.75	13.1	11.2	13.2
51pins	23.8	20.19	17.55	15.7	17.65	65pins	28.3	24.64	22	20.1	22.1
69pins	29.5	25.91	23.25	21.4	23.35						

Remark: All dimensions are in mm

## Outline dimension



Pin count	Dimension					Pin count	Dimension				
	A	B	C	D	E		A	B	C	D	E
9pins	10.5	6.86	4.2	3.7	4.3	15pins	12.4	8.76	6.1	5	6.2
21pins	14.3	10.67	8	6.6	8.1	25pins	15.6	11.94	9.3	7.8	9.4
31pins	17.5	13.84	11.2	9.4	11.3	37pins	19.4	15.75	13.1	11.2	13.2
51pins	23.8	20.19	17.55	15.7	17.65	65pins	28.3	24.64	22	20.1	22.1
69pins	29.5	25.91	23.25	21.4	23.35						


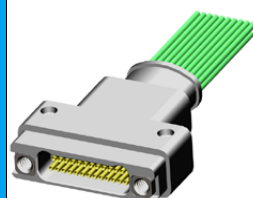
Remark: All dimensions are in mm





## Horizontal Mounted Crimp Connector with Tail Cover Series

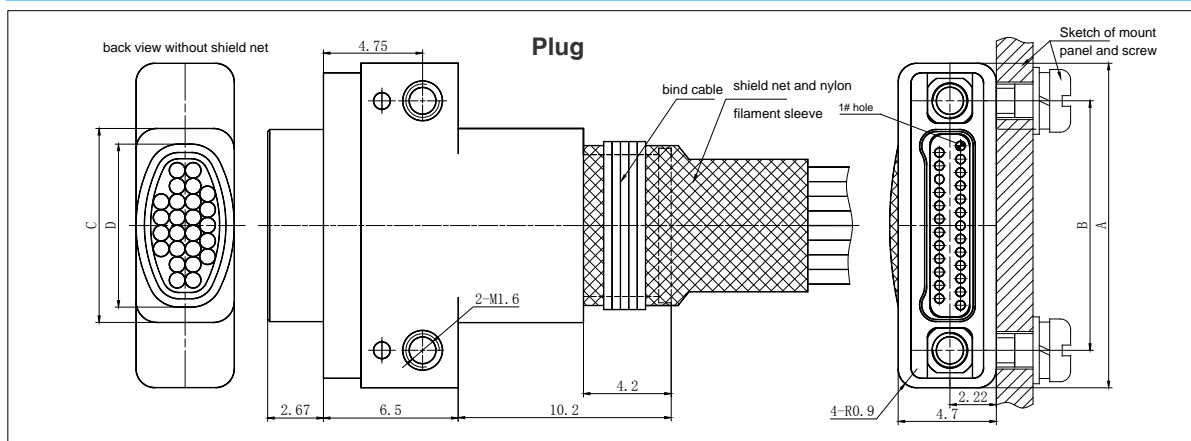
### Order marks

<b>Series</b>	R06	-2	2	1	-C	3	-25	RH	1	-TH	 <p>PI</p>  <p>RH</p>
<b>Contact row:</b>											
2 — tow rows											
<b>Shell plating:</b>											
2 — nickel plating											
<b>Contact plating:</b>											
1 — gold plating											
<b>Termination type :</b>											
C — crimp											
<b>Mounting style:</b>											
3 — horizontal mounted											
<b>Contact number:</b>											
9、15、21、25、31、37、51、65、69											
<b>Contact type</b>											
PI — pin in plug      RH — socket in receptacle											
<b>Tail cover :</b>											
1 — with tail cover											
<b>Locking type:</b>											
TH — connect nut											

### Remark

- Connector with integrated tail cover,bind shielding net on tail cover,shield whole connector,tail cover non-removable
- Connector usually mated with connector which have screw

### Outline dimension

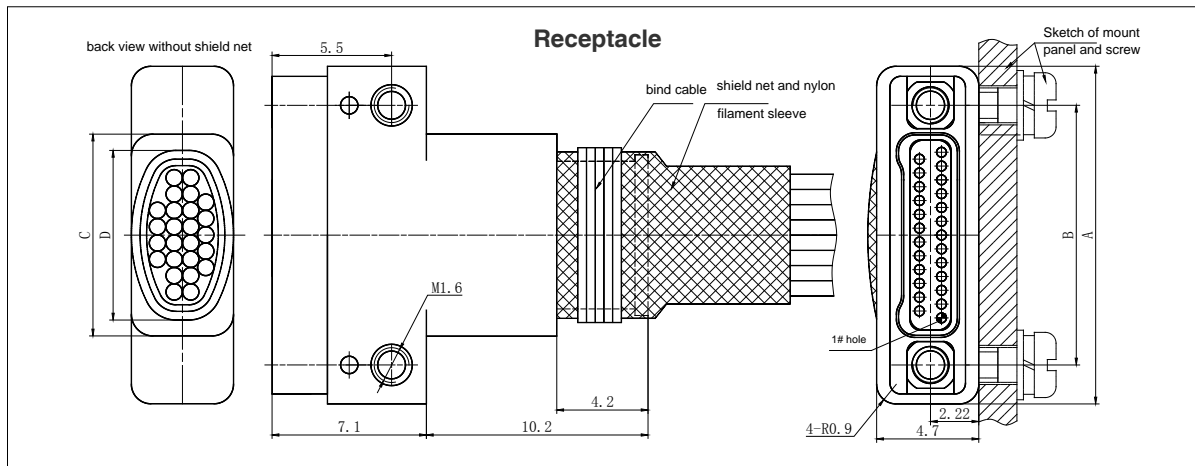


Pin count	Dimension				Pin count	Dimension			
	A	B	C	D		A	B	C	D
9pins	10.5	6.86	4.2	3.7	15pins	12.4	8.76	6.1	5
21pins	14.3	10.67	8	6.6	25pins	15.6	11.94	9.3	7.8
31pins	17.5	13.84	11.2	9.4	37pins	19.4	15.75	13.1	11.2
51pins	23.8	20.19	17.55	15.7	65pins	28.3	24.64	22	20.1
69pins	29.5	25.91	23.25	21.4					

Remark: All dimensions are in mm



## Outline dimension



Pin count	Dimension				Pin count	Dimension			
	A	B	C	D		A	B	C	D
9pins	10.5	6.86	4.2	3.7	15pins	12.4	8.76	6.1	5
21pins	14.3	10.67	8	6.6	25pins	15.6	11.94	9.3	7.8
31pins	17.5	13.84	11.2	9.4	37pins	19.4	15.75	13.1	11.2
51pins	23.8	20.19	17.55	15.7	65pins	28.3	24.64	22	20.1
69pins	29.5	25.91	23.25	21.4					

Remark: All dimensions are in mm



# MIL-DTL-32139 Nano D-sub Connectors

## R06 Straight to PCB Series

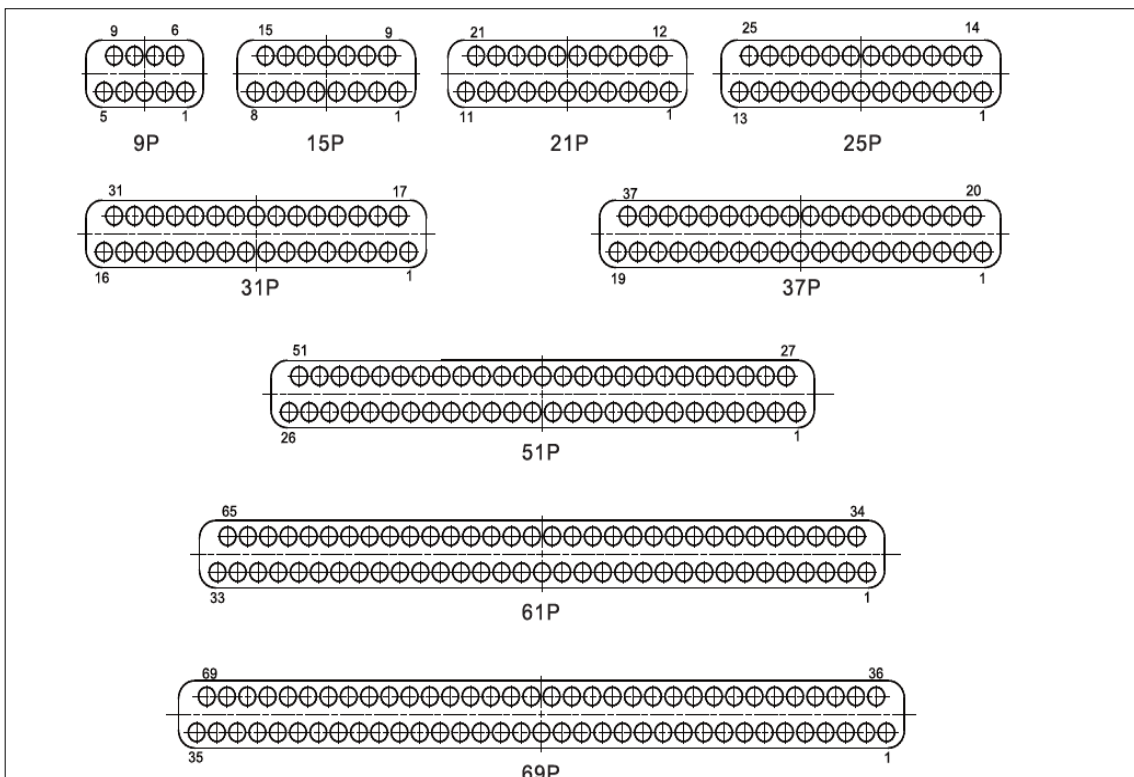
### Brief introduction

- Contacts:9,15,21,25,31,37,51,65,69
- Twist flexible micro pin (twist pin), 0.635mm pitch, micro miniature outline dimension
- Screw nut locking, it is gently when insert and extract, stably locked
- It is used for all kinds for electric circuit system interconnection which have high density, micro, light, highly reliable requirement, it can meet light and miniaturize demand
- Plug with twist pin, receptacle with socket, free terminal with locking screw, fixed terminal with nut, standard mated connector locked by screw and nut
- Standard: MIL-DTL-32139
- Undefined tolerance is $\pm 0.13$

### Specification

- |                     |   |                          |                           |
|---------------------|---|--------------------------|---------------------------|
| ■ Environment:      | -55°C~+125°C  | ■ Contact resistance:    | $\leq 21m\Omega$          |
| ■ Vibration:        | 10Hz~2000Hz 196m/s <sup>2</sup>   | ■ Insulation resistance: | $\geq 5000M\Omega$ 100VDC |
| ■ Shock:            | 980m/s <sup>2</sup> 6ms   | ■ Dielectric strength:   | 250V                      |
| ■ Rated current:    | 1A  | ■ Machine life:          | 200 times                 |
| ■ Random vibration: | power spectrum density 0.4G <sup>2</sup> /Hz, r.m.s value of total acceleration 23.1G |                          |                           |

### Contact layout

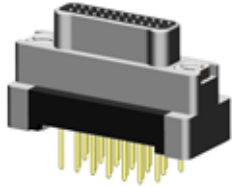
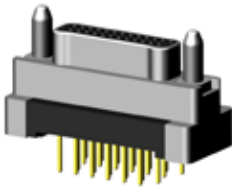


Remark: The above layout is view from plug mate side end face



# R06 Straight to PCB Plug Series

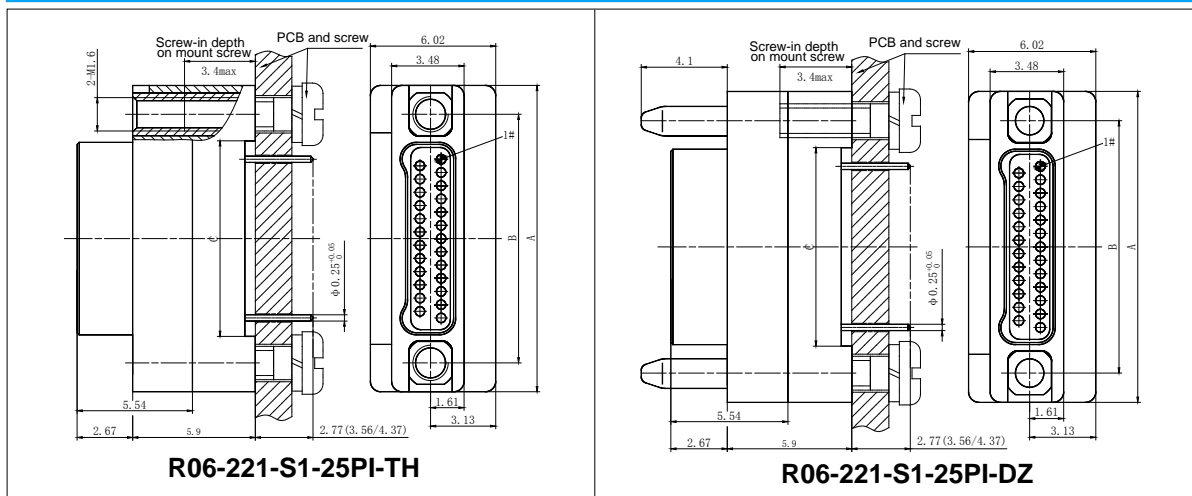
## Order marks

<b>Series</b>	R06	-2	2	1	-S	1	-25	PI	-TH	 <p><b>R06-221-S1-25PI-TH</b></p>  <p><b>R06-221-S1-25PI-DZ</b></p>
<b>Contact row:</b>	2 — tow rows									
<b>Shell plating:</b>	2 — nickel plating									
<b>Contact plating:</b>	1 — gold plating									
<b>Tail termination type :</b>	S — straight to pcb									
<b>Tail length:</b>	1 — 2.77mm 2 — 3.56mm 3 — 4.37mm									
<b>Contact number:</b>	9、15、21、25、31、37、51、65、69									
<b>Contact type :</b>	PI — pin in plug									
<b>Locking type:</b>	DZ — guide pin      TH — connect nut									

### Remark

- R06-221-S\*-\*\*PI-TH usually mated with receptacle which have locking screw, R06-221-S\*-\*\*PI-DZ usually mated with receptacle which have guide hole
- 3 kinds of tail length, customized produce for other length

## Outline dimension

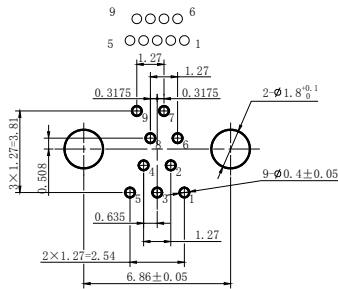
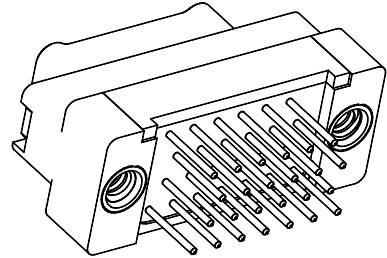
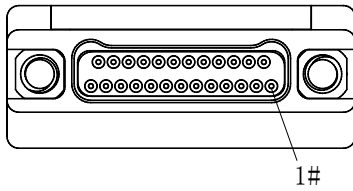


Pin count	Dimension			Pin count	Dimension			Pin count	Dimension		
	A	B	C		A	B	C		A	B	C
9pins	9.63	6.86	4.31	15pins	11.53	8.76	6.22	21pins	13.44	10.67	8.13
25pins	14.71	11.94	9.4	31pins	16.61	13.84	11.3	37pins	18.52	15.75	13.21
51pins	22.96	20.19	17.65	65pins	27.41	24.64	22.10	69pins	28.68	25.91	23.37

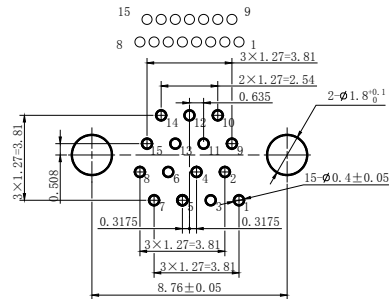
Remark: All dimensions are in mm



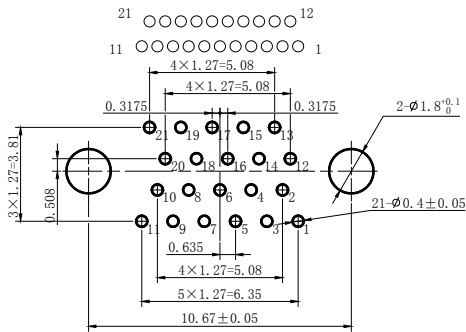
## Suggested PCB Layout



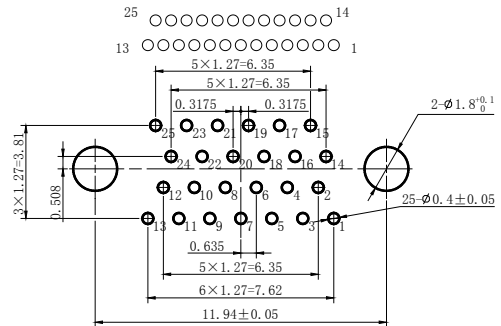
**R06-221-S1/S2/S3-9PI-TH**



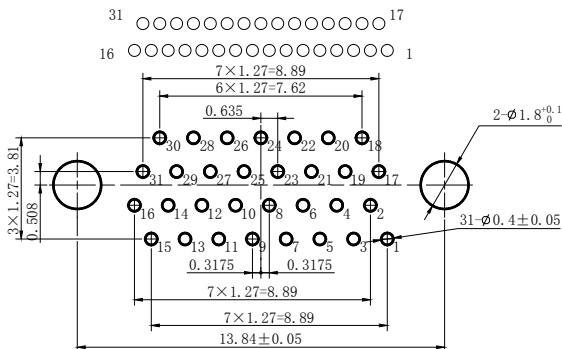
**R06-221-S1/S2/S3-15PI-TH**



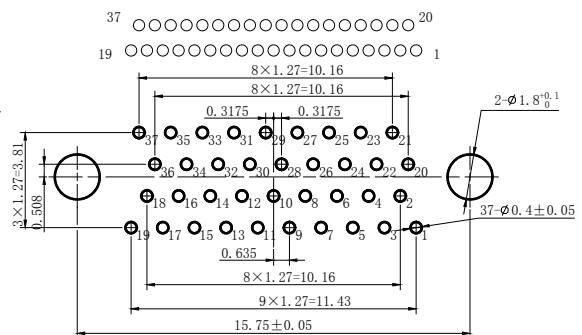
**R06-221-S1/S2/S3-21PI-TH**



**R06-221-S1/S2/S3-25PI-TH**



**R06-221-S1/S2/S3-31PI-TH**



**R06-221-S1/S2/S3-37PI-TH**


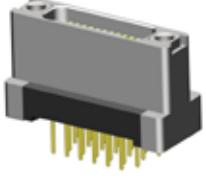
Remark: All dimensions are in mm





# R06 Straight to PCB Receptacle Series

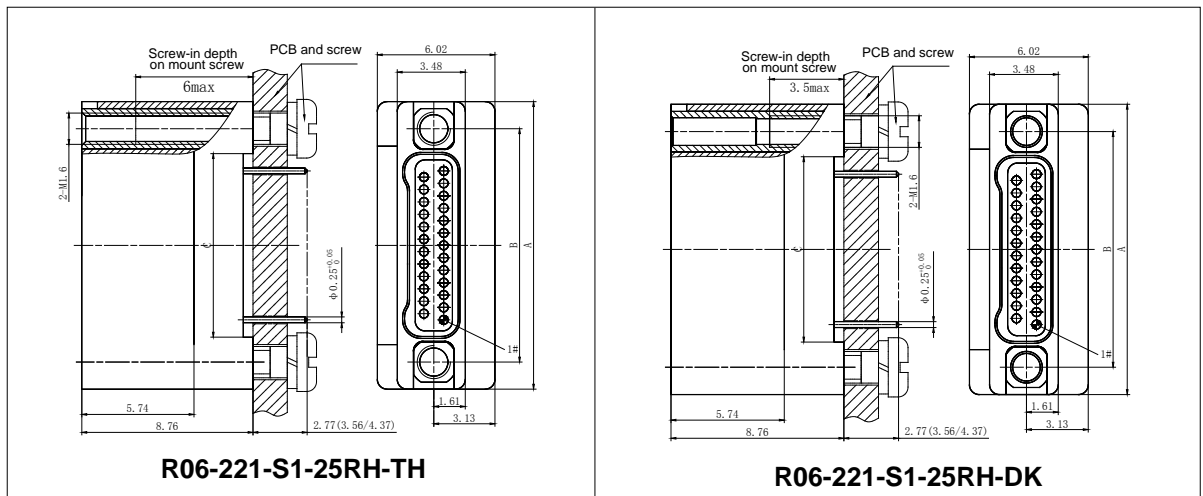
## Order marks

Series	R06	-2	2	1	-S	1	-25	RH	-TH	 <p>R06-221-S1-25RH-TH</p>  <p>R06-221-S1-25RH-DK</p>
<b>Contact row:</b>										
2 — tow rows										
<b>Shell plating:</b>										
2 — nickel plating										
<b>Contact plating:</b>										
1 — gold plating										
<b>Tail termination type :</b>										
S — straight to pcb										
<b>Tail length:</b>										
1 — 2.77mm										
2 — 3.56mm										
3 — 4.37mm										
<b>Contact number:</b>										
9、15、21、25、31、37、51、65、69										
<b>Contact type :</b>										
RH — socket in receptacle										
<b>Locking type:</b>										
DK — guide hole      TH — connect nut										

### Remark

- R06-221-S\*-\*\*RH-TH usually mated with plug which have locking screw, R06-221-S\*-\*\*PI-DK usually mated with plug which have guide pin
- 3 kinds of tail length, customized produce for other length

## Outline dimension

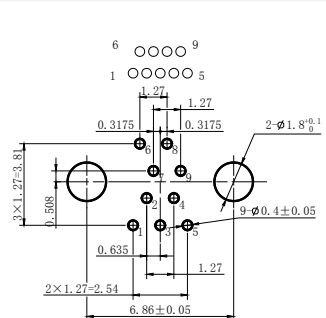
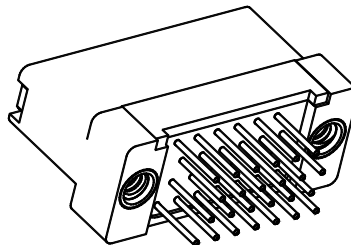
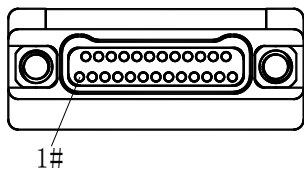


Pin count	Dimension			Pin count	Dimension			Pin count	Dimension		
	A	B	C		A	B	C		A	B	C
9pins	9.63	6.86	4.31	15pins	11.53	8.76	6.22	21pins	13.44	10.67	8.13
25pins	14.71	11.94	9.4	31pins	16.61	13.84	11.3	37pins	18.52	15.75	13.21
51pins	22.96	20.19	17.65	65pins	27.41	24.64	22.10	69pins	28.68	25.91	23.37

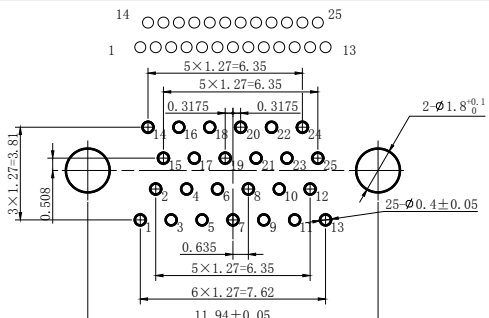
Remark: All dimensions are in mm



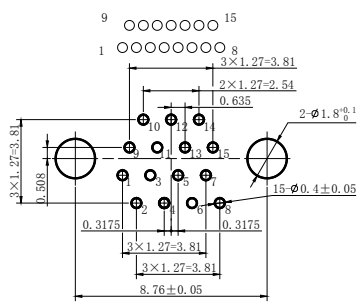
## Suggested PCB Layout



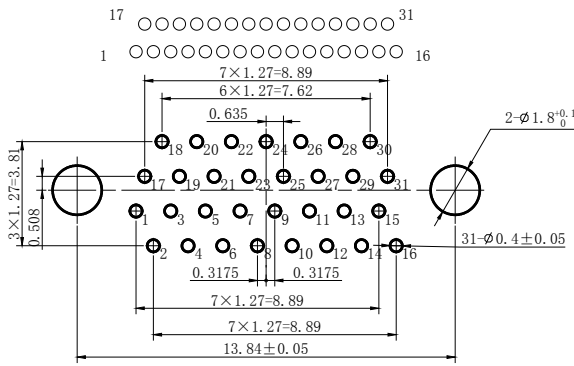
**R06-221-S1/S2/S3-9RH-TH**



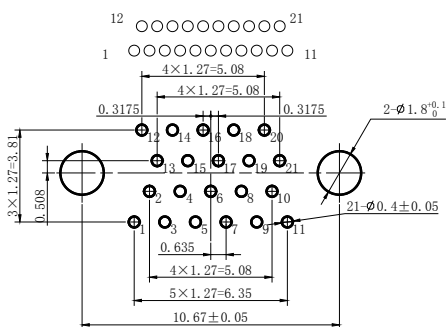
**R06-221-S1/S2/S3-25RH-TH**



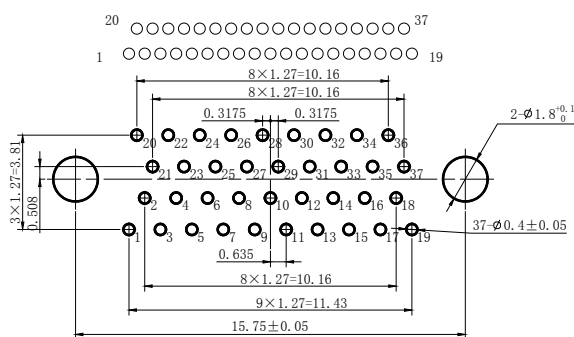
**R06-221-S1/S2/S3-15RH-TH**



**R06-221-S1/S2/S3-31RH-TH**



**R06-221-S1/S2/S3-21RH-TH**

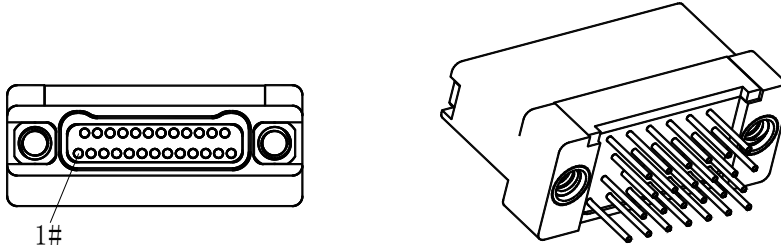


**R06-221-S1/S2/S3-37RH-TH**

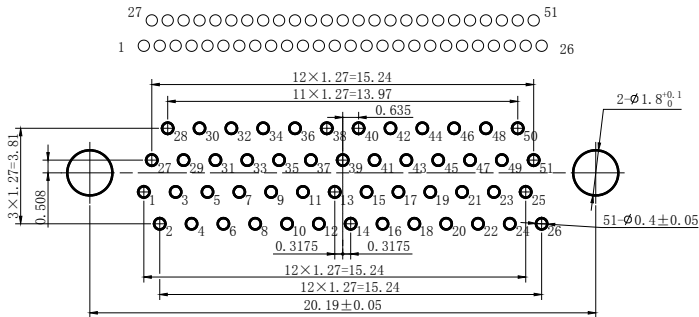
Remark: All dimensions are in mm



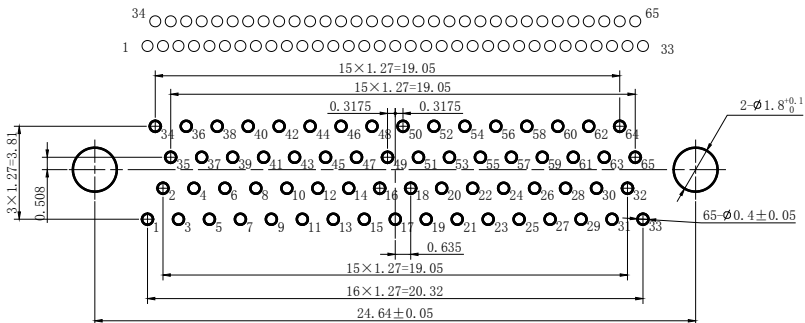
## Suggested PCB Layout



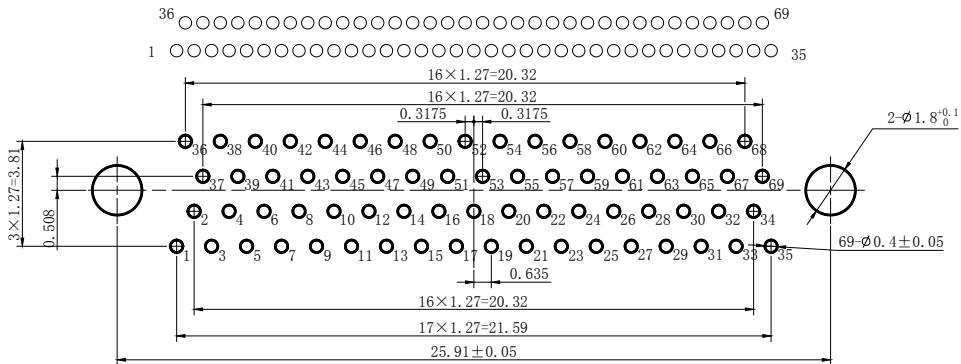
1#



**R06-221-S1/S2/S3-51RH-TH**



**R06-221-S1/S2/S3-65RH-TH**



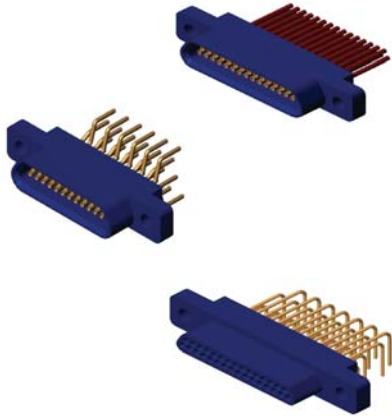
**R06-221-S1/S2/S3-69RH-TH**

Remark: All dimensions are in mm



# MIL-DTL-83513 Micro-D Plastic Connectors

## R04 Series Microminiature Rectangular Connector



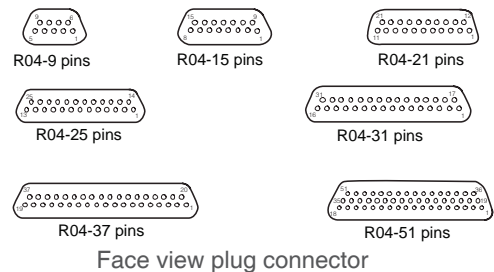
### Introduction

- Micro-D connectors
- Twist pin contact, high density interconnection
- Plastic connectors, raw material: PPS or PBT  
PPS-15% Glass filled polyphenylene sulfide  
PBT-20% Glass filled polybutylene terephthalate
- Contacts:BeCu,gold over nickel plating
- Gold thickness:1.27micron minimum)
- Termination style:  
Crimp,solder cup,straight to PCB,riht angle to PCB
- The sectional area of cable:0.1mm<sup>2</sup>~0.15mm<sup>2</sup>,0.07mm<sup>2</sup>
- Meet MIL-DTL-83513

### Specification

- Environment temperature: -55°C~125°C
- Vibration: 10Hz~2000Hz, 196m/s<sup>2</sup>
- Random vibration: Power spectrum density 0.4G<sup>2</sup>/Hz  
root mean square value of total acceleration 23.1G
- Shock: 735m/s<sup>2</sup> 11ms
- Rated current: 3A
- Contact resistance: ≤10mΩ
- Insulation resistance: ≥5000 MΩ
- Dielectric strength: 800V
- Durability: 500 times

### Contact arrangements



### How To Order

Sample part number      **R04**      **-25**      **PI**      **S**      **K03**

#### Series:

R04—Series of Sunkye,plastic shell

#### Contact number:

9, 15, 21, 25, 31, 37, 51ins

#### Contact type :

PI—pin in plug      RH—socket in receptacle





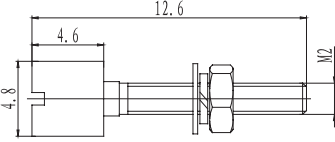


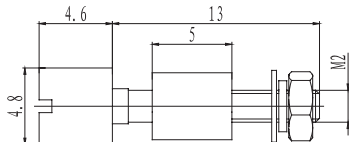


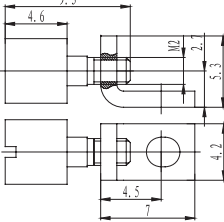


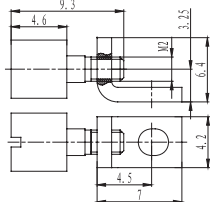

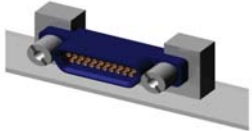
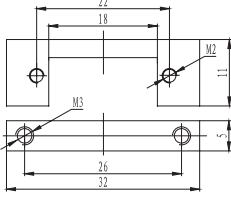


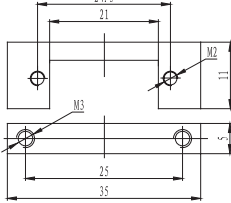
#### Termination style:

Blank—crimp contact      J—solder cup  
S—straight to PCB,the column spacing of tail is 2.54mm  
S1—straight to PCB, the net grid spacing of tail is 2.54 X 2.54mm  
F—right angle to PCB, the net grid spacing of tail is 2.54X2.54mm  
FJ—right angle to PCB, the net grid spacing of tail is 1.27 X 2.54mm  
FM—right angle to PCB and surface mounting,only for middle locking connectors

#### Accessories:

blank—without, more information please see page2

### R04 Series Accessories

Type	Before assembling	Assembly Picture	Outerline Dimension	Feature and Matching Accessories
K01			Standard Accessories	<ol style="list-style-type: none"> <li>1. Screw post size:M2*6</li> <li>2. Matching Accessories: K02, K03</li> </ol>
K02				<ol style="list-style-type: none"> <li>1. Just suitable for front panel mountin</li> <li>2. Matching Accessories : K01</li> </ol>
K03				<ol style="list-style-type: none"> <li>1. Suitable for straight to pcb type connectors and pcb thickness not over 2.5mm.</li> <li>2. Matching Accessories: K01</li> </ol>
K04				<ol style="list-style-type: none"> <li>1. Suitable for R04-9, 15, 21 25, 31, 37PIF/PIFJ/ RHF/RHFJ</li> <li>2. Matching Accessories: K01</li> </ol>
K05				<ol style="list-style-type: none"> <li>1. Suitable for R04-51PIF/ PIFJ/ RHF/ RHFJ</li> <li>2. Matching Accessories: K01</li> </ol>
K06				<ol style="list-style-type: none"> <li>1. Suitable for R04-9, 15, 21 25, 31, 37PIF/PIFJ/ RHF/RHFJ</li> <li>2. K06 include K01 locking screw post, but didn't show in the drawing</li> </ol>
K07				<ol style="list-style-type: none"> <li>1. Suitable for R04-51PIF/ PIF-J/ RHF/ RHF-J</li> <li>2. K07 include K01 locking screw post, but didn't show in the drawing</li> </ol>

Note:All dimensions in mm



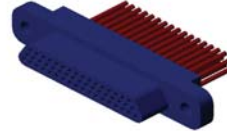
**Product solid picture of crimp type**



R04-31PI



R04-31RH

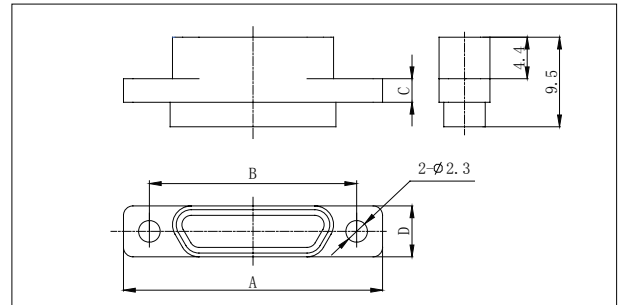
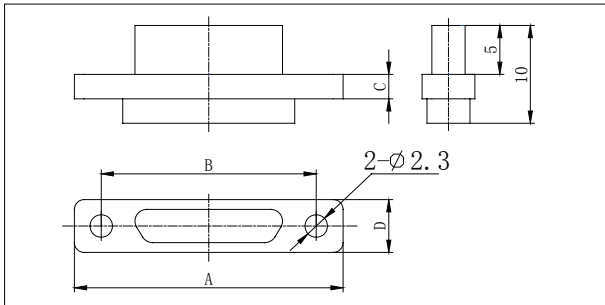


R04-51PI



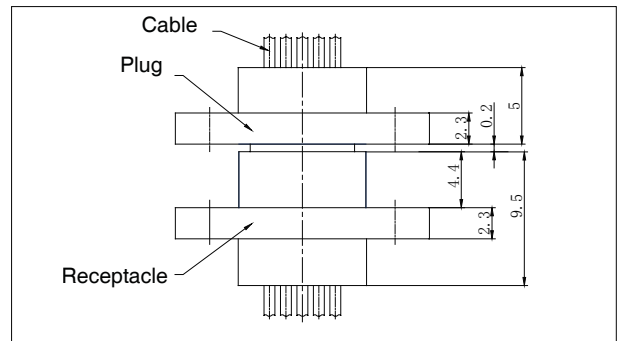
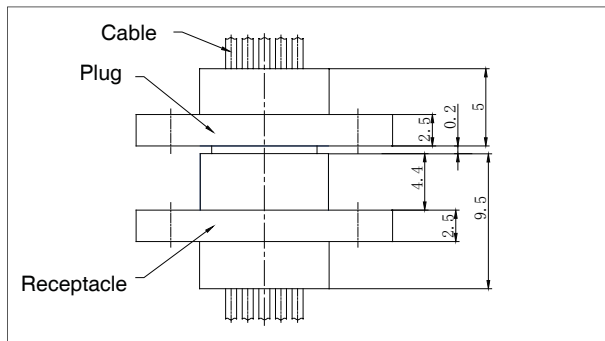
R04-51RH

**Outline dimension for sold cup and crimp type**



Part no.	A	B	C	D	Part no.	A	B	C	D
R04-9PI/9PIJ	19.8	14.3	2.5	5.4	R04-9RH/9RHJ	19.8	14.3	2.5	5.4
R04-15PI/15PIJ	23.6	18.2	2.5	5.4	R04-15RH/15RHJ	23.6	18.2	2.5	5.4
R04-21PI/21PIJ	27.5	22	2.5	5.4	R04-21RH/RHJ	27.5	22	2.5	5.4
R04-25PI/25PIJ	30	24.5	2.5	5.4	R04-25RH/25RHJ	30	24.5	2.5	5.4
R04-31PI/31PIJ	33.7	28.3	2.5	5.4	R04-31RH/31RHJ	33.7	28.3	2.5	5.4
R04-37PI/37PIJ	37.5	32.2	2.5	5.4	R04-37RH/37RHJ	37.5	32.2	2.5	5.4
R04-51PI/51PIJ	36.3	30.8	2.3	6.5	R04-51RH/51RHJ	36.3	30.8	2.3	6.5

**Outline dimension after matching**



Note: All dimensions in mm

Product solid picture of straight to PCB (S type)



R04-21PIS



R04-21RHS

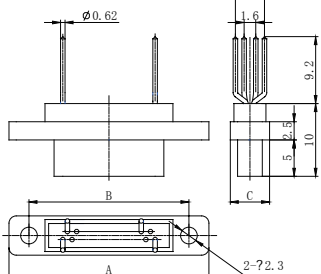


R04-51PIS

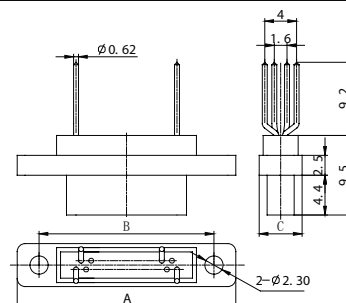


R04-51RHS

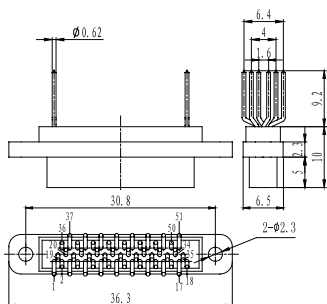
Outline dimension



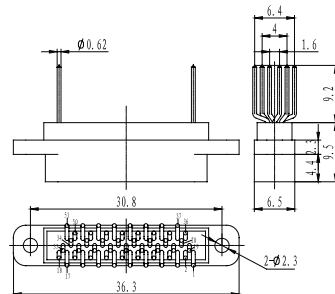
R04-9-37PIS



R04-9-37RHS



R04-51PIS



R04-51RHS

Part no.	A	B	C	Part no.	A	B	C
R04-9PIS	19.8	14.3	5.4	R04-9RHS	19.8	14.3	5.4
R04-15PIS	23.6	18.2	5.4	R04-15RHS	23.6	18.2	5.4
R04-21PIS	27.5	22	5.4	R04-21RHS	27.5	22	5.4
R04-25PIS	30	24.5	5.4	R04-25RHS	30	24.5	5.4
R04-31PIS	33.7	28.3	5.4	R04-31RHS	33.7	28.3	5.4
R04-37PIS	37.5	32.2	5.4	R04-37RHS	37.5	32.2	5.4

Note: All dimensions in mm

Product solid picture of straight to PCB (S1 type)



R04-25PIS1



R04-25RHS1

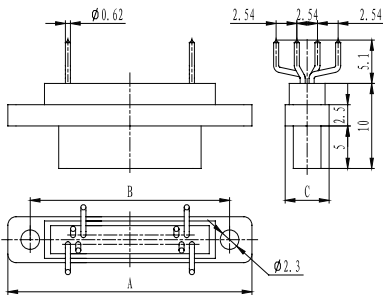


R04-51PIS1

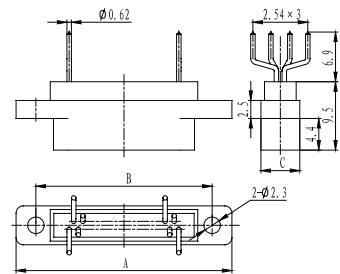


R04-51RHS1

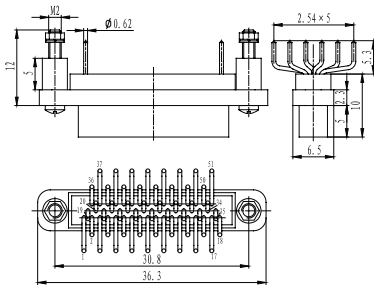
Outline dimension



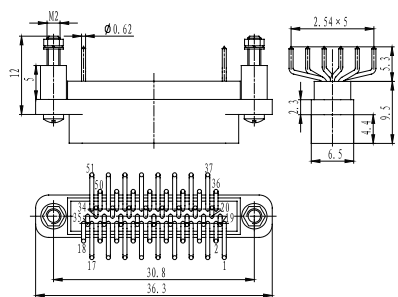
R04-9-37PIS1



R04-9-37RHS1



R04-51PIS1



R04-51RHS1

Part no.	A	B	C	Part no.	A	B	C
R04-9PIS1	19.8	14.3	5.4	R04-9RHS1	19.8	14.3	5.4
R04-15PIS1	23.6	18.2	5.4	R04-15RHS1	23.6	18.2	5.4
R04-21PIS1	27.5	22	5.4	R04-21RHS1	27.5	22	5.4
R04-25PIS1	30	24.5	5.4	R04-25RHS1	30	24.5	5.4
R04-31PIS1	33.7	28.3	5.4	R04-31RHS1	33.7	28.3	5.4
R04-37PIS1	37.5	32.2	5.4	R04-37RHS1	37.5	32.2	5.4

Note: All dimensions in mm

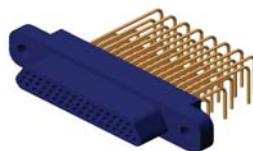
Product solid picture of right angle to PCB(F type)



R04-31PIF



R04-31RHF

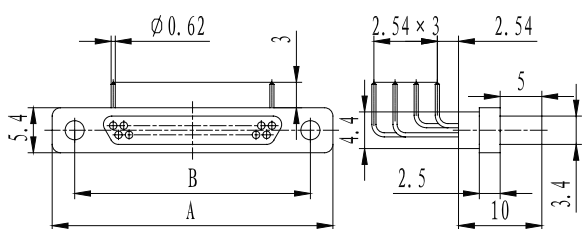


R04-51PIF

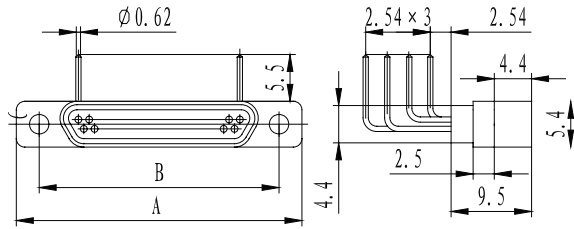


R04-51RHF

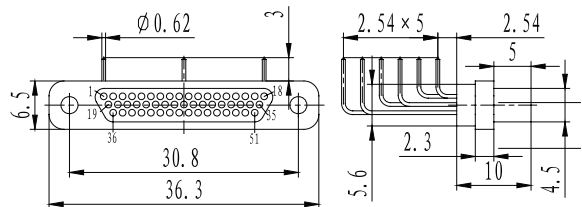
Outline dimension



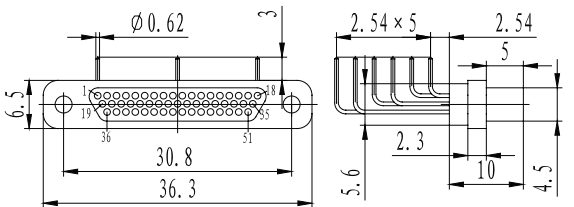
R04-9-37PIF



R04-9-37RHF



R04-51PIF



R04-51RHF

Part no.	A	B	Part no.	A	B
R04-9PIF	19.8	14.3	R04-9RHF	19.8	14.3
R04-15PIF	23.6	18.2	R04-15RHF	23.6	18.2
R04-21PIF	27.5	22	R04-21RHF	27.5	22
R04-25PIF	30	24.5	R04-25RHF	30	24.5
R04-31PIF	33.7	28.3	R04-31RHF	33.7	28.3
R04-37PIF	37.5	32.2	R04-37RHF	37.5	32.2

Note:All dimensions in mm

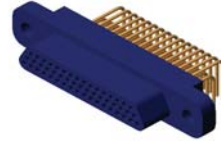
**Product solid picture of right angle to PCB(FJ type)**



R04-21PIFJ



R04-21RHFJ

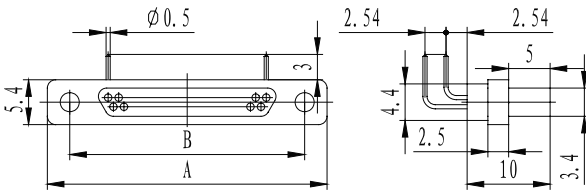


R04-51PIFJ

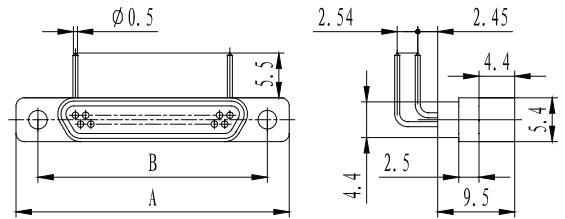


R04-51RHFJ

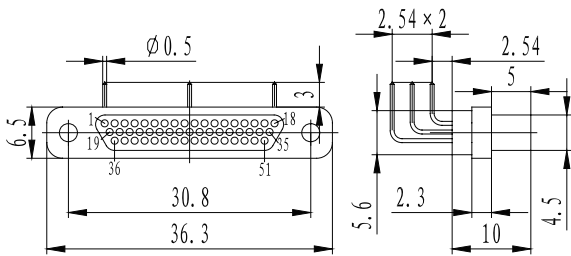
**Outline dimension**



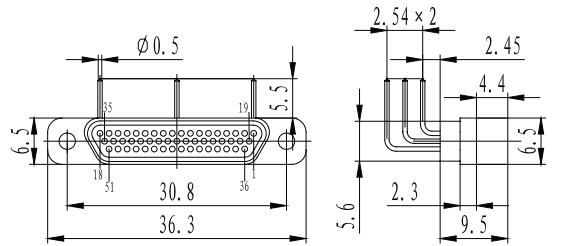
R04-9-37PIFJ



R04-9-37RHFJ



R04-51PIFJ



R04-51RHFJ

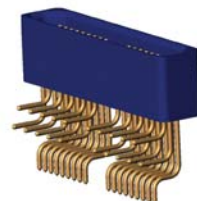
Part no.	A	B	Part no.	A	B
R04-9PIFJ/RHFJ	19.8	14.3	R04-25PIFJ/RHFJ	30	24.5
R04-15PIFJ/RHFJ	23.6	18.2	R04-31PIFJ/RHFJ	33.7	28.3
R04-21PIFJ/RHFJ	27.5	22	R04-37PIFJ/RHFJ	37.5	32.2

Note: All dimensions in mm

Product solid picture of middle locking connector

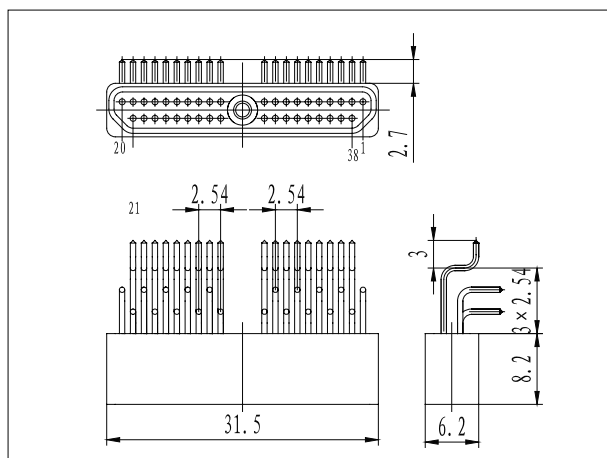
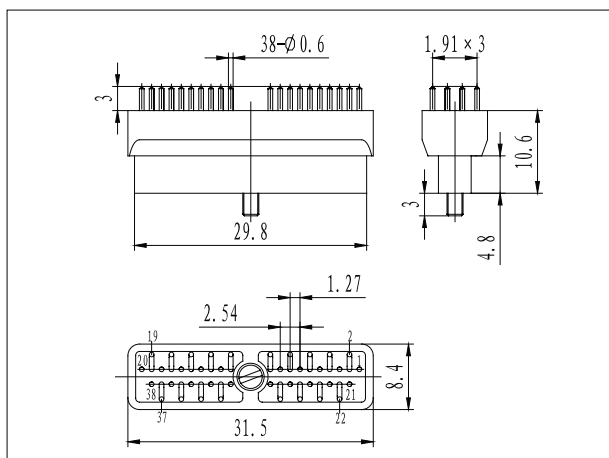


R04-38PIS

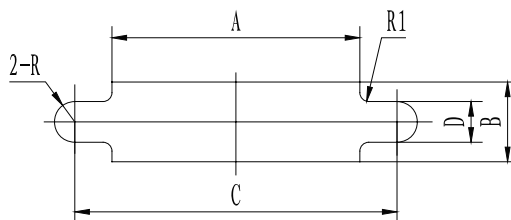


R04-38RHFM

Outline dimension



Mounting hole dimension of solder cup and crimp type



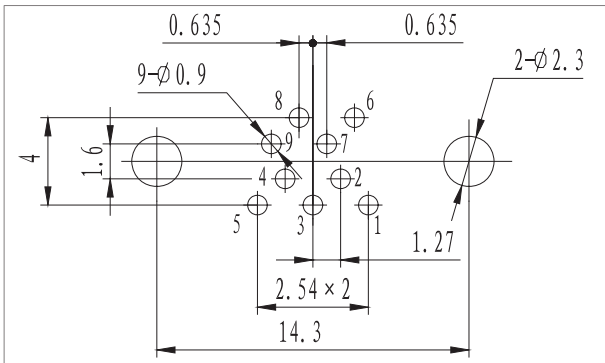
Contacts No.	A	B	C	D
9Pins	10.1	4.6	14.3	2.3
15Pins	14.2	4.6	18.2	2.3
21Pins	17.9	4.6	22	2.3
25Pins	20.8	4.6	24.5	2.3
31Pins	24.2	4.6	28.3	2.3
37Pins	28.2	4.6	32.2	2.3
51Pins	26.9	5.9	30.8	2.3

Note: All dimensions in mm

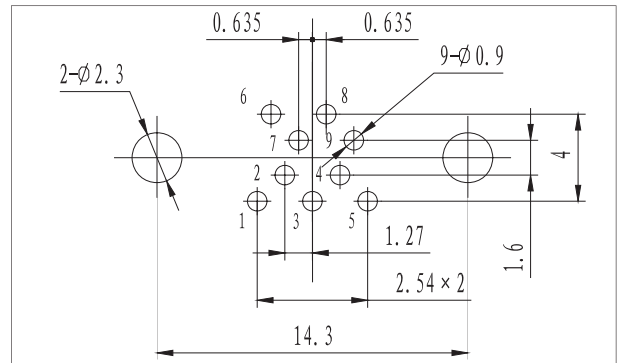


**PCB layout of straight to PCB(S type)**

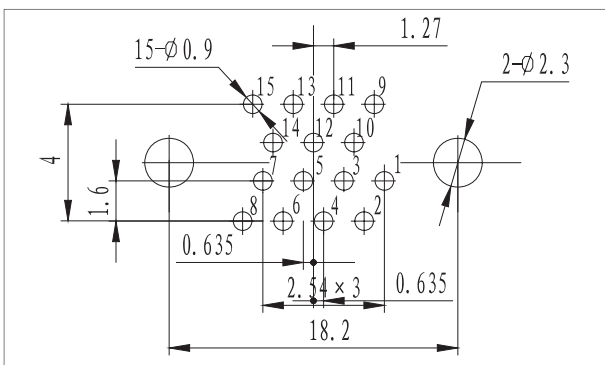
■ R04-9PIS



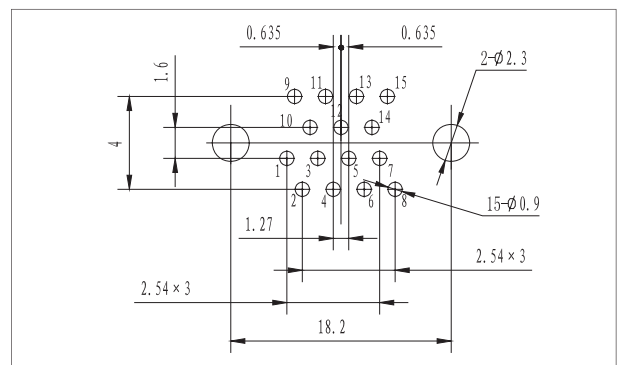
■ R04-9RHS



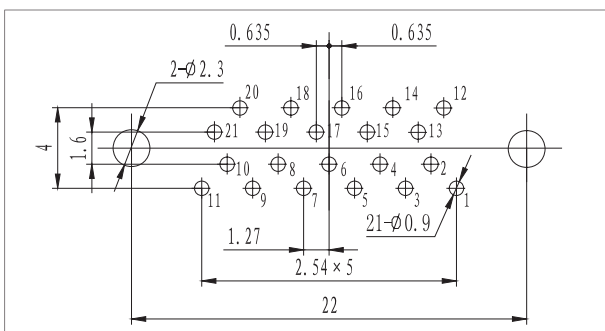
■ R04-15PIS



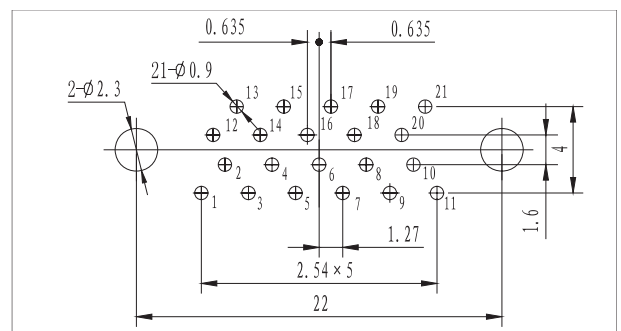
■ R04-15RHS



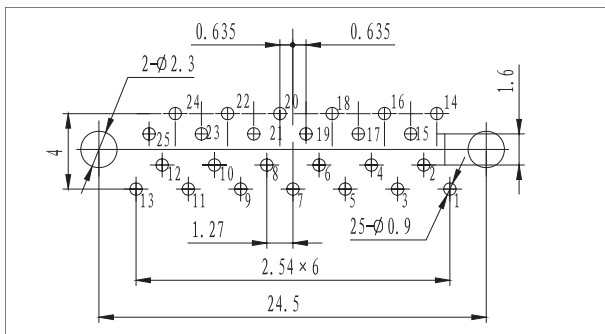
■ R04-21PIS



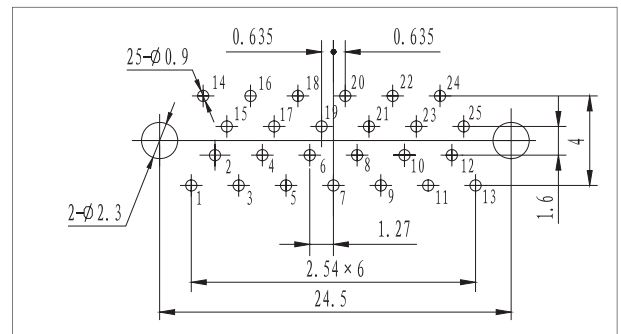
■ R04-21RHS



■ R04-25PIS



■ R04-25RHS

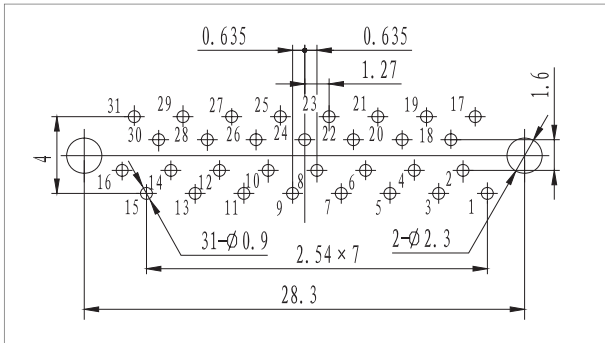


Note: All dimensions in mm

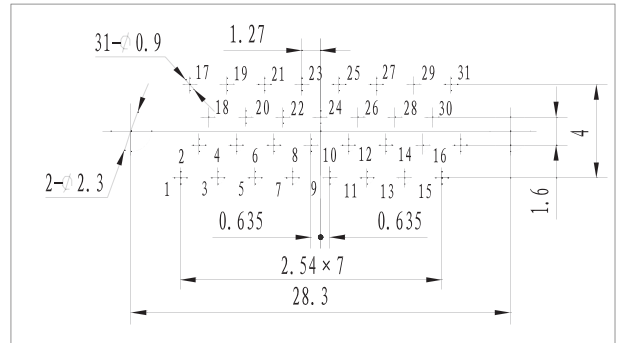


### PCB layout of straight to PCB(S type)

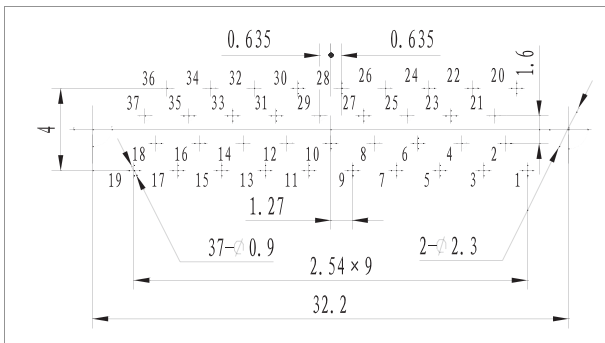
■ R04-31PIS



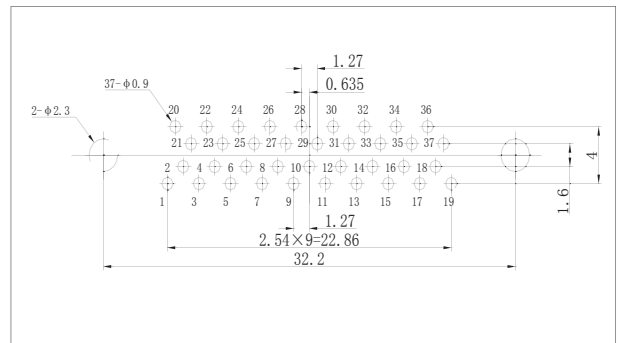
■ R04-31RHS



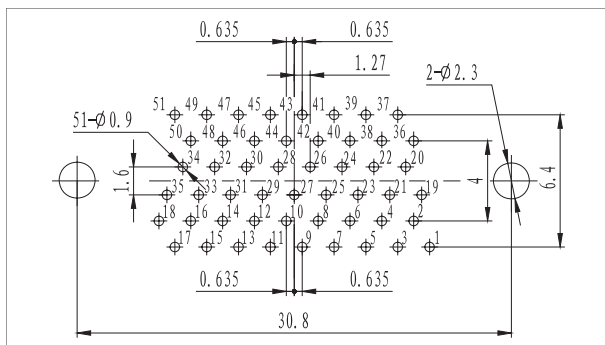
■ R04-37PIS



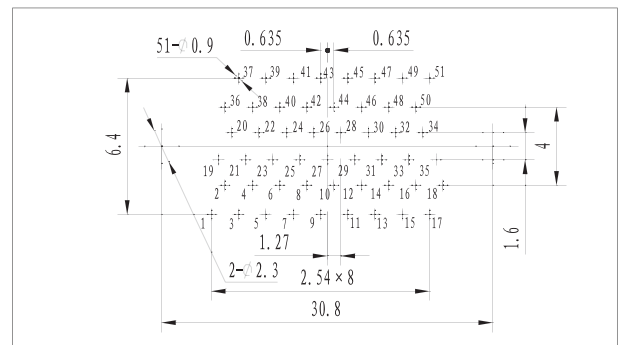
■ R04-37RHS



■ R04-51PIS



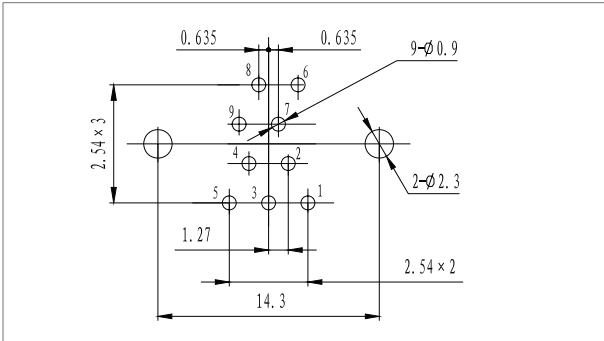
■ R04-51RHS



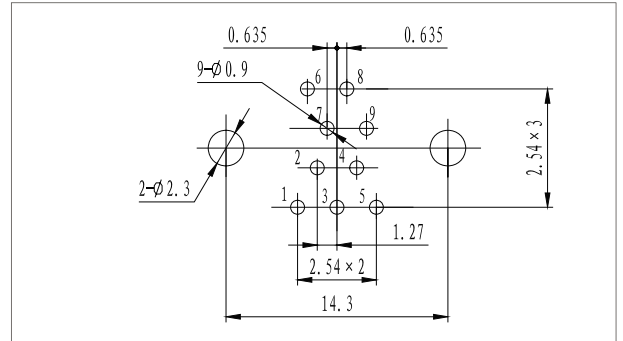
Note: All dimensions in mm

**PCB layout of straight to PCB(S1 type)**

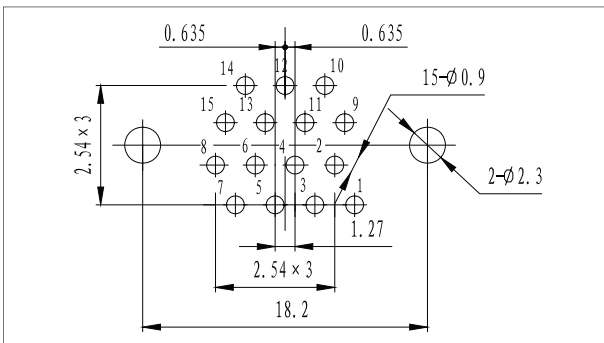
■ R04-9PIS1



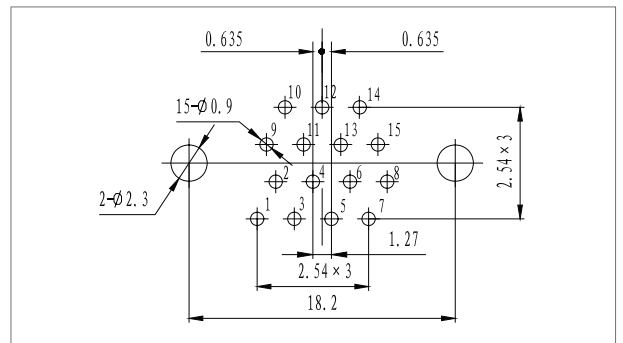
■ R04-9RHS1



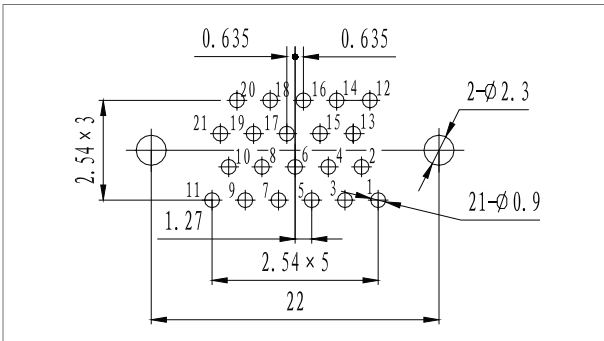
■ R04-15PIS1



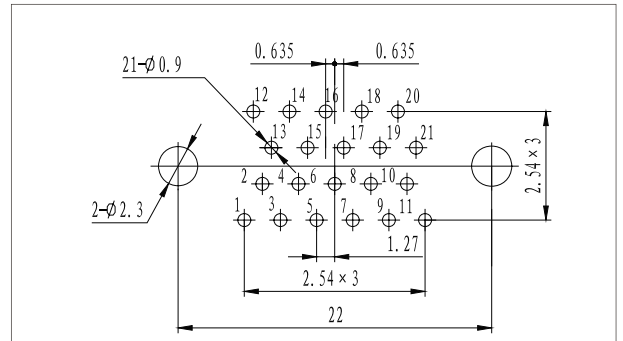
■ R04-15RHS1



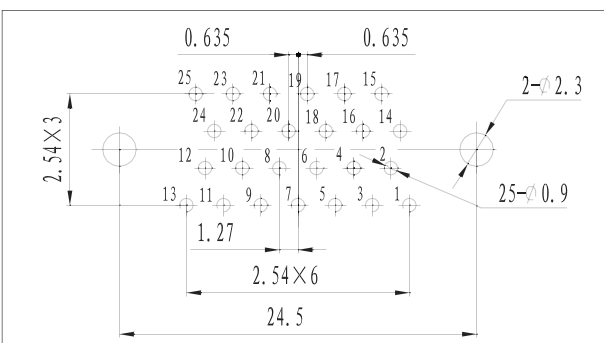
■ R04-21PIS1



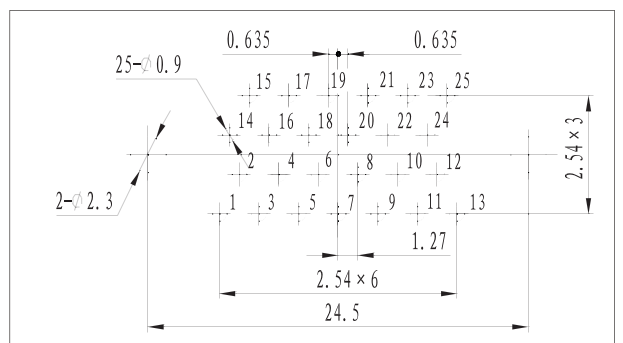
■ R04-21RHS1



■ R04-25PIS1



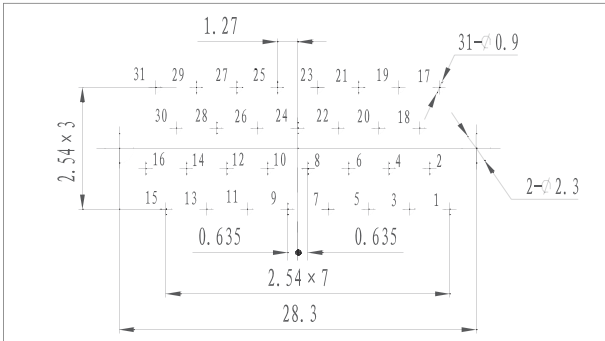
■ R04-25RHS1



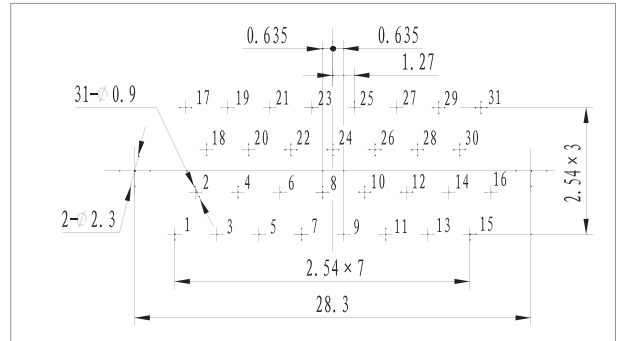
Note: All dimensions in mm

**PCB layout of straight to PCB(S1 type)**

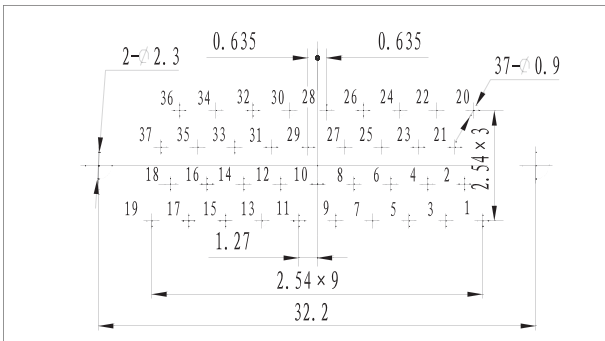
■ R04-31PIS1



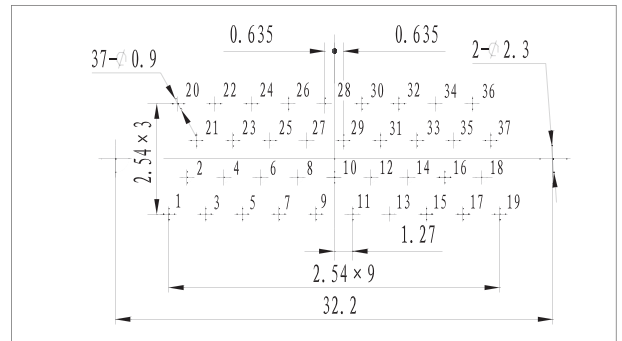
■ R04-31RHS1



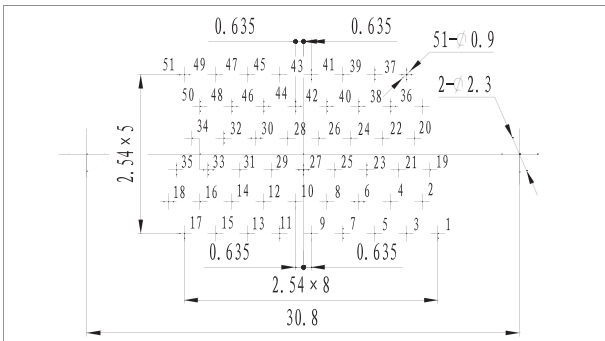
■ R04-37PIS1



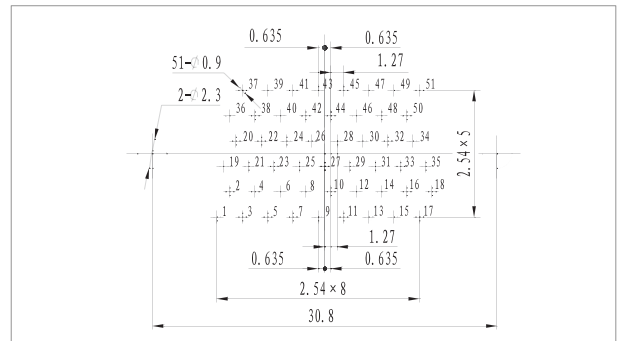
■ R04-37RHS1



■ R04-51PIS1



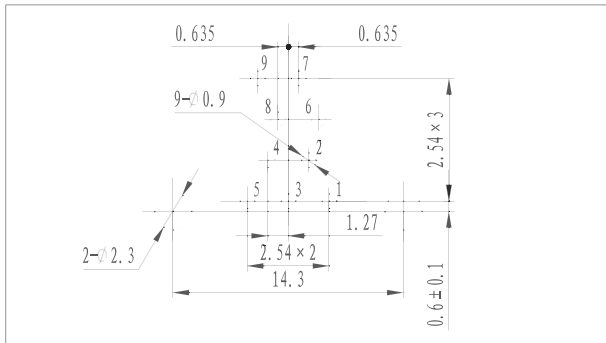
■ R04-51RHS1



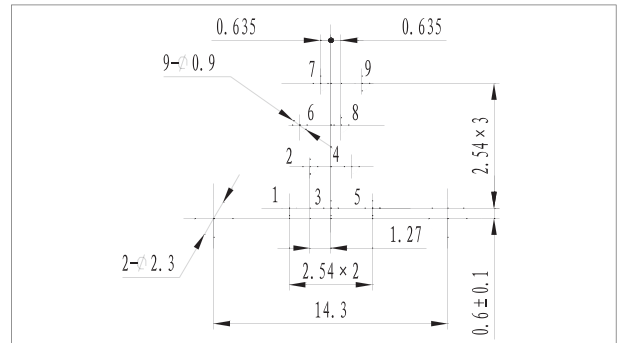
Note: All dimensions in mm

**PCB layout of right angle to PCB (F type)**

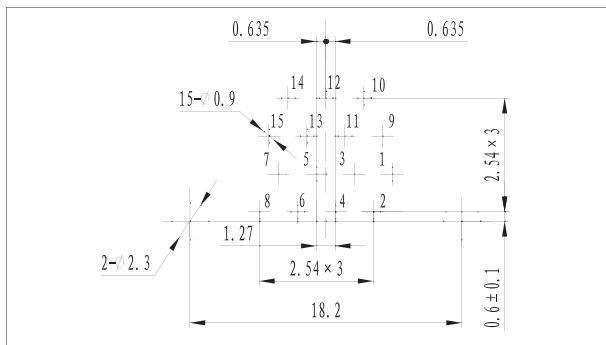
■ R04-9PIF



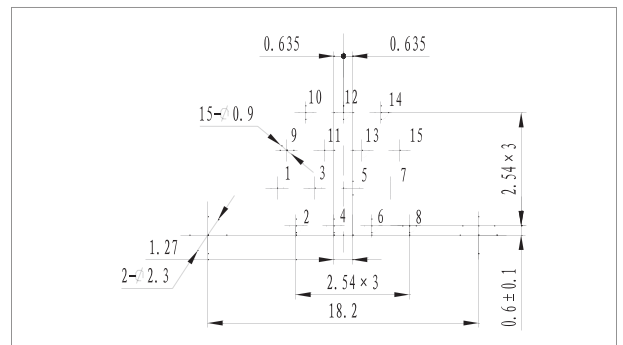
■ R04-9RHF



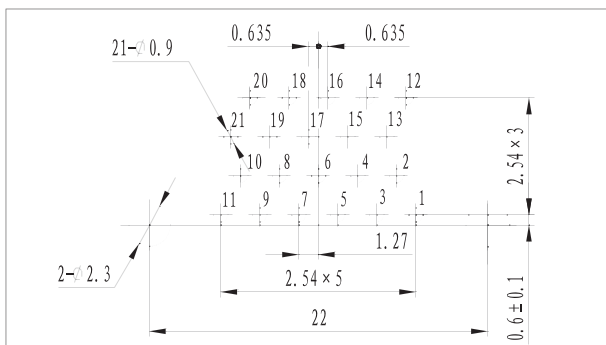
■ R04-15PIF



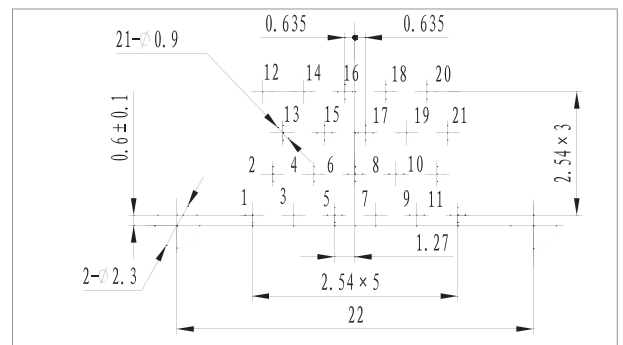
■ R04-15RHF



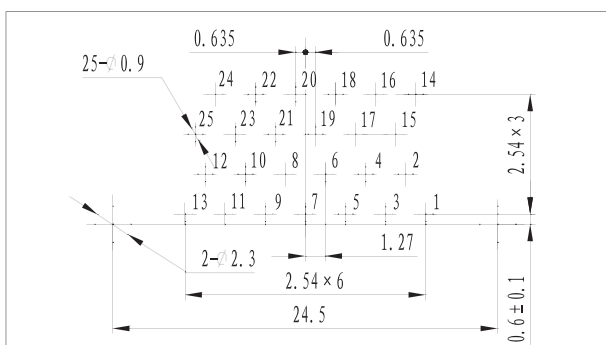
■ R04-21PIF



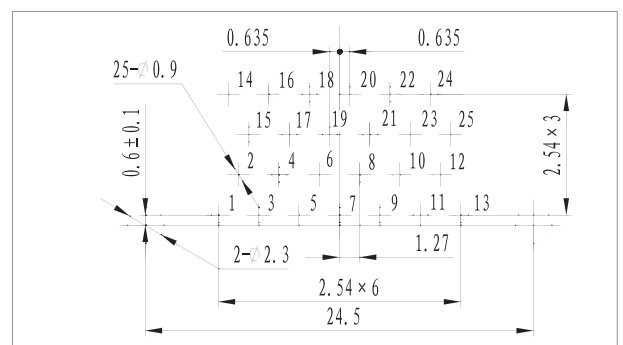
■ R04-21RHF



■ R04-25PIF



■ R04-25RHF

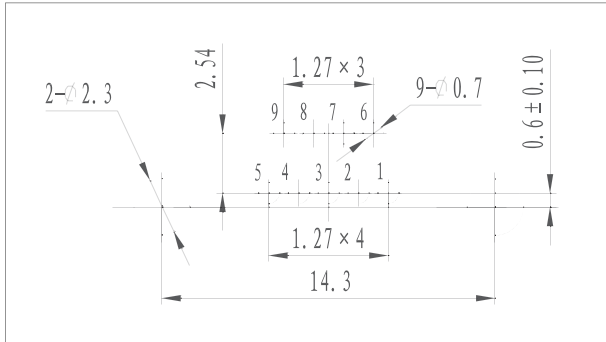


Note: All dimensions in mm

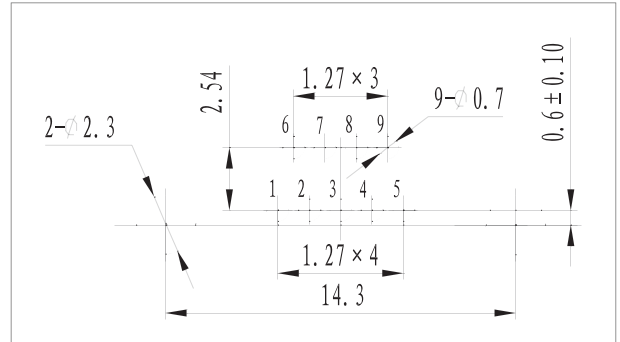




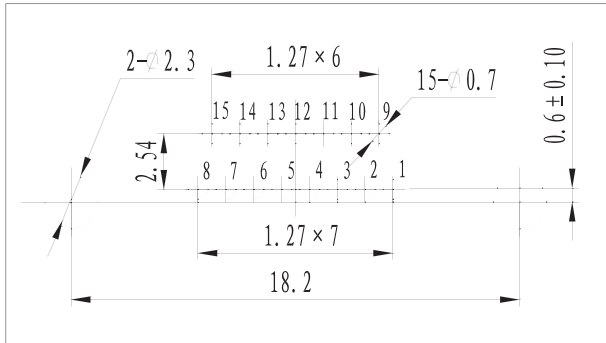
**PCB layout of right angle to PCB (FJ type)**



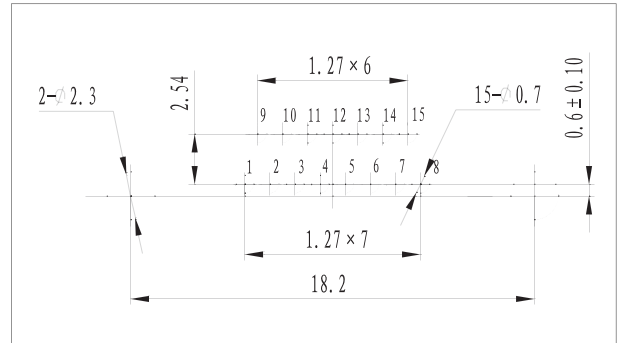
■ R04-15PIFJ



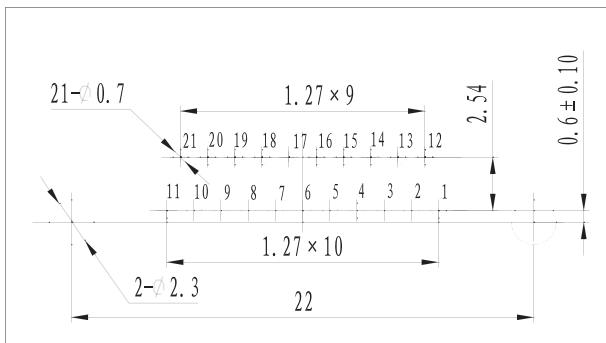
■ R04-15RHFJ



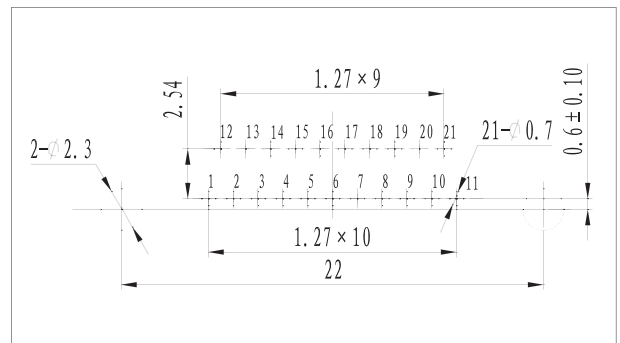
■ R04-21PIFJ



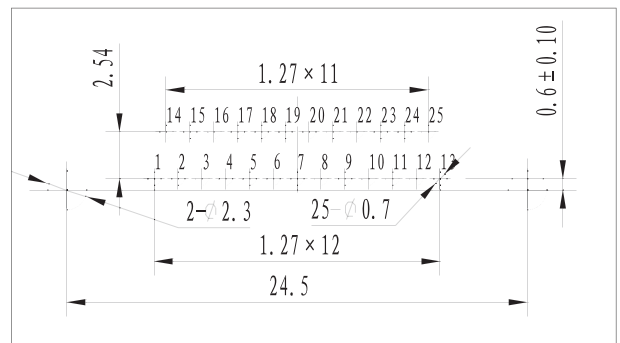
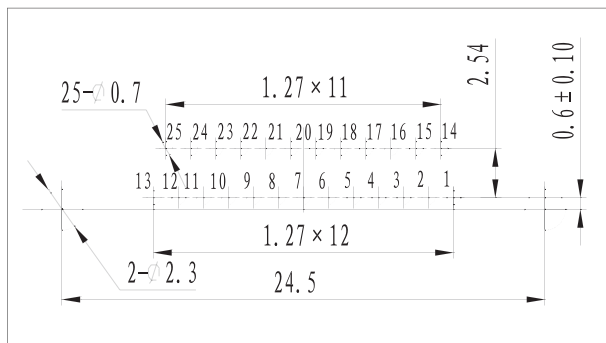
■ R04-21RHFJ



■ R04-25PIFJ



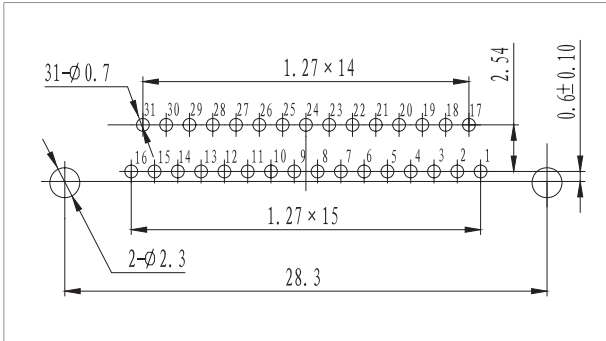
■ R04-25RHFJ



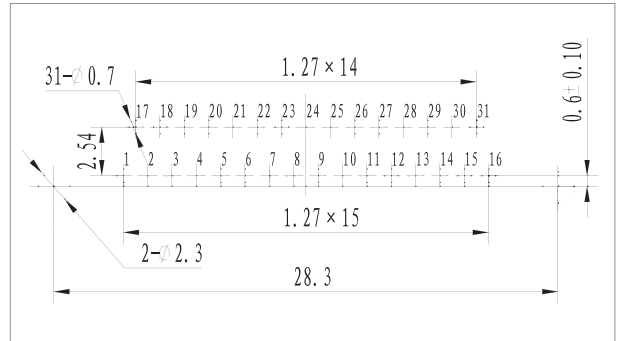
Note: All dimensions in mm

**PCB layout of right angle to PCB (FJ type)**

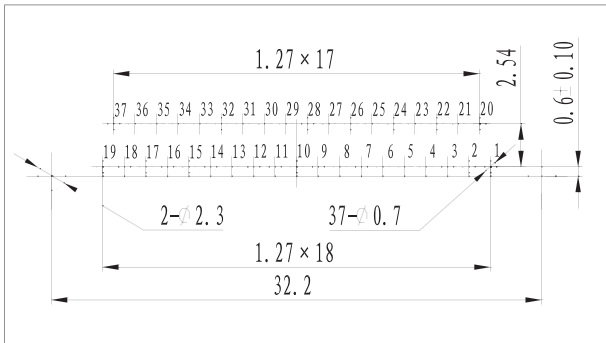
■ R04-31PIFJ



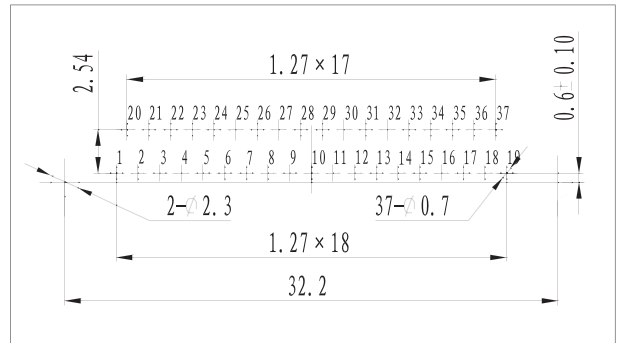
■ R04-31RHFJ



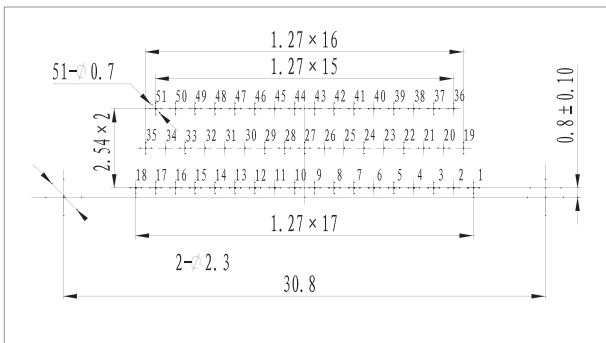
■ R04-37PIFJ



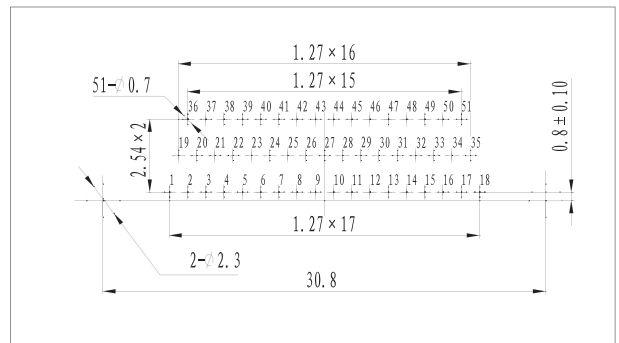
■ R04-37RHFJ



■ R04-51PIFJ



■ R04-51RHFJ



Note: All dimensions in mm



## Company Profile:

Sunkye International Co., Limited.(Connector) Business Group, with sixty five years of experience, specializes in designing and producing connectors, related components and cables. A wide range of connector products, twist pin connector, optical fiber connector, RF coaxial connector, separable connector, custom and application-

# *Company profile*

specific connector, etc, which are widely used in military area: aerospace, aviation, electrical, ship-building, defense system, etc and civil area: communication, telecom, automotive, rail, etc.

Design team focuses on meeting customers' requirement with continuous innovative technology, manufacture team provides high quality products by utilizing advanced equipments in standardized processes to ensure customers' benefits.

Sunkye is ISO 9001 certified, UL, VDE, CE certification passed, and ensures products quality by testing in realistic conditions with advanced test facilities, professional test employees.

Sunkye team is committed to offering high quality products, best service, prompt delivery and competitive price for you.



## Manufacture Equipment:

Five-Axis CNC, AGIE EDM, SODICK WEDM-LS, 40G Vector Network Analyzers, Vacuum Heat Treatment Equipment, Glass-sintered System, Laser Processing Center, High Velocity Ram Machine, Gold, Nickel and Cadmium Plating Production Line, Thermosetting Injection Machine, Thermoplastic Injection Machine, Swiss Automatic Lathe, etc.

## Test Facilities:

Comprehensive Test Instrument of Temperature, Humidity and Vibration; Experimental Box of Temperature and Shock; layer thickness meter; Coordinate Measurement Machine, etc.



MIL-DTL-83513 Micro D-Sub Connectors

**SUNKYE**



# CONTENT



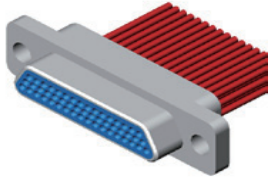
## **MIL-DTL-83513 Micro D-Sub Connectors**

<b>R04J Series Crimp Contact Type .....</b>	<b>1</b>
<b>R04J Series Straight to PCB Type.....</b>	<b>19</b>
<b>R04J Series Right Angle to PCB Type.....</b>	<b>31</b>
<b>R04J Series Solder Cup Connector.....</b>	<b>47</b>



# MIL-DTL-83513 Micro D-Sub Connectors

## R04J Series Crimp Contact Type



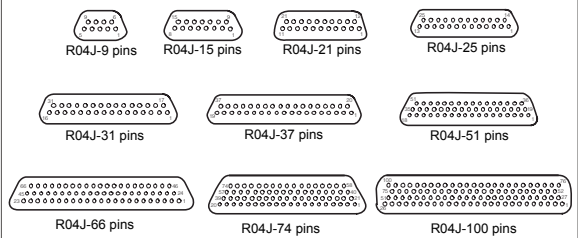
### Introduction

- Micro-D connectors
- Twist pin contact, high density interconnection
- Metal shell, plated nickel or cadmium
- Crimp contact type
- The sectional area of cable:  $0.1\text{mm}^2 \sim 0.15\text{mm}^2, 0.07\text{mm}^2$
- Meet MIL-DTL-83513

### Specification

- Environment temperature:  $-55^{\circ}\text{C} \sim 125^{\circ}\text{C}$
- Vibration: 10Hz~2000Hz,  $196\text{m/s}^2$
- Random vibration: Power spectrum density  $0.4\text{G}^2/\text{Hz}$   
root mean square value of total acceleration 23.1G
- Shock:  $735\text{m/s}^2$  11ms
- Rated current: 3A
- Contact resistance:  $\leq 10\text{m}\Omega$
- Insulation resistance:  $\geq 5000\text{M}\Omega$
- Dielectric strength: 800V
- Durability: 500 times

### Contact arrangements

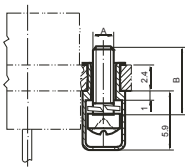
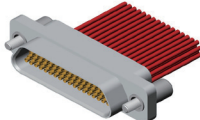
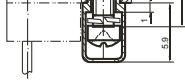
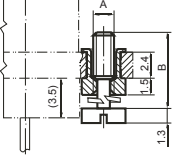
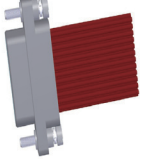
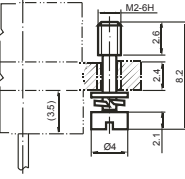
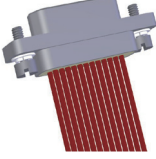
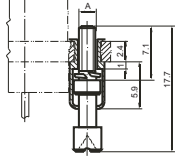
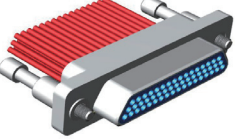


### How To Order Crimp Contact Connectors

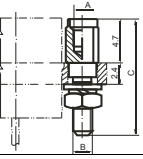
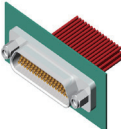
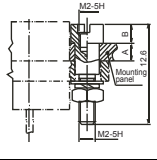
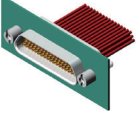
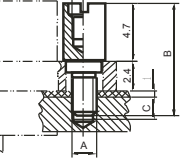
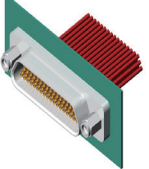
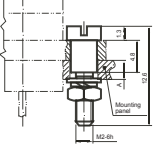
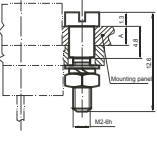
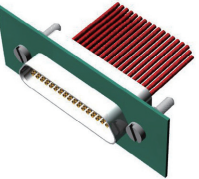
Sample part number	R04J	-25	PI	W7	G	A1	D
<b>Series:</b> R04J—standar type    R04JA—fast lock type R04JC—Sn-P bronze shell, finish nickel R04JD—assembly hole is threaded hole:M2-6H R04JS—glue sealing							
<b>Contact number:</b> 9, 15, 21, 25, 31, 37, 51, 66, 74, 100pins							
<b>Contact type :</b> PI—pin in plug    RH—socket in receptacle							
<b>Locking component type:</b> blank—without    Regarding locking component type, please see page2							
<b>Shell material and finish :</b> Blank—Aluminum shell, finish nickel    G—Aluminum shell, finish cadmium							
<b>Cable clamp type:</b> blank—without    A1—A1 type A2—A2 type    A3—A3 type, the datasheet, please see page3							
<b>Extended Series :</b> Blank—standard type    D—with anti-rotation slot on the outer shell (9.6)—the width of flange is 9.6mm    Q—widen the flange (11.6)—the width of flange is 11.6mm    C—the outlet direction of cable is vertical to contacts Q8—the flange size and assembly hole size are enlarged from R04J crimp contact basic type							

Remark: The accessories is not included in the order information, please mark the cable type . For example:the sectional area, the length and the color of cable. If the cable is special, please provide the drawing and spec. to us.

**R04J crimp contact type free end locking component**



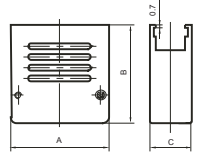


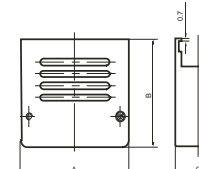
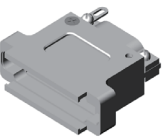
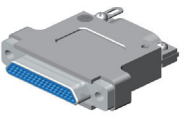
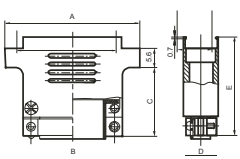
Type	A	B	Outline dimension	Assembly picture	Matched with locking component
W	M2-6h	7.1			Q,Q0,Q2,Q3,Q4,Q5,Q7,Q8,Q9,Q10,Q11, Q14,Q15,Q17,Q23,Q25,Q29,Q32,Q35, Q36,Q37,Q41,Q42,Q43,Q45,Q46
W8	#2-56UNC-2A	7.1			Q1
W7	M2-6h	7.1			Q,Q0,Q2,Q3,Q4,Q5,Q7,Q8,Q9,Q10,Q11, Q14,Q15,Q17,Q23,Q25,Q29,Q32,Q35, Q36,Q37,Q41,Q42,Q43,Q45,Q46
W9	M2-6h				Q,Q0,Q2,Q3,Q4,Q5,Q7,Q8,Q9,Q10,Q11, Q14,Q15,Q17,Q23,Q25,Q29,Q32,Q35, Q36,Q37,Q41,Q42,Q43,Q45,Q46 Note: W9 just suitable for R04JD series product.
N	M2-6h				Q,Q0,Q2,Q3,Q4,Q5,Q7,Q8,Q9,Q10,Q11, Q14,Q15,Q17,Q23,Q25,Q29,Q32,Q35, Q36,Q37,Q41,Q42,Q43,Q45,Q46
N1	#2-56UNC-2A				Q1

**R04J crimp contact type fixed end locking component**

Type	A	B	C	Outline dimension	Assembly picture	Matched with locking component	
Q	M2-6h	M2-6h	12.6			W, W7, W9, N	
Q1	#2-56UNC-2B	#2-56UNC-2A	12.6			W8, N1	Note: just suitable for front panel mounting
Q8	M2-6h	M2-6h	15.6			W,W7,W9,N	
Q9	M2-6h	M2-6h	21.6			W,W7,N	
Q0	4.1	0.6	12.6			W, W7, W9, N	
Q3	3.3	1.4	12.6			Note: These Kinds components just suitable for rear panel mounting	
Q4	2.5	2.2	12.6				
Q11	1.3	3.4	12.6				
Q45	2.7	2	20				
Q29	M3-6h	10.5	3.3min			W,W7,W9,N	
Q36	M3-6h	14.7	6 min			Note:1. Just suitable for front panel mounting 2. Suitable for R04JS series	
Q37	M2-6h	10	2.8min				
Q43	M3-6h	11.7	4 min				
Q44							Note: 1. Not need to lock with locking component of free end 2. Front panel mounting, A dimension is 2.5~3.5mm 3. Rear panel mounting, (1)Mated with connector without locking component, A dimension is 3.5mm max (2) Mated with connector which have fixed end locking component, A dimension =4.9-1.3-(distance between bolt and flange of mated with connector)

Remark:1. Fixed end locking component apply to fix the connector on the mounting panel or the PCB. Most fixed end locking component can mate with free end locking component. Few fixed end locking component can't mate with free end locking component.(eg. : Q44)  
2. All dimensions are in mm

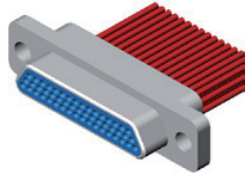
### R04J series cable clamp

Type	Stereoqram		Outline dimension			Using condition					
A1	 Without connector, only A1 cable clamp	 Plug with A1 cable clamp				A1 cable clamp suitable for R04J crimp contact basic type, usually apply to free end locking component					
A2	 Without connector, only A2 cable clamp	 Plug with A2 cable clamp				A2 cable clamp just suitable for R04J-9~51PI/RH-Q8					
A3	 Without connector, only A3 cable clamp	 Plug with A3 cable clamp				A3 cable clamp suitable for R04J crimp contact basic type and R04J solder cup basic type					
Pin Count	A1			A2			A3				
	A	B	C	A	B	C	A	B	C	D	E
9	9.9	23.6	10.4	11.7	22	13.4	19.6	9.9	18.2	10.4	27
15	13.8	23.8	10.4	15.6	22	13.4	23.5	13.8	18.2	10.4	27
21	17.6	23.6	10.4	19.4	22	13.4	27.4	17.6	19.2	10.4	28
25	20.2	23.6	10.4	22	22	13.4	29.8	20.2	19.2	10.4	28
31	24	23.6	10.4	25.8	22	13.4	33.6	24	19.2	10.4	28
37	27.8	23.6	10.4	29.6	22	13.4	37.4	27.8	19.2	10.4	28
51	26.6	26.6	11.2	28.4	22	14.6	36.4	26.6	21.2	11.2	30
66	33	26.6	11.2	---	---	---	42.9	29.1	21.2	11.2	30
74	29.1	30	12	---	---	---	38.8	29.1	21.2	12	30
100	40.7	30	12	---	---	---	54.7	40.7	21.2	12	30

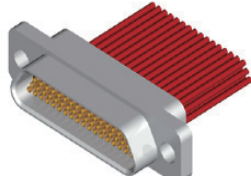
Remark: All dimensions are in mm

## R04J series crimp contact basic type

- **Contacts:** R04J- 9, 15, 21, 25, 31, 37, 51, 66, 74, 100 PI /RH(G)
- **Shell Plating Finish:** Nickel , Cadmium



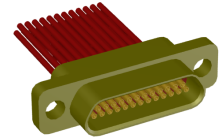
Plug:PI



Receptacle:RH

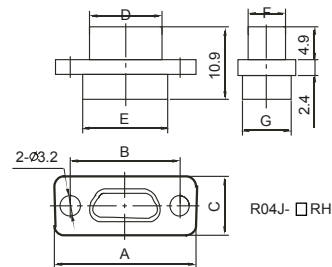
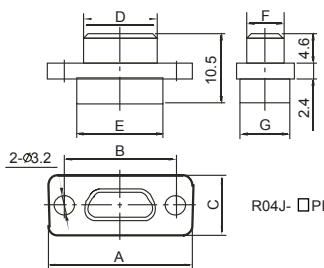


Plug:PIG



Receptacle:RHG

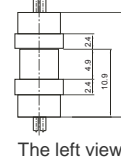
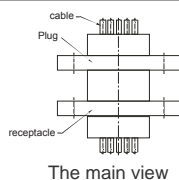
## Outline Dimension



Part Number	A	B	C	D	E	F	G
R04J-9PI/PIG	19.6	14.3	7.6	8.3	9.9	4.7	6.8
R04J-15PI/PIG	23.5	18.2	7.6	12.3	13.8	4.7	6.8
R04J-21PI/PIG	27.4	22	7.6	16	17.6	4.7	6.8
R04J-25PI/PIG	29.8	24.5	7.6	18.6	20.2	4.7	6.8
R04J-31PI/PIG	33.6	28.3	7.6	22.4	24	4.7	6.8
R04J-37PI/PIG	37.4	32.2	7.6	26.3	27.8	4.7	6.8
R04J-51PI/PIG	36.4	30.86	8.7	25	26.6	5.8	7.9
R04J-66PI/PIG	42.9	37.3	8.7	31.4	33	5.8	7.9
R04J-74PI/PIG	38.8	33.5	9.7	27.5	29.1	6.8	9.1
R04J-100PI/PIG	54.7	45.7	9.7	35	36.6	6.8	9.1
R04J-9RH/RHG	19.6	14.3	7.6	9.8	9.9	6.1	6.8
R04J-15RH/RHG	23.5	18.2	7.6	13.7	13.8	6.1	6.8
R04J-21RH/RHG	27.4	22	7.6	17.4	17.6	6.1	6.8
R04J-25RH/RHG	29.8	24.5	7.6	20	20.2	6.1	6.8
R04J-31RH/RHG	33.6	28.3	7.6	23.8	24	6.1	6.8
R04J-37RH/RHG	37.4	32.2	7.6	27.7	27.8	6.1	6.8
R04J-51RH/RHG	36.4	30.86	8.7	26.5	26.6	7.2	7.9
R04J-66RH/RHG	42.9	37.3	8.7	32.9	33	7.2	7.9
R04J-74RH/RHG	38.8	33.5	9.7	29	29.1	8.3	9.1
R04J-100RH/RHG	54.7	45.7	9.7	36.6	36.65	8.2	9.1

Remark: All dimensions are in mm

## Outline Dimension after mating

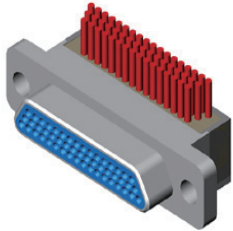


## R04JC series crimp contact basic type

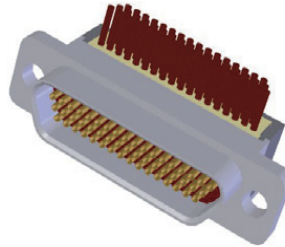
- **Sn-P bronze outer shell, plated nickel**
- **Contacts:** R04JC- 9, 15, 21, 25, 31, 37, 51, 66, 74, 100 PI /RH
- **Outline dimension:** same as R04J crimp contact basic type, please see above datasheet

## R04J series crimp contact extended type-C

- The outlet direction of cable is vertical to the contacts, termination type is crimp contact.
- **Contacts:** R04J- 9, 15, 21, 25, 31, 37, 51, 66, 74, 100 PI /RH-C

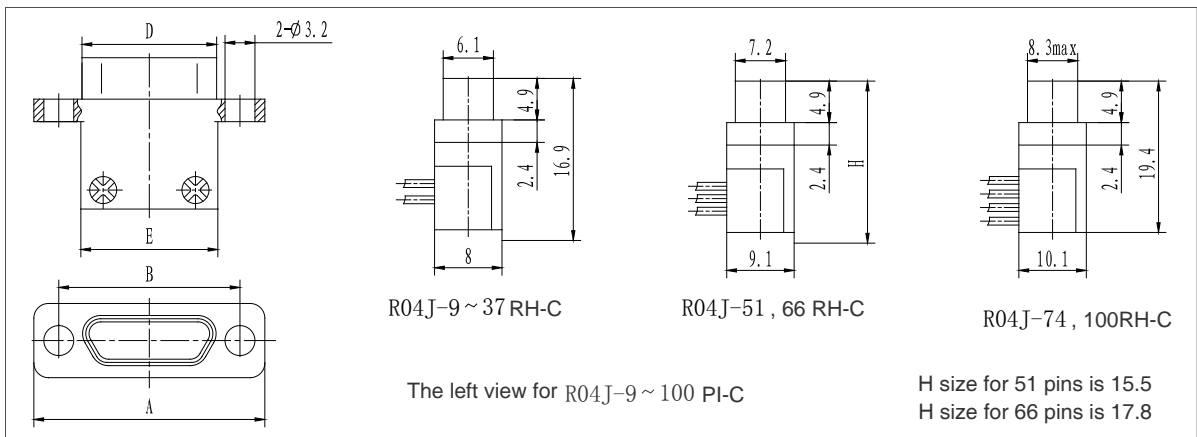
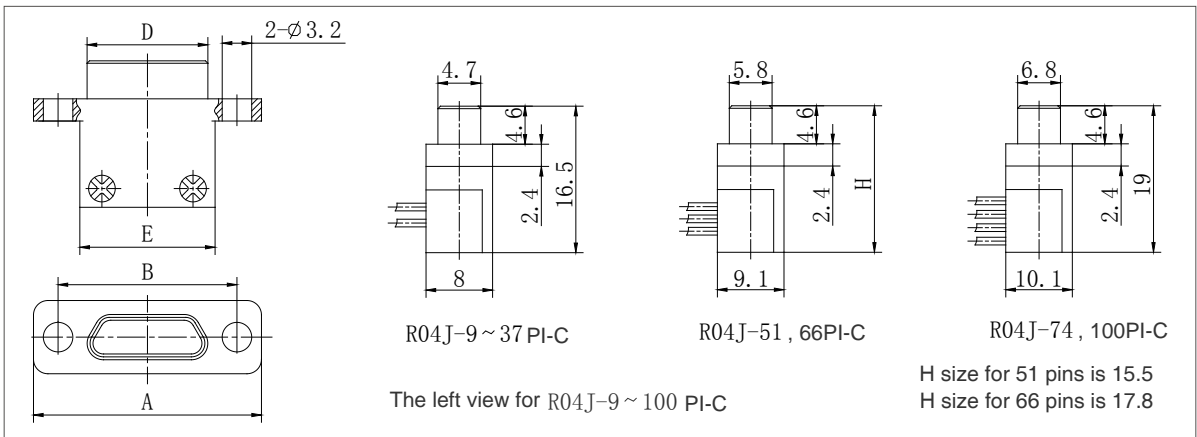


Plug:PI-C



Receptacle:RH-C

### Outline Dimension



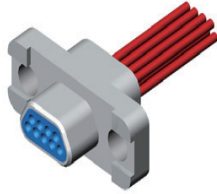
Part Number	A	B	D		E
			PI-C	RH-C	
RQ4J-9PI/RH-C	19.6	14.3	8.3	9.8	9.9
R04J-15PI/RH-C	23.5	18.2	12.3	13.7	13.8
R04J-21PI/RH-C	27.4	22	16	17.4	17.6
R04J-25PI/RH-C	29.8	24.5	18.6	20	20.2
R04J-31PI/RH-C	38.6	28.3	22.4	23.8	24
R04J-37PI/RH-C	37.4	32.2	26.3	27.7	27.8
R04J-51PI/RH-C	36.4	30.86	25	26.5	26.6
RD4J-66PI/RH-C	42.9	37.3	31.4	32.9	33
RD4J-74PI/RH-C	38.8	33.5	27.5	29	29.1
R04J-100PI/RH-C	54.7	45.7	35	36.6	36.6

Remark: All dimensions are in mm

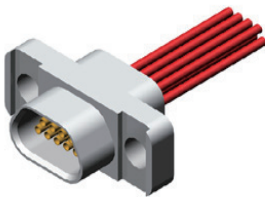
The outlet direction of cable for R04J-□ PI-C is opposite to R04J-□ RH-C.



## R04J series crimp contact extended type-D



Plug:PI-D



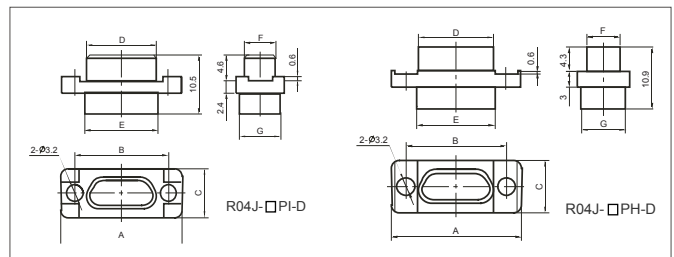
Receptacle:RH-D

■ With anti-rotation slots on the flange

■ **Contacts:**

R04J- 9, 15, 21, 25, 31, 37, 51, 66, 74, 100 PI /RH-D

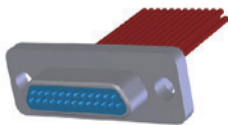
### Outline Dimension



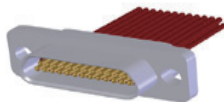
Part Number	A	B	C	D		E	F		G
				PI-D	RH-D		PI-D	RH-D	
R04J-9PI/RH-D	19.6	14.3	7.6	8.3	9.8	9.9	4.7	6.1	6.8
R04J-15PI/RH-D	23.5	18.2	7.6	12.3	13.7	13.8	4.7	6.1	6.8
R04J-21PI/RH-D	27.4	22	7.6	16	17.4	17.6	4.7	6.1	6.8
R04J-25PI/RH-D	29.8	24.5	7.6	18.6	20	20.2	4.7	6.1	6.8
R04J-31PI/RH-D	33.6	28.3	7.6	22.4	23.8	24	4.7	6.1	6.8
R04J-37PI/RH-D	37.4	32.2	7.6	26.3	27.7	27.8	4.7	6.1	6.8
R04J-51PI/RH-D	36.4	30.86	8.7	25	26.5	26.6	5.8	7.2	7.9
R04J-66PI/RH-D	42.9	37.3	8.7	31.4	32.9	33	5.8	7.2	7.9
R04J-74PI/RH-D	38.8	33.5	9.7	27.5	29	29.1	6.8	8.3	9.1
R04J-100PI/RH-D	54.7	45.7	9.7	35	36.6	36.6 / 36.65	6.8	8.2	9.1

Remark: All dimensions are in mm

## R04J series crimp contact extended type(9.6)



Plug:PI(9.6)



Receptacle:RH(9.6)

■ The width of flange is 9.6mm

■ **Contacts:**

R04J- 9, 15, 21, 25, 31, 37,PI/RH(9.6)

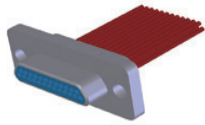
### Outline Dimension

Part Number	A	B	C	D		E
				PI	RH	
R04J-9PI/RH(9.6)	19.6	14.3	9.6	8.3	9.8	9.9
R04J-15PI/RH(9.6)	23.5	18.2	9.6	12.3	13.7	13.8
R04J-21PI/RH(9.6)	27.4	22	9.6	16	17.4	17.6
R04J-25PI/RH(9.6)	29.8	24.5	9.6	18.6	20	20.2
R04J-31PI/RH(9.6)	33.6	28.3	9.6	22.4	23.8	24
R04J-37PI/RH(9.6)	37.4	32.2	9.6	26.3	27.7	27.8

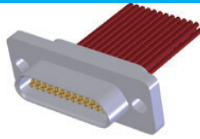
Remark: All dimensions are in mm



## R04J series crimp contact extended type(11.6)



Plug:PI(11.6)



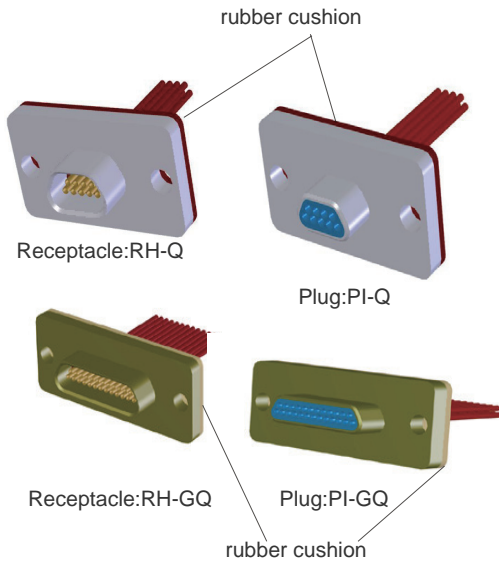
Receptacle:RH(11.6)

- The width of flange is 11.6mm
- **Contacts:** R04J- 9, 15, 21, 25, 31, 37,PI/RH(11.6)

### Outline Dimension

Part Number	A	B	C	D		E
				PI	RH	
R04J-9PI/RH(11.6)	19.6	14.3	11.6	8.3	9.8	9.9
R04J-15PI/RH(11.6)	23.5	18.2	11.6	12.3	13.7	13.8
R04J-21PI/RH(11.6)	27.4	22	11.6	16	17.4	17.6
R04J-25PI/RH(11.6)	29.8	24.5	11.6	18.6	20	20.2
R04J-31PI/RH(11.6)	33.6	28.3	11.6	22.4	23.8	24
R04J-37PI/RH(11.6)	37.4	32.2	11.6	26.3	27.7	27.8

## R04J series crimp contact extended type-Q



- the flange is widened
- with a rubber cushion,thickness:1mm
- **Shell Plating Finish:** Nickel , Cadmium
- **Contacts:**

R04J- 9, 15, 21, 25, 31, 37, 51, 66, 74, 100 PI /RH-Q/GQ

### Outline Dimension

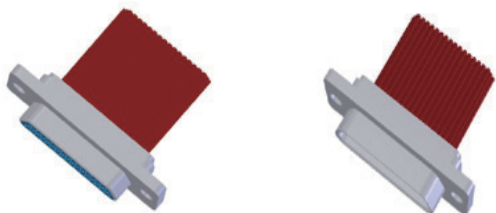
Part Number	A	B	C	D		E	F		G
				PI	RH		PI	RH	
R04J-9PI/RH-Q	26	21	14	8.3	9.8	9.9	4.7	6.1	6.8
R04J-15PI/RH-Q	29.9	24.9	14	12.3	13.7	13.8	4.7	6.1	6.8
R04J-21PI/RH-Q	33.8	28.7	14	16	17.4	17.6	4.7	6.1	6.8
R04J-25PI/RH-Q	36.2	31.2	14	18.6	20	20.2	4.7	6.1	6.8
R04J-31PI/RH-Q	40	35	14	22.4	23.8	24	4.7	6.1	6.8
R04J-37PI/RH-Q	43.8	38.9	14	26.3	27.7	27.8	4.7	6.1	8.8
R04J-51PI/RH-Q	42.6	37.6	15.2	25	26.5	26.6	5.8	7.2	7.9
R04J-66PI/RH-Q	49.3	44	15.2	31.4	32.9	33	5.8	7.2	7.9
R04J-77PI/RH-Q	45.2	40.2	16.1	27.5	29	29.1	6.8	8.3	9.1
R04J-100PI/RH-Q	61.1	52.4	16.1	35	36.6	36.6 / 36.65	6.8	8.2	9.1

Remark: All dimensions are in mm

## R04JC series crimp contact extended type-Q

- **Sn-P bronze outer shell,plated nickel**
- **the flange is widened**
- **Outline dimension:** Same as R04J- \* RH-Q,please see above datasheet
- **Contacts:** R04JC- 9, 15, 21, 25, 31, 37, 51, 66, 74, 100 RH-Q
- **with a rubber cushion,thickness:1mm**

## R04J series crimp contact extended type-Q8

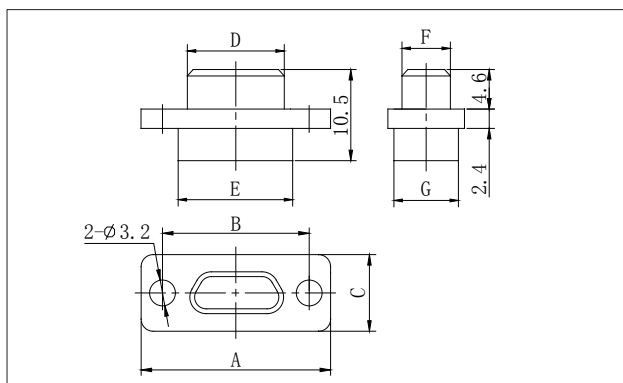


Plug:PI-Q8

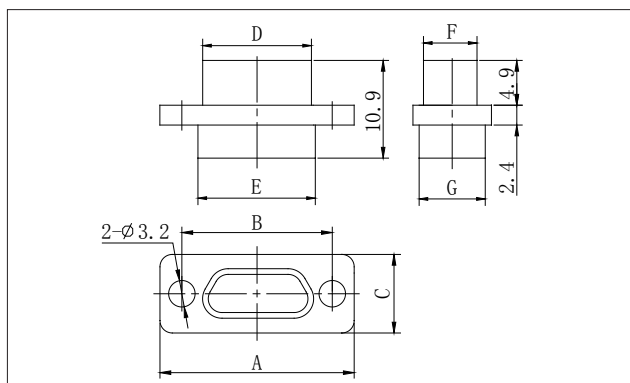
Receptacle:RH-Q8

- The flange size and assembly hole size are enlarged from R04J crimp contact basic type
- **Contacts:**  
R04J- 9, 15, 21, 25, 31, 37, 51, 66, 74, 100 PI /RH-Q8

## Outline Dimension



R04J-□PI-Q8



R04J-□RH-Q8

Part Number	A	B	C	D		E	F		G
				PI-Q8	RH-Q8		PI-Q8	RH-Q8	
R04J-9PI-Q8/RH-Q8	21.4	16.1	11.6	8.3	9.8	11.7	4.7	6.1	6.8
R04J-15PI-Q8/RH-Q8	25.3	20	11.6	12.3	13.7	15.6	4.7	6.1	6.8
RQ4J-21PI-Q8/RH-Q8	29.2	23.8	11.6	16	17.4	19.4	4.7	6.1	6.8
RQ4J-25PI-Q8/RH-Q8	31.6	26.3	11.6	18.6	20	22	4.7	6.1	6.8
R04J-31PI-Q8/RH-Q8	35.4	30.1	11.6	22.4	23.8	25.8	4.7	6.1	6.8
R04J-37PI-Q8/RH-Q8	39.2	34	11.6	26.3	27.7	29.6	4.7	6.1	6.8
R04J-51PI-Q8/RH-Q8	38.2	32.6	12.6	25	26.5	28.4	5.8	7.2	7.9

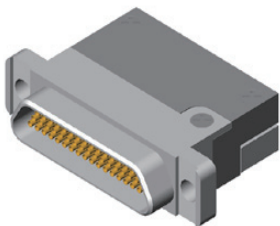
Remark: All dimensions are in mm



## R04J series crimp contact extended type-A1D



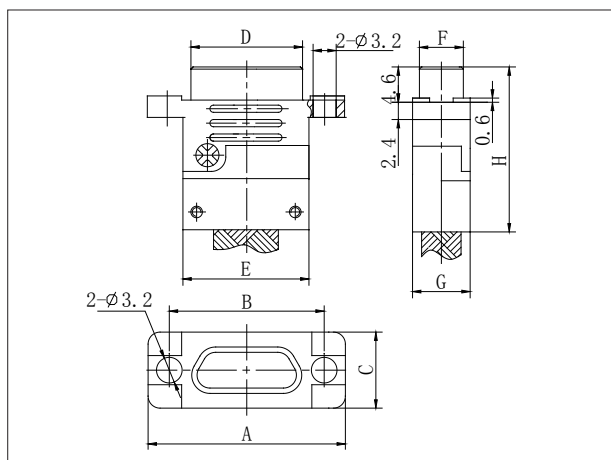
Plug:PI-A1D



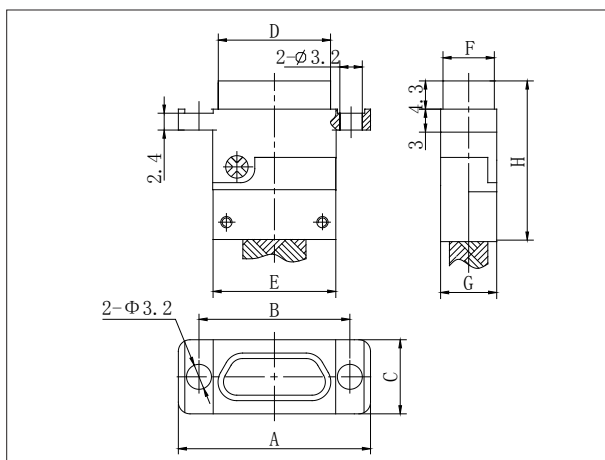
Receptacle:RH-A1D

- with anti-rotation slots on the flange
- with shielded cable clamp on the tail of outer shell
- **Contacts:**  
R04J- 9, 15, 21, 25, 31, 37, 51, 66, 74, 100 PI /RH-A1D

### Outline Dimension



R04J-□PI-A1D



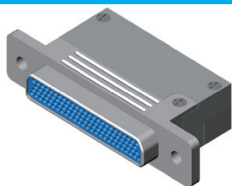
R04J-□RH-A1D

Part Number	A	B	D		E	F		G	H	
			PI-A1D	RH-A1D		PI-A1D	RH-A1D		PI-A1D	RH-A1D
RQ4J-9PI-A1D/RH-A1D	19.6	14.3	8.3	9.8	9.9	4.7	6.1	8	23	23.5
R04J-15PI-A1D/RH-A1D	23.5	18.2	12.3	13.7	13.8	4.7	6.1	8	23	23.5
R04J-21PI-A1D/RH-A1D	27.4	22	16	17.4	17.6	4.7	6.1	8	23	23.5
R04J-25PI-A1D/RH-A1D	29.8	24.5	18.6	20	20.2	4.7	6.1	8	23	23.5
RD4J-31PI-A1D/RH-A1D	33.6	28.3	22.4	23.8	24	4.7	6.1	8	23	23.5
R04J-37PI-A1D/RH-A1D	37.4	32.2	26.3	27.7	27.8	4.7	6.1	8	23	23.5
R04J-51PI-A1D/RH-A1D	36.4	30.86	25	26.5	26.6	5.8	7.2	9	23	23.5
R04J-66PI-A1D/RH-A1D	42.9	37.3	31.4	32.9	33	5.8	7.2	9	23	23.5
R04J-74PI-A1D/RH-A1D	38.8	33.5	27.5	29	29.1	6.8	8.3	11	25	25.5
R04J-100PI-A1D/RH-A1D	54.7	45.7	35	36.6	36.8	6.8	8.2	11	25	25.5

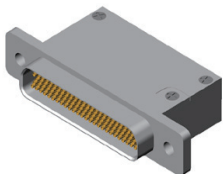
Remark: All dimensions are in mm



**R04J series crimp contact basic type -A1/GA1**



Plug:PI-A1



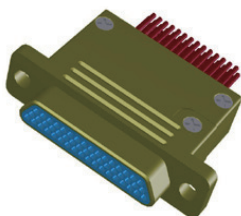
Receptacle:RH-A1

- with shielded cable clamp on the tail of outer shell

- **Shell Plating Finish:** Nickel

- **Contacts:**

R04J- 9, 15, 21, 25, 31, 37, 51, 66, 74, 100 PI /RH-A1



Plug:PI-GA1



Receptacle:RH-GA1

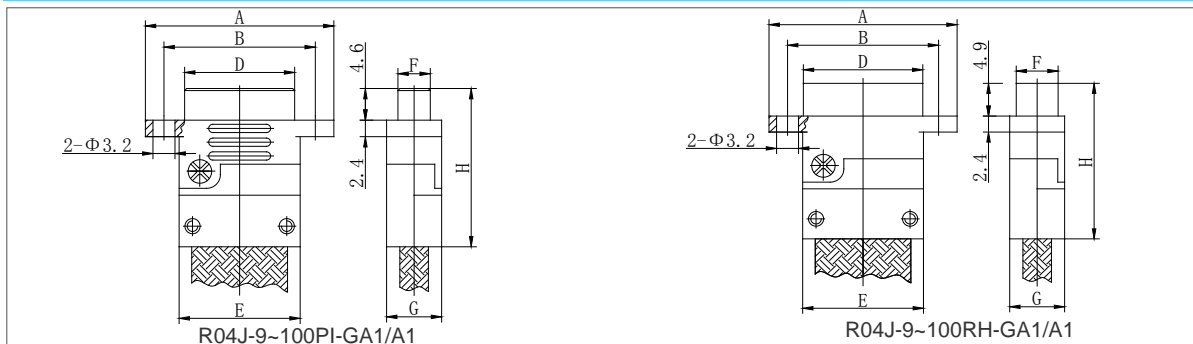
- with shielded cable clamp on the tail of outer shell

- **Shell Plating Finish:** Cadmium

- **Contacts:**

R04J- 9, 15, 21, 25, 31, 37, 51, 66, 74, 100 PI /RH-GA1

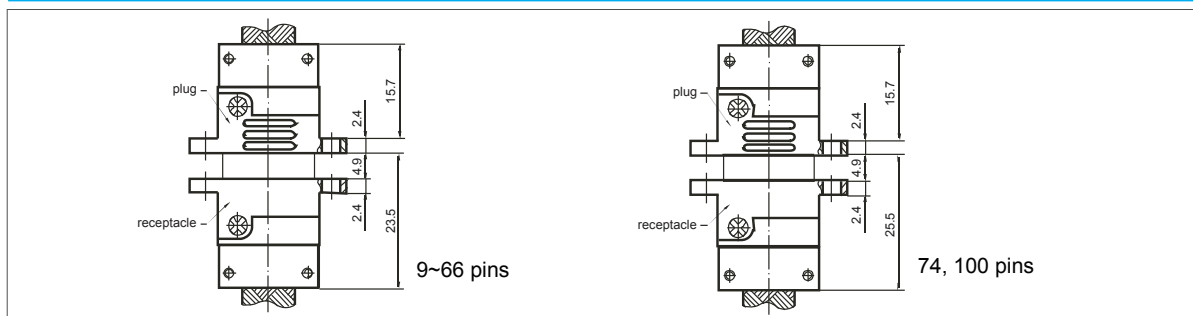
**Outline Dimension**



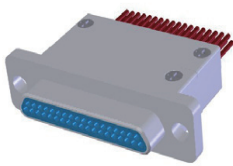
Pin Count	A	B	D		E	F		G	H	
			PI	RH		PI	RH		PI	RH
9PI/RH	19.6	14.3	8.3	9.8	9.9	4.7	6.1	8	23	23.5
15PI/RH	23.5	18.2	12.3	13.7	13.8	4.7	6.1	8	23	23.5
21PI/RH	27.4	22	16	17.4	17.6	4.7	6.1	8	23	23.5
25PI/RH	29.8	24.5	18.6	20	20.2	4.7	6.1	8	23	23.5
31PI/RH	33.6	28.3	22.4	23.8	24	4.7	6.1	8	23	23.5
37PI/RH	37.4	32.2	26.3	27.7	27.8	4.7	6.1	8	23	23.5
51PI/RH	36.4	30.86	25	26.5	26.6	5.8	7.2	9	23	23.5
66PI/RH	42.9	37.3	31.4	32.9	33	5.8	7.2	9	23	23.5
74PI/RH	38.8	33.5	27.5	29	29.1	6.8	8.3	11	25	25.5
100PI/RH	54.7	45.7	35	36.6	36.8	6.8	8.2	11	25	25.5

Remark: All dimensions are in mm

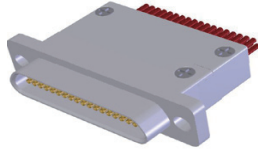
**Appearance dimension**



## R04J series crimp contact extended type-A1(9.6)



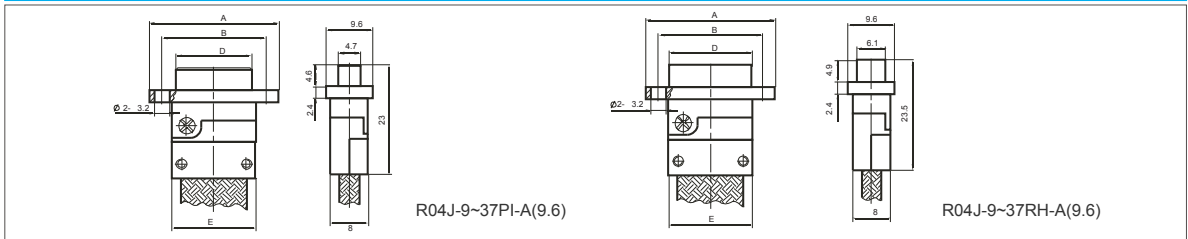
Plug:PI-A1(9.6)



Receptacle:RH-A1(9.6)

- The width of flange is 9.6mm
- With shielded cable clamp on the tail of outer shell
- **Contacts:** R04J- 9, 15, 21, 25, 31, 37,PI/RH-A1(9.6)

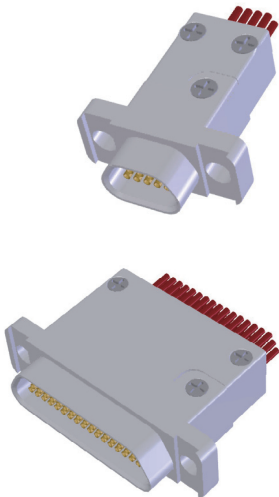
### Outline Dimension



Part Number	A	B	D		E
			PI-A1(9.6)	RH-A1(9.6)	
R04J-9PI/RH-A1(9.6)	19.6	14.3	8.3	9.8	9.9
R04J-15PI/RH-A1(9.6)	23.5	18.2	12.3	13.7	13.8
R04J-21PI/RH-A1(9.6)	27.4	22	16	17.4	17.6
R04J-25PI/RH-A1(9.6)	29.8	24.5	18.6	20	20.2
R04J-31PI/RH-A1(9.6)	33.6	28.3	22.4	23.8	24
R04J-37PI/RH-A1(9.6)	37.4	32.2	26.3	27.7	27.8

Remark: All dimensions are in mm

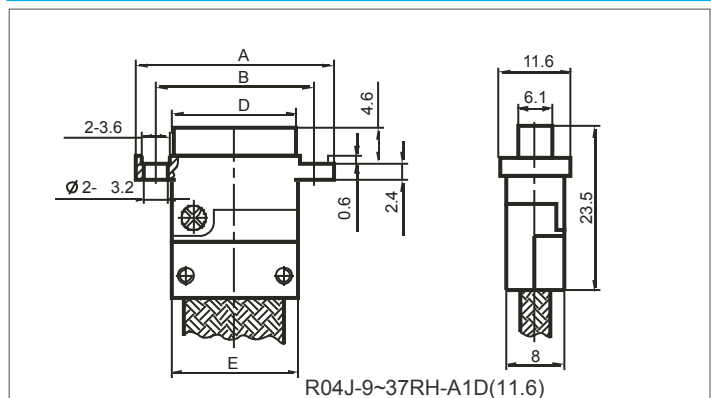
## R04J series crimp contact extended type-A1D(11.6)



Receptacle:RH-A1D(11.6)

- The width of flange is 11.6mm
- With shielded cable clamp on the tail of outer shell
- With anti-rotation slots on the flange
- **Contacts:** R04J- 9, 15, 21, 25, 31, 37RH-A1D(11.6)

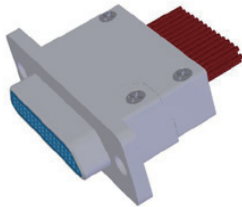
### Outline Dimension



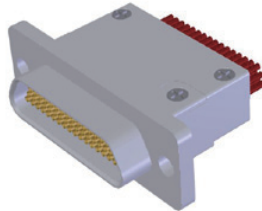
Part Number	A	B	D	E
R04J-9RH-A1D(11.6)	19.6	14.3	9.8	9.9
R04J-15RH-A1D(11.6)	23.5	18.2	13.7	13.8
R04J-21RH-A1D(11.6)	27.4	22	17.4	17.6
R04J-25RH-A1D(11.6)	29.8	24.5	20	20.2
R04J-31RH-A1D(11.6)	33.6	28.3	23.8	24
R04J-37RH-A1D(11.6)	37.4	32.2	27.7	27.8

Remark: All dimensions are in mm

## R04J series crimp contact extended type-A2Q8



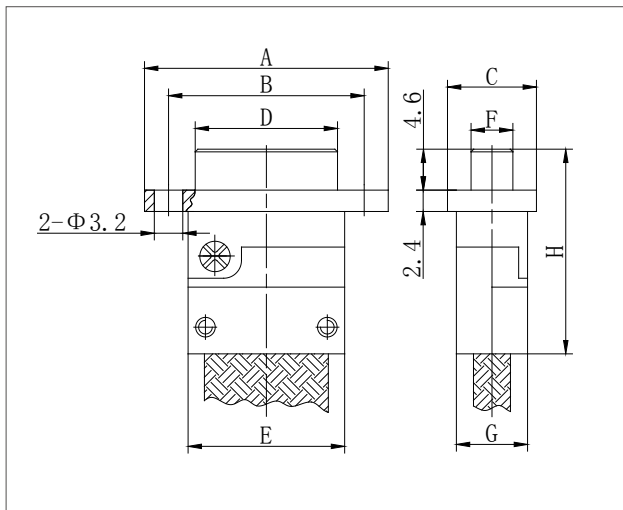
Plug:PI-A2Q8



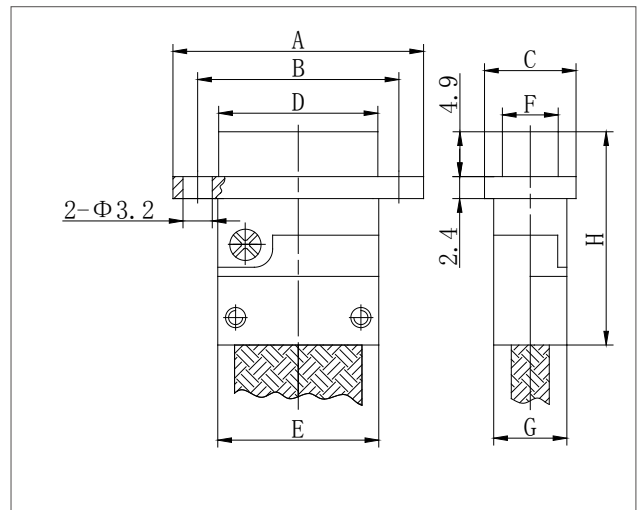
Receptacle:RH-A2Q8

- The flange size and assembly hole size are enlarged from R04J-\*PIA1/RHA1
- With shielded cable clamp on the tail of outer shell
- **Contacts:**  
R04J- 9, 15, 21, 25, 31, 37, 51, 74, 100 PI /RH-A2Q8

## Outline Dimension



R04J-9~100PI -A2Q8



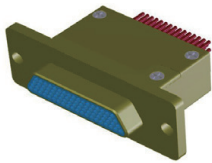
R04J-9~100RH-A2Q8

Part No.	A	B	C	D		E	F		G	H	
				PI-A2Q8	RH-A2Q8		PI-A2Q8	RH-A2Q8		PI-A2Q8	RH-A2Q8
R04J-9PI/RH-A2Q8	21.4	16.1	11.6	8.3	9.8	9.9	4.7	6.1	8	23	23.5
R04J-15PI/RH-A2Q8	25.3	20	11.6	12.3	13.7	13.8	4.7	6.1	8	23	23.5
R04J-21PI/RH-A2Q8	29.2	23.8	11.6	16	17.4	17.6	4.7	6.1	8	23	23.5
R04J-25PI/RH-A2Q8	31.6	26.3	11.6	18.6	20	20.2	4.7	6.1	8	23	23.5
R04J-31PI/RH-A2Q8	35.4	30.1	11.6	22.4	23.8	24	4.7	6.1	8	23	23.5
R04J-37PI/RH-A2Q8	39.2	34	11.6	26.3	27.7	27.8	4.7	6.1	8	23	23.5
R04J-51PI/RH-A2Q8	38.2	32.6	12.6	25	26.5	26.6	5.8	7.2	9	23	23.5
R04J-74PI/RH-A2Q8	40.6	37.1	13.8	27.5	29	29.1	6.8	8.3	11	25	25.5
R04J-100PI/RH-A2Q8	56.5	49.3	13.8	35	36.6	36.8	6.8	8.2	11	25	25.5

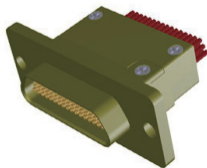
Remark: All dimensions are in mm



### R04J series crimp contact extended type-GA1Q



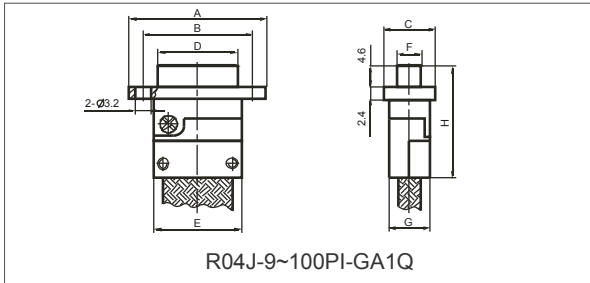
Plug:PI-GA1Q



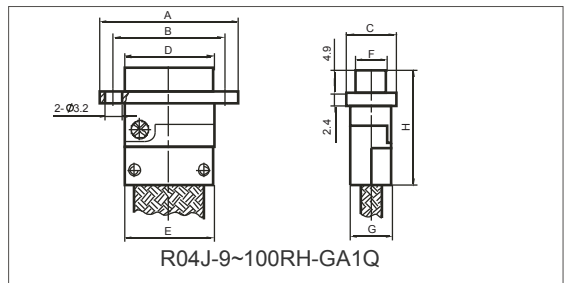
Receptacle:RH-GA1Q

- Outer shell is plated with cadmium
- With shielded cable clamp on the tail of outer shell
- The flange is widened
- **Contacts:**  
R04J- 9, 15, 21, 25, 31, 37, 51, 66, 74, 100 PI /RH-GA1Q

### Outline Dimension



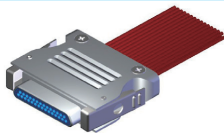
R04J-9~100PI-GA1Q



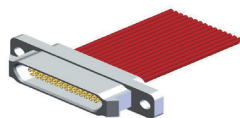
R04J-9~100RH-GA1Q

Pin Count	A	B	C	D		E	F		G	H	
				PI	RH		PI	RH		PI	RH
9PI/RH-GA1Q	26	21	14	8.3	9.8	9.9	4.7	6.1	8	23	23.5
15PI/RH-GA1Q	29.9	24.9	14	12.3	13.7	13.8	4.7	6.1	8	23	23.5
21PI/RH-GA1Q	33.8	28.7	14	16	17.4	17.6	4.7	6.1	8	23	23.5
25PI/RH-GA1Q	36.2	31.2	14	18.6	20	20.2	4.7	6.1	8	23	23.5
31PI/RH-GA1Q	40	35	14	22.4	23.8	24	4.7	6.1	8	23	23.5
37PI/RH-GA1Q	43.8	38.9	14	26.3	27.7	27.8	4.7	6.1	8	23	23.5
51PI/RH-GA1Q	42.6	37.6	15.2	25	26.5	26.6	5.8	7.2	9	23	23.5
66PI/RH-GA1Q	49.3	44	15.2	31.4	32.9	33	5.8	7.2	9	23	23.5
74PI/RH-GA1Q	45.2	40.2	16.1	27.5	29	29.1	6.8	8.3	11	25	25.5
100PI/RH-GA1Q	61.1	52.4	16.1	35	36.6	36.8	6.8	8.2	11	25	25.5

### R04J series crimp contact of fast lock type---R04JA



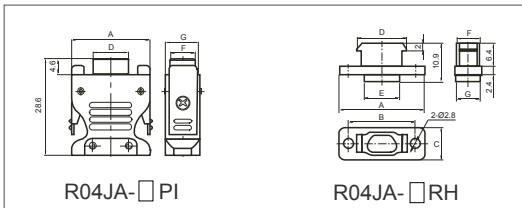
Plug: R04JA-\* PI



Receptacle: R04JA-\*RH

- With fast lock function
- Crimp contact termination type
- **Contacts:**  
R04JA- 9, 15, 21, 25, 31, 37, 51, 66 , 74, 100 PI / RH

### Outline Dimension



R04JA-□ PI

R04JA-□ RH

Part number	A	D	F	G	Part number	A	B	C	D	E	F	G
R04JA-9PI	18.2	8.4	4.7	8.1	R04JA-9RH	23.4	18.6	7.6	14.3	9.8	6.5	6.8
R04JA-15PI	22.1	12.3	4.7	8.1	R34JA-15RH	27.4	22.6	7.6	18.3	13.8	6.5	6.8
R04JA-21PI	25.8	16	4.7	8.1	R04JA-21RH	31.1	26.3	7.6	22	17.5	6.5	6.8
R04JA-25PI	28.4	18.6	4.7	8.1	RMJA-25RH	33.7	28.9	7.6	24.6	20.1	6.5	6.8
R04JA-31PI	32.2	22.4	4.7	8.1	RB4JA31RH	37.5	32.7	7.6	28.4	24.1	6.5	6.8
R04JA-37PI	36	26.3	4.7	8.1	RQ4JA-37RH	41.4	36.6	7.6	32.3	27.8	6.5	6.8
R04JA-51PI	34.8	25	5.8	10	RD4JA-51RH	40.1	35.3	8.7	31	26.5	7.6	7.9
R04JA-74PI	37.3	27.5	6.8	11	RD4JA-74RH	42.6	37.8	9.8	33.5	29	8.7	9
R04JA-100PI	44.8	35	6.8	11	R04JA-100RI	50.1	45.3	9.8	41	36.5	8.7	9

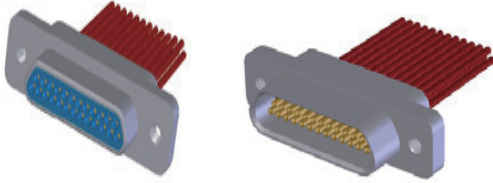
### Solid picture and appearance dimension after mating



Part number	A	B	Part number	A	B
R04JA-9PI/RH	23.4	8.1	R04JA-37PI/RH	41.4	8.1
R04JA-15PI/RH	27.4	8.1	R04JA-51PI/RH	40.1	10
R04JA-21PI/RH	31.1	8.1	R04JA-74PI/RH	42.6	11
R04JA-25PI/RH	33.7	8.1	R04JA-100PI/RH	50.1	11
R04JA-31PI/RH	37.5	8.1			

Remark: All dimensions are in mm

**R04J series crimp contact extended type---R04JD**

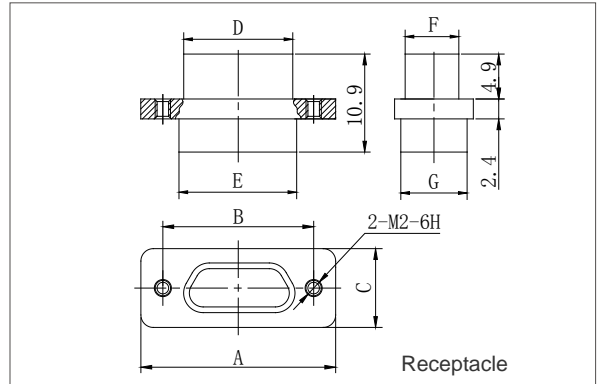
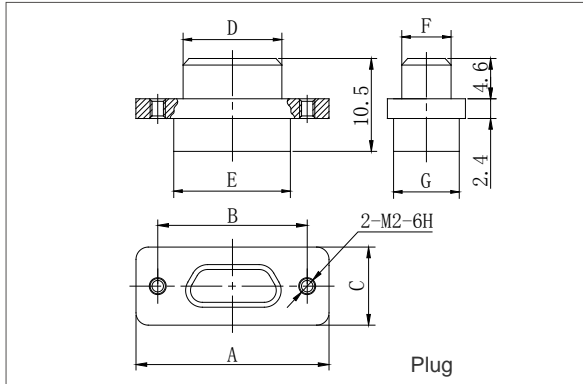


Plug: R04JD-\* PI

Receptacle: R04JD-\* RH

- The assembly hole is threaded hole : M2-6H
- Crimp contact termination type
- **Contacts:**  
R04JD- 9, 15, 21, 25, 31, 37, 51, 66 , 74, 100 PI / RH

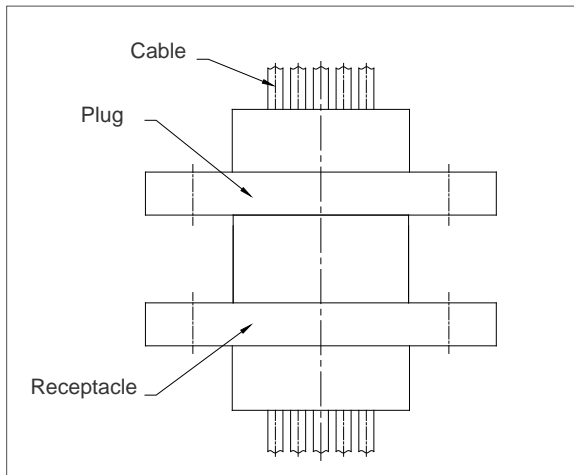
**Outline Dimension**



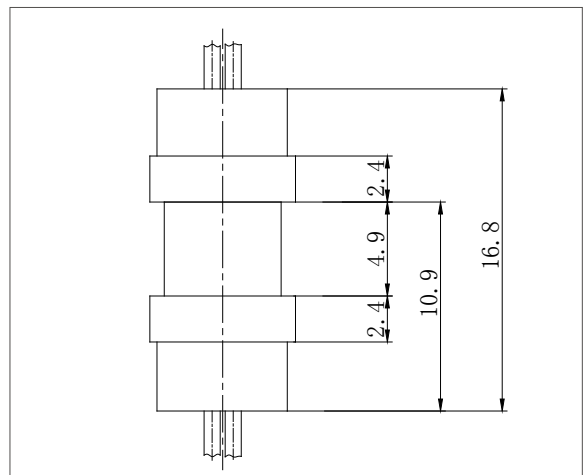
Part number	A	B	C	D		E	F		G
				PI	RH		PI	RH	
R04JD-9PI/RH	19.6	14.3	7.6	8.3	9.8	9.9	4.7	6.1	6.8
R04JD-15PI/RH	23.5	18.2	7.6	12.3	13.7	13.8	4.7	6.1	6.8
R04JD-21PI/RH	27.4	22	7.6	16	17.4	17.6	4.7	6.1	6.8
R04JD-25PI/RH	29.8	24.5	7.6	18.6	20	20.2	4.7	6.1	6.8
R04JD-31PI/RH	33.6	28.3	7.6	22.4	23.8	24	4.7	6.1	6.8
R04JD-37PI/RH	37.4	32.2	7.6	26.3	27.7	27.8	4.7	6.1	6.8
R04JD-51PI/RH	36.4	30.86	8.7	25	26.5	26.6	5.8	7.2	7.9
R04JD-66PI/RH	42.9	37.3	8.7	31.4	32.9	33	5.8	7.2	7.9
R04JD-74PI/RH	38.8	33.5	9.7	27.5	29	29.1	6.8	8.3	9.1
R04JD-100PI/RH	54.7	45.7	9.7	35	36.6	36.6 / 36.65	6.8	8.2	9.1

Remark: All dimensions are in mm

**Solid picture and appearance dimension after mating**



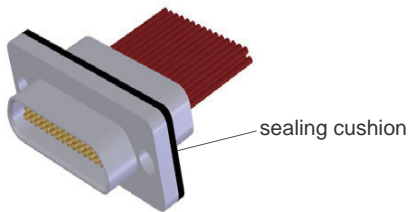
The main view



The left view



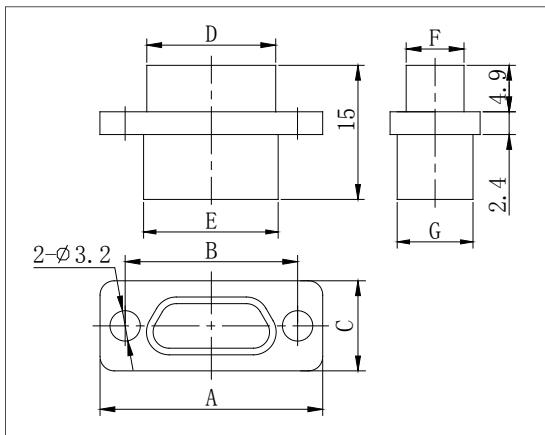
## R04J series crimp contact of gule sealing type---R04JS



Receptacle: R04JS-\* RH

- Glue sealing
- With a sealing cushion,thickness:1mm
- Insulation resistance:  $\geq 2000 M\Omega$
- The air leakage rate:  $1 \times 10^{-2} Pa \cdot CM / S^3$
- Crimp contact termination type
- **Contacts:**  
R04JS- 9, 15, 21, 25, 31, 37, 51, 66 , 74, 100 RH

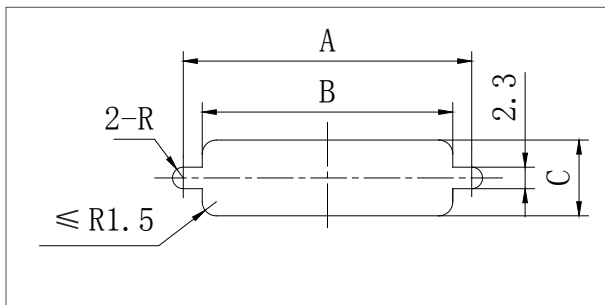
### Outline Dimension



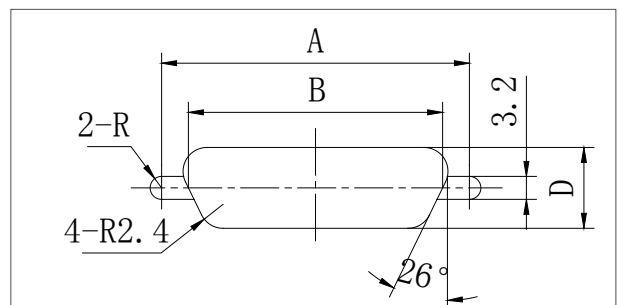
Part number	A	B	C	D	E	F	G
R04JS-9RH	19.6	14.3	12	9.8	9.9	6.1	6.8
R04JS-15RH	23.5	18.2	12	13.7	13.8	6.1	6.8
R04JS-21RH	27.4	22	12	17.4	17.6	6.1	6.8
RD4JS-25RH	29.8	24.5	12	20	20.2	6.1	6.8
RD4JS-31RH	33.6	28.3	12	23.8	24	6.1	6.8
R04JS-37RH	37.4	32.2	12	27.7	27.8	6.1	6.8
R04JS-51RH	36.4	30.86	13	26.5	26.6	7.2	7.9
R04JS-74RH	38.8	33.5	14	29	29.1	8.3	9.1
R04JS-100RH	54.7	45.7	14	36.65	36.8	3.2	9.1

### R04J series crimp contact type - mounting hole dimension

- Suitable for product: R04J-\*PI/RH      R04J-\*PI/RH-D      R04J-\*PIG/RHG      R04J-\*PI/RH(9.6)
- R04J-\*PI/RH(11.6)      R04JC-\*PI/RH      R04J-\*RH



Mounting hole dimension for front panel mounting



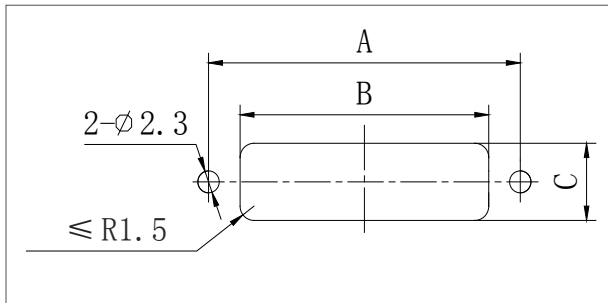
Mounting hole dimension for rear panel mounting

Pin Count	A	B	C	D	Pin Count	A	B	C	D
9 pins	14.3	10.2	7	6.3	37 pins	32.2	28.1	7	6.3
15 pins	18.2	14.1	7	6.3	51pins	30.86	26.9	8.1	7.4
21 pins	22	17.9	7	6.3	66 pins	37.3	33.4	8.1	7.4
25 pins	24.5	20.5	7	6.3	74 pins	33.5	29.4	9.3	8.6
31 pins	28.3	24.3	7	6.3	100 pins	45.7	37	9.3	8.6

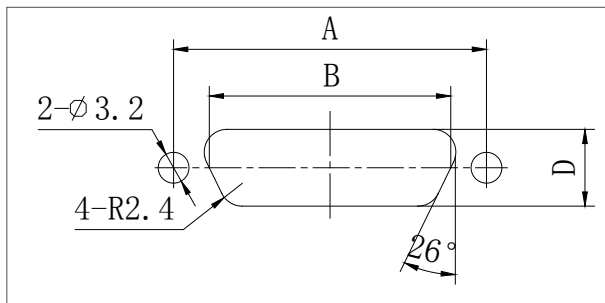
Remark:1. R04JS is sealing product,we suggest to use un-through threaded mounting hole for front panel mounting  
2. All dimensions are in mm

### R04J series crimp contact type - mounting hole dimension

■ Suitable for product: R04J-\*PI/RH-Q R04J-\*PI/RHG-Q R04JC-\*RH-Q



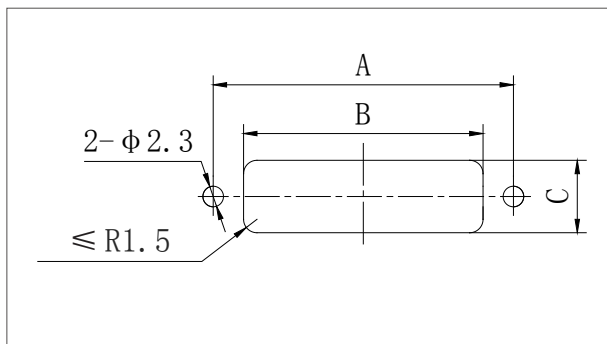
Mounting hole dimension for front panel mounting



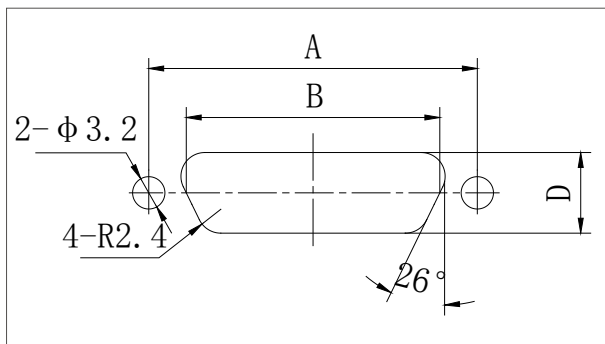
Mounting hole dimension for rear panel mounting

Pin Count	A	B	C	D	Pin Count	A	B	C	D
9 pins	21	10.2	7	6.3	37 pins	38.9	28.1	7	6.3
15 pins	24.9	14.1	7	6.3	51 pins	37.6	26.9	8.1	7.4
21 pins	28.7	17.9	7	6.3	66 pins	44	33.4	8.1	7.4
25 pins	31.2	20.5	7	6.3	74 pins	40.2	29.4	9.3	8.6
31 pins	35	24.3	7	6.3	100 pins	52.4	37	9.3	8.6

■ Suitable for product: R04J-\*PI/RH-Q8



Mounting hole dimension for front panel mounting



Mounting hole dimension for rear panel mounting

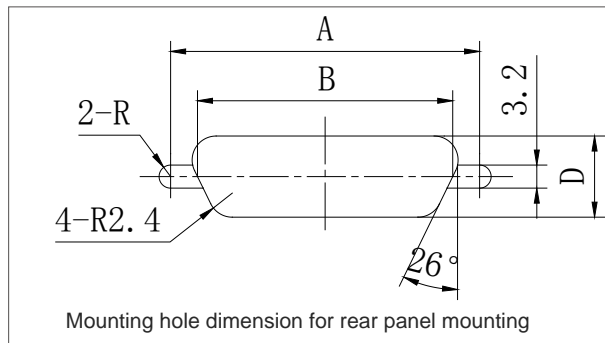
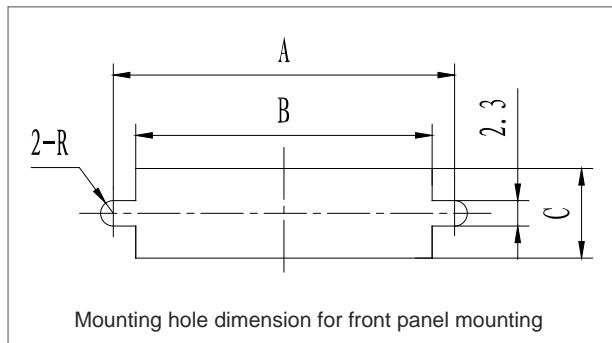
Pin Count	A	B	C	D	Pin Count	A	B	C	D
9 pins	16.1	12	7	6.3	31 pins	30.1	26.1	7	6.3
15 pins	20	15.9	7	6.3	37 pins	34	29.9	7	6.3
21 pins	23.8	19.7	7	6.3	51 pins	32.6	28.7	8.1	7.4
25 pins	26.3	22.3	7	6.3					

Remark: All dimensions are in mm



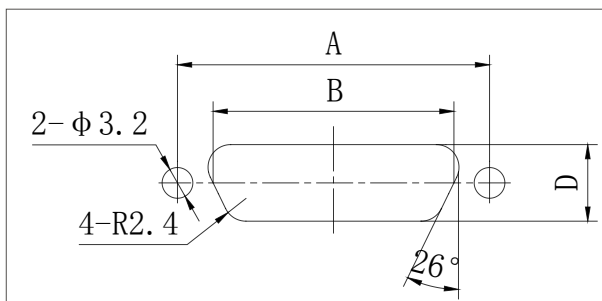
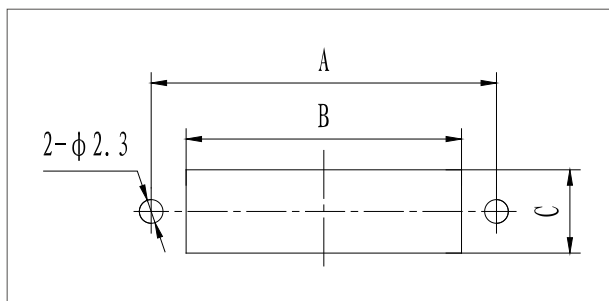
### R04J series crimp contact type - mounting hole dimension

- Suitable for product: R04J-\*PI/RH-A1      R04J-\*PI/RH-A1D      R04J-\*PI/RHG-A1  
    R04J-\*PI/RH-A1(9.6)      R04J-\*PI/RHG-A1(11.6)      R04J-\*PI/RH-A1D(11.6)



Pin Count	A	B	C	D	Pin Count	A	B	C	D
9 pins	14.3	10.2	8.2	6.3	37 pins	32.2	28.1	8.2	6.3
15 pins	18.2	14.1	8.2	6.3	51 pins	30.86	26.9	9.2	7.4
21 pins	22	17.9	8.2	6.3	66 pins	37.3	33.4	9.2	7.4
25 pins	24.5	20.5	8.2	6.3	74 pins	33.5	29.4	11.2	8.6
31 pins	28.3	24.3	8.2	6.3	100 pins	45.7	37	11.2	8.6

- Suitable for product: R04J-\*PI/RH-A2Q8

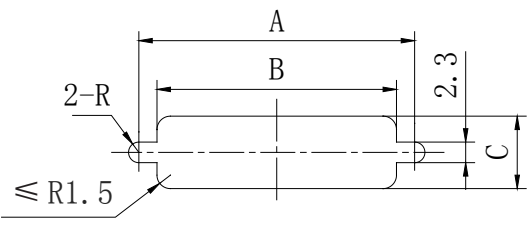


Pin Count	A	B	C	D	Pin Count	A	B	C	D
9 pins	16.1	10.2	8.2	6.3	31 pins	30.1	24.3	8.2	6.3
15 pins	20	14.1	8.2	6.3	37 pins	34	28.1	8.2	6.3
21 pins	23.8	17.9	8.2	6.3	51 pins	32.6	26.9	9.2	7.4
25 pins	26.3	20.5	8.2	6.3					

Remark: All dimensions are in mm

**R04J series crimp contact type - mounting hole dimension**

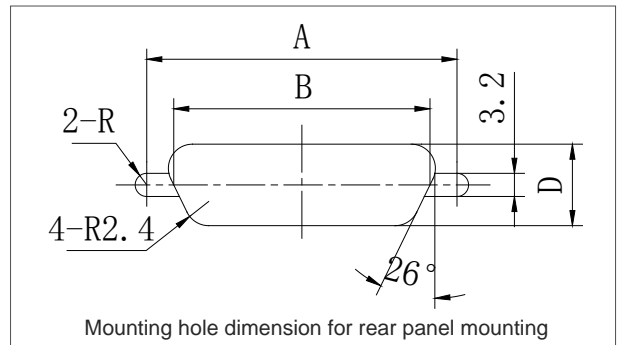
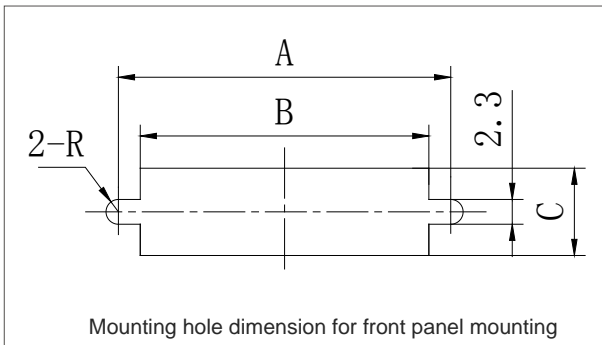
■ Suitable for product: R04JA-\*RH



Pin Count	A	B	C	Pin Count	A	B	C
9 pins	18.6	10.2	7	37 pins	36.6	28.1	7
15 pins	22.6	14.1	7	51 pins	35.3	26.9	8.1
21 pins	26.3	17.9	7	74 pins	37.8	29.4	9.3
25 pins	28.9	20.5	7	100 pins	45.3	37	9.3
31 pins	32.7	24.3	7				

Mounting hole dimension for front panel mounting

■ Suitable for product: R04J-\*PI/RH-C



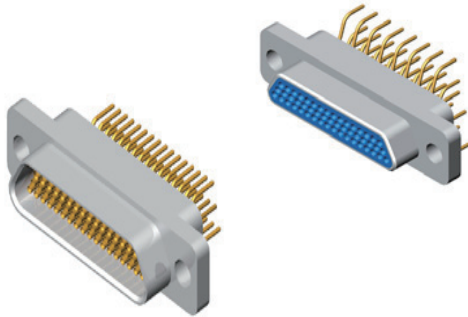
Pin Count	A	B	C	D	Pin Count	A	B	C	D
9 pins	14.3	10.2	8.2	6.3	37 pins	32.2	28.1	8.2	6.3
15 pins	18.2	14.1	8.2	6.3	51 pins	30.86	26.9	9.3	7.4
21 pins	22	17.9	8.2	6.3	66 pins	37.3	33.4	9.3	7.4
25 pins	24.5	20.5	8.2	6.3	74 pins	33.5	29.4	10.3	8.6
31 pins	28.3	24.3	8.2	6.3	100 pins	45.7	37	10.3	8.6

Remark: All dimensions are in mm



# MIL-DTL-83513 Micro D-Sub Connectors

## R04J Series Straight to PCB Type



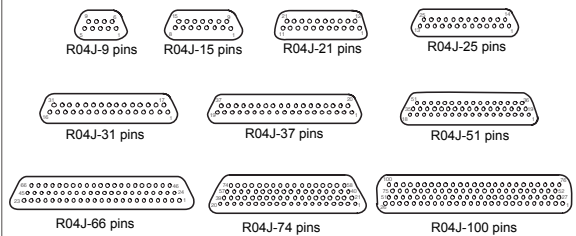
### Introduction

- Micro D-sub connectors
- Twist pin contact, high density interconnection
- Metal shell, plated nickel or cadmium
- Straight to PCB type
- Meet MIL-DTL-83513

### Specification

- Environment temperature:  $-55^{\circ}\text{C} \sim 125^{\circ}\text{C}$
- Vibration:  $10\text{Hz} \sim 2000\text{Hz}$ ,  $196\text{m/s}^2$
- Random vibration: Power spectrum density  $0.4\text{G}^2/\text{Hz}$   
root mean square value of total acceleration  $23.1\text{G}$
- Shock:  $735\text{m/s}^2$  11sm
- Rated current: 3A
- Contact resistance:  $\leq 10\text{m}\Omega$
- Insulation resistance:  $\geq 5000\text{ M}\Omega$
- Dielectric strength: 800V
- Durability: 500 times

### Contact Layout



### How to Order Straight to PCB Connector

Sample part number	R04J	— 25	RH	S	Q5	4	— J
<b>Series:</b>	R04J—standar type R04JA—fast lock type						
<b>Contact number:</b>	9, 15, 21, 25, 31, 37, 51, 66, 74, 100pins						
<b>Contact type :</b>	PI—pin in plug      RH—socket in receptacle						
<b>Tail termination type:</b>	S—straight to PCB						
<b>Locking component type:</b>	blank—without      Q5— locking component type,please see page2						
<b>Shell material and finish :</b>	Blank—Aluminum shell,finish nickel      G—Aluminum shell,finish cadmium						
<b>Tail lengty :</b>	3—6.7mm      4—7.2mm 8—8mm      blank—standard type						
<b>PCB layout :</b>	J—1.27*2.54mm      Blank—2.54*2.54mm						





**R04J series free end locking component**

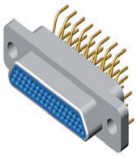
Type	A	B	Outline dimension	Assembly picture	Matched with locking component
W	M2-6h	7.1			Q,Q0,Q2,Q3,Q4,Q5,Q7,Q8,Q9,Q10,Q11, Q14,Q15,Q17,Q23,Q25,Q29,Q32,Q35, Q36,Q37,Q41,Q42,Q43,Q45,Q46
W8	#2-56UNC-2A	7.1			Q1
W7	M2-6h	7.1			Q,Q0,Q2,Q3,Q4,Q5,Q7,Q8,Q9,Q10,Q11, Q14,Q15,Q17,Q23,Q25,Q29,Q32,Q35, Q36,Q37,Q41,Q42,Q43,Q45,Q46
N	M2-6h				Q,Q0,Q2,Q3,Q4,Q5,Q7,Q8,Q9,Q10,Q11, Q14,Q15,Q17,Q23,Q25,Q29,Q32,Q35, Q36,Q37,Q41,Q42,Q43,Q45,Q46
N1	#2-56UNC-2A				Q1

**R04J series fixed end locking component for straight to PCB**

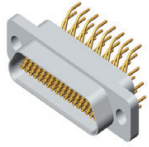
Type	A	B	C	PCB thickness	Outline dimension	Assembly picture	Matched with locking component
Q5	5.7	5.9	18.6	1.6~2.5			W, W7, W9, N  Note: These Kinds components just suitable for front panel mounting
Q10	8	8.4	20.5	1.6~2.5			
Q25	5.7	5.9	20.5	1.6~2.5			
	8	5.9	20.5	1.6~2.5			
Q23	5.7	5.9	17.8	1.6			
Q32	2.7	2		1.6~2.5			W, W7, W9, N  Note: These Kinds components just suitable for rear panel mounting
Q41	3.2	1.5		1.6~2.5			
Q17	5.7			1.6~3			W, W7, W9, N
	7.2			1.6~4.5			
V				≤ 2.5			Not need to lock with locking component of free end

Remark: 1. Fixed end locking component apply to fix the connector on the mounting panel or the PCB. Most fixed end locking component can mate with free end locking component. Few fixed end locking component can't mate with free end locking component.(eg.: Q44)  
2. All dimensions are in mm

## R04J series basic type inserting to PCB--straight to PCB S type



Plug:PIS



Receptacle:RHS

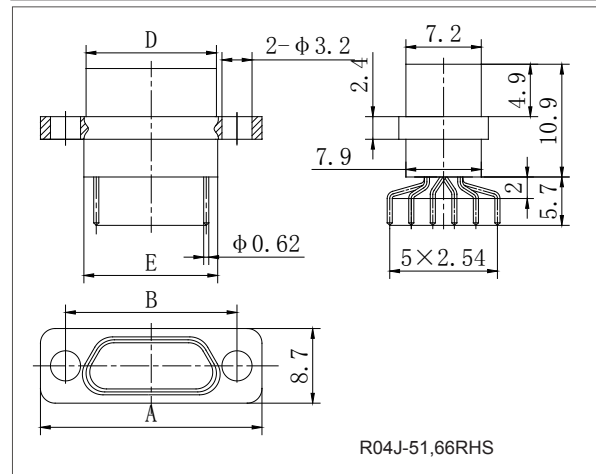
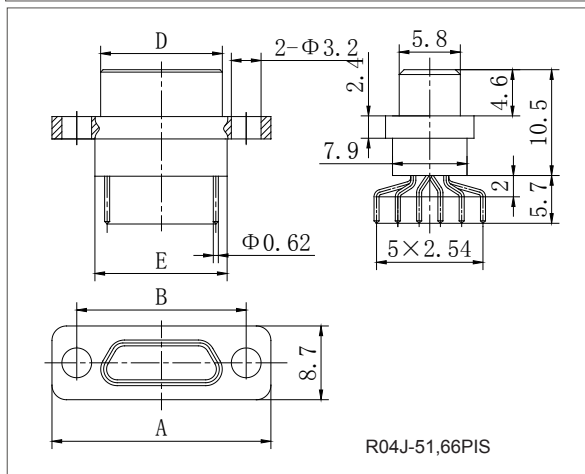
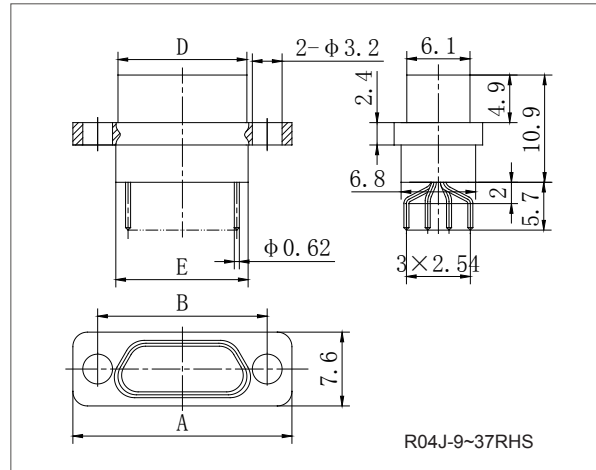
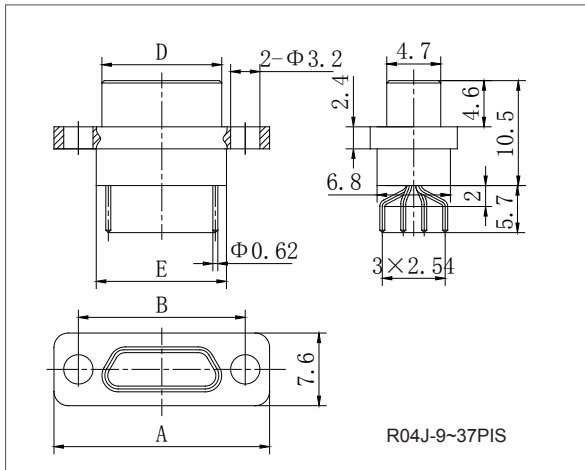
■ **Shell Plating Finish:** Nickel or Cadmium

■ **The PCB Layout:** 2.54\*2.54mm

■ **Contacts:**

R04J- 9, 15, 21, 25, 31, 37, 51, 66, PI S/RHS

### Outline Dimension

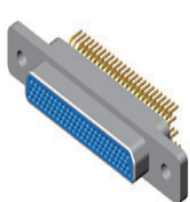


Part Number	A	B	D		E
			PIS	RHS	
R04J-9PIS/RHS	19.6	14.3	8.3	9.8	9.9
R04J-15PIS/RHS	23.5	18.2	12.3	13.7	13.8
RD4J-21PIS/RHS	27.4	22	16	17.4	17.6
R04J-25PIS/RHS	29.8	24.5	18.6	20	20.2
RD4J-31PIS/RHS	33.6	28.3	22.4	23.8	24
RD4J-37PIS/RHS	37.4	32.2	26.3	27.7	27.8
RD4J-51PIS/RHS	36.4	30.86	25	26.5	26.6
RQ4J-66PIS/RHS	42.9	37.3	31.4	32.9	33

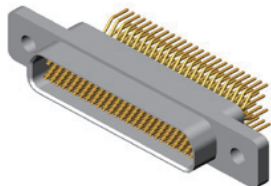
Remark: All dimensions are in mm



straight to PCB S-J type



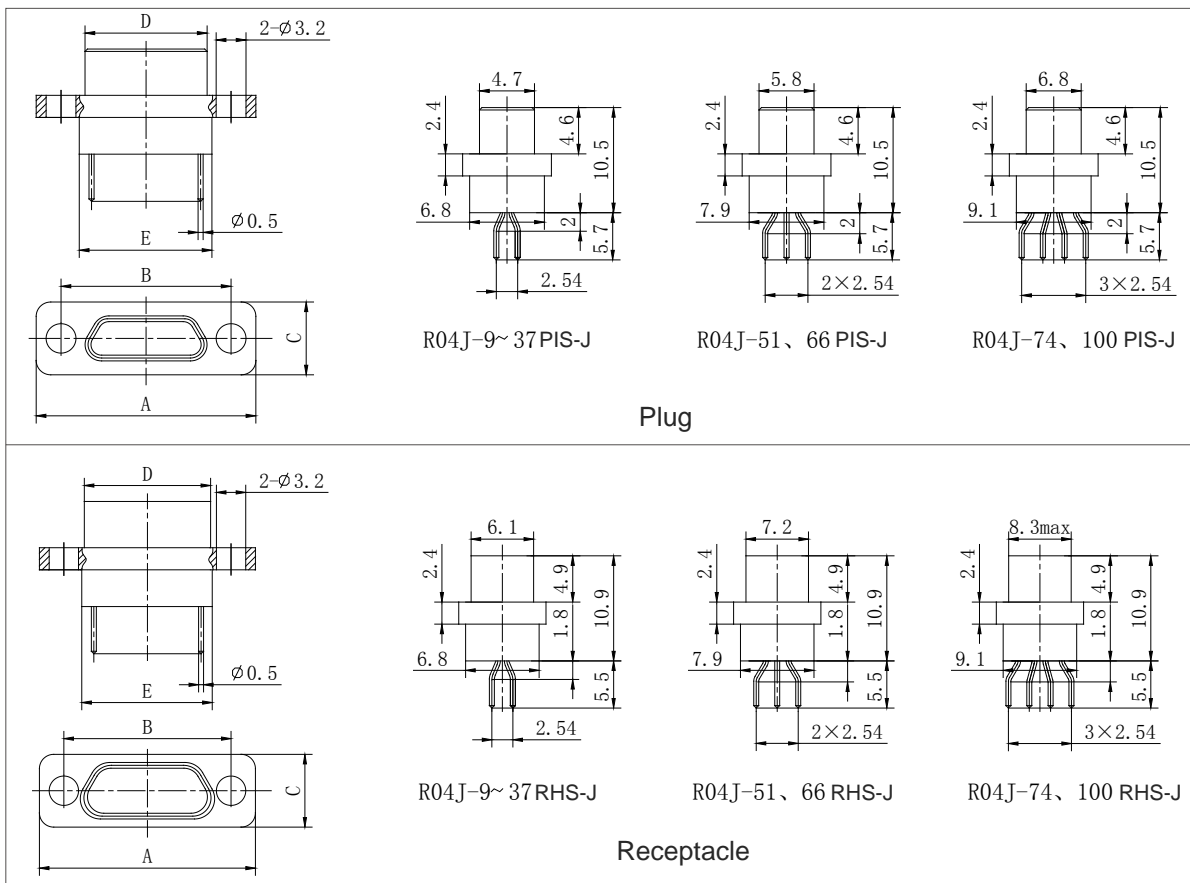
Plug:PIS-J



Receptacle:RHS-J

- **Shell Plating Finish:** Nickel or Cadmium
- **The PCB Layout:** 1.27\*2.54mm
- **Contacts:** R04J- 9, 15, 21, 25, 31, 37, 51, 66, 74, 100 PIS-J / RHS-J

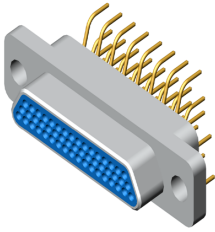
Outline Dimension



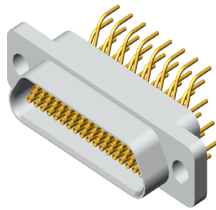
Part number	A	B	C	D		E
				PIS-J	RHS-J	
R04J-9PIS-J/RHS-J	19.6	14.3	7.6	8.3	9.8	9.9
R04J-15PIS-J/RHS-J	23.5	18.2	7.6	12.3	13.7	13.8
R04J-21PIS-J/RHS-J	27.4	22	7.6	16	17.4	17.6
R04J-25PIS-J/RHS-J	29.8	24.5	7.6	18.6	20	20.2
R04J-31PIS-J/RHS-J	33.6	28.3	7.6	22.4	23.8	24
R04J-37PIS-J/RHS-J	37.4	32.2	7.6	26.3	27.7	27.8
R04J-51PIS-J/RHS-J	36.4	30.86	8.7	25	26.5	26.6
R04J-66PIS-J/RHS-J	42.9	37.3	8.7	31.4	32.9	33
R04J-74PIS-J/RHS-J	38.8	33.5	9.7	27.5	29	29.1
R04J-100PIS-J/RHS-J	54.7	45.7	9.7	35	36.6	36.6

Remark: All dimensions are in mm

straight to PCB - PC tail lengthened



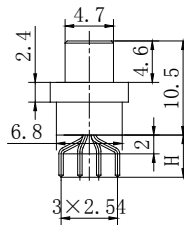
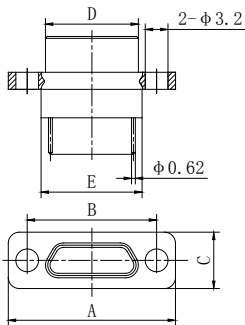
Plug



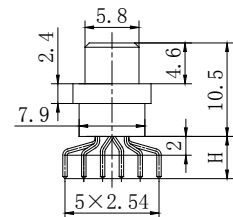
Receptacle

- **Shell Plating Finish:** Nickel or Cadmium
- **The PCB Layout:** 2.54\*2.54mm
- **Contacts:** R04J- 9, 15, 21, 25, 31, 37, 51
- **PC tail length:** 6.7mm , 7.2mm or 8mm

Outline Dimension

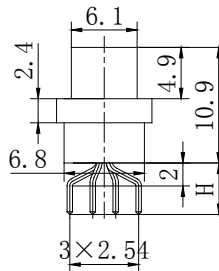
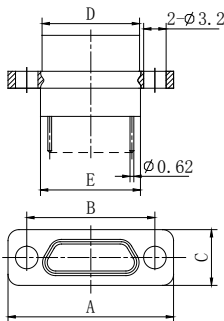


9~37Pins

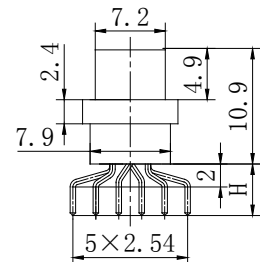


51Pins

R04J-9~51PIS4 / R04J-9~37PIS8



9~37 Sockets



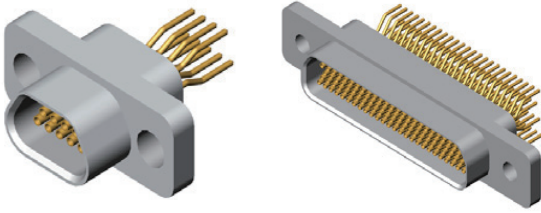
51Sockets

R04J-9~51RHS3 / R04J-9~51RHS4

Contacts	A	B	C	D	E	H		
						S3	S4	S8
9	19.6	14.3	7.6	8.3	9.9	6.7	7.2	8
15	23.5	18.2	7.6	12.3	13.8	6.7	7.2	8
21	27.4	22	7.6	16	17.6	6.7	7.2	8
25	29.8	24.5	7.6	18.6	20.2	6.7	7.2	8
31	33.6	28.3	7.6	22.4	24	6.7	7.2	8
37	37.4	32.2	7.6	26.3	27.8	6.7	7.2	8
51	36.4	30.86	8.7	25	26.6	6.7	7.2	without

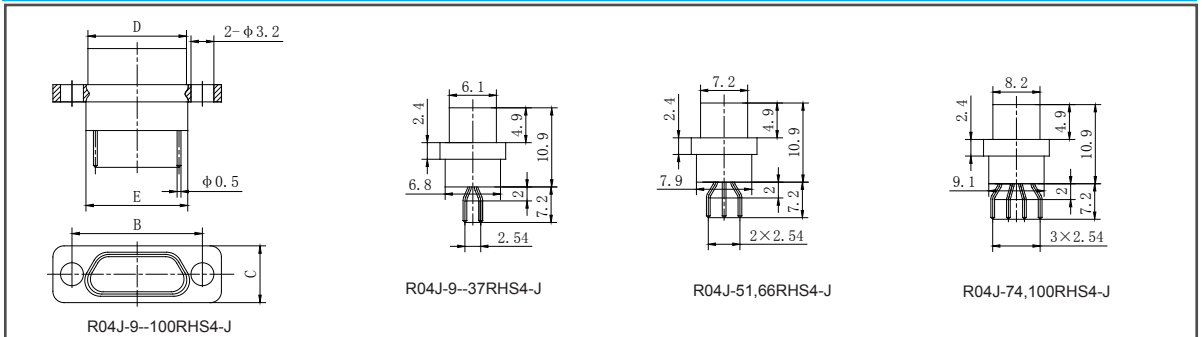
Remark: All dimensions are in mm

**straight to PCB - PC tail lengthened -J type**



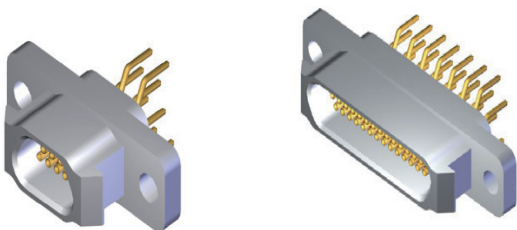
- **Shell Plating Finish:** Nickel or Cadmium
- **The PCB Layout:** 1.27\*2.54mm
- **PC tail length:** 7.2mm
- **Receptacle**
- **Contacts:** R04J- 9, 15, 21, 25, 31, 37, 51  
66, 74, 100RHS4-J

**Outline Dimension**



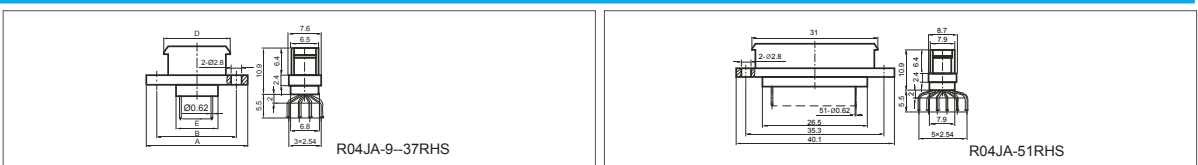
Part number	A	B	C	D	E
R04J-9RHS4-J	19.6	14.3	7.6	9.8	9.9
R04J-15RHS4-J	23.5	18.2	7.6	13.7	13.8
R04J-21RHS4-J	27.4	22	7.6	17.4	17.6
R04J-25RHS4-J	29.8	24.5	7.6	20	20.2
R04J-31RHS4-J	33.6	28.3	7.6	23.8	24
R04J-37RHS4-J	37.4	32.2	7.6	27.7	27.8
R04J-51RHS4-J	36.4	30.86	8.7	26.5	26.6
R04J-66RHS4-J	42.9	37.3	8.7	32.9	33
R04J-74RHS4-J	38.8	33.5	9.7	29	29.1
R04J-100RHS4-J	54.7	45.7	9.7	36.6	36.6

**straight to PCB - fast lock type(R04JA)**



- **Shell Plating Finish:** Nickel or Cadmium
- **The PCB Layout** 2.54\*2.54mm
- **With fast locking function**
- **Receptacle**
- **Contacts:** R04JA- 9, 15, 21, 25, 31, 37, 51RHS

**Outline Dimension**

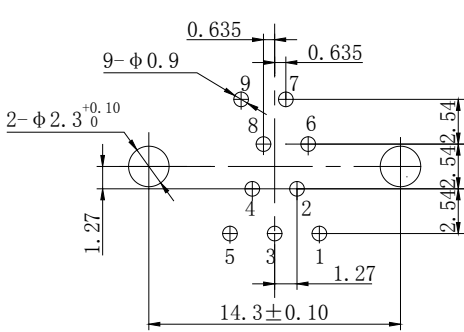


Part number	A	B	D	E
R04JA-9RHS	23.4	18.6	14.8	9.8
R04JA-15RHS	27.4	22.6	18.3	13.8
RD4JA-21RHS	31.1	26.3	22	17.5
RD4JA-25RHS	33.7	28.9	24.6	20.1
R04JA-31RHS	37.5	32.7	28.4	24.1
R04JA-37RHS	41.4	36.6	32.3	27.8

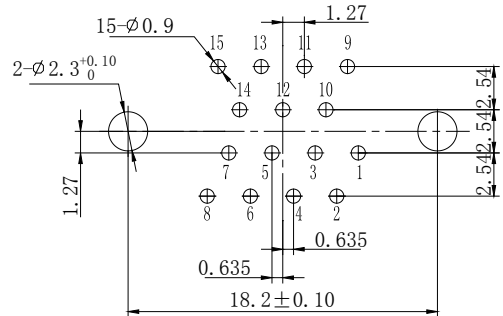
Remark: All dimensions are in mm

## PCB Layout - PI Connector

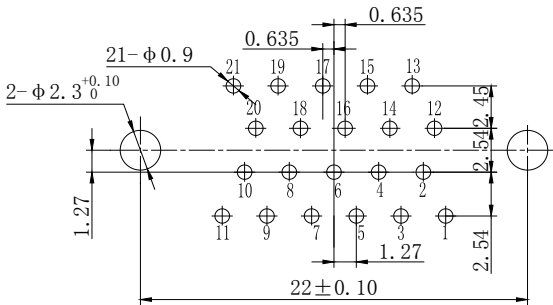
- Patterns shown are for connector mounting side of PC board
- R04J Straight to PCB- S, S4, S8 Type PI Connector



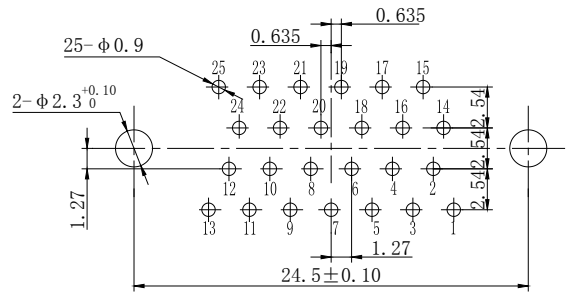
R04J-9PIS, PIS4, PIS8



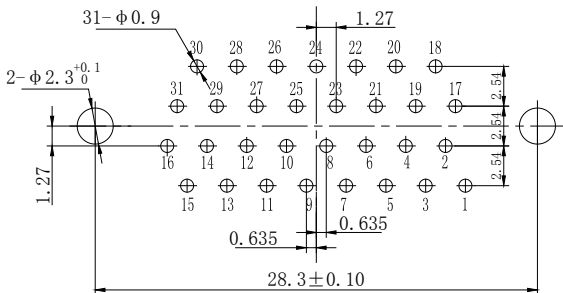
R04J-15PIS, PIS4, PIS8



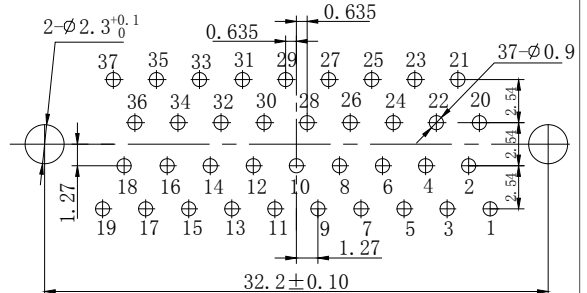
R04J-21PIS, PIS4, PIS8



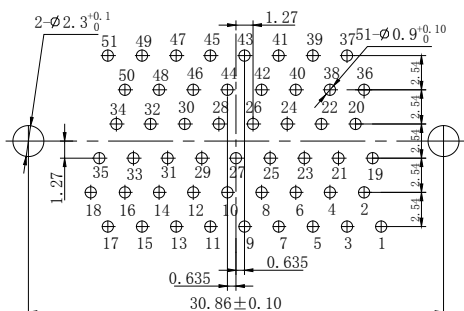
R04J-25PIS, PIS4, PIS8



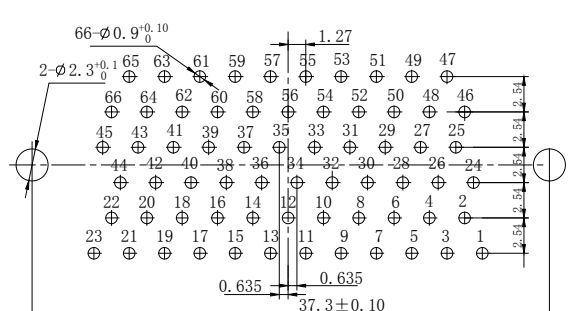
R04J-31PIS, PIS4, PIS8



R04J-37PIS, PIS4, PIS8



R04J-51PIS, PIS4, PIS8



R04J-66PIS, PIS4, PIS8

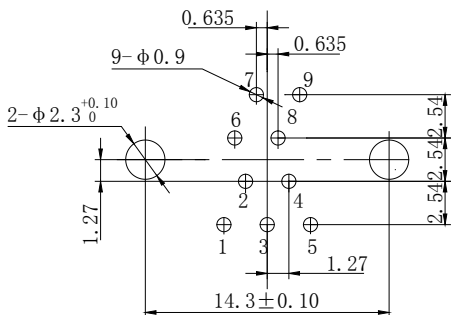
Remark: All dimensions are in mm



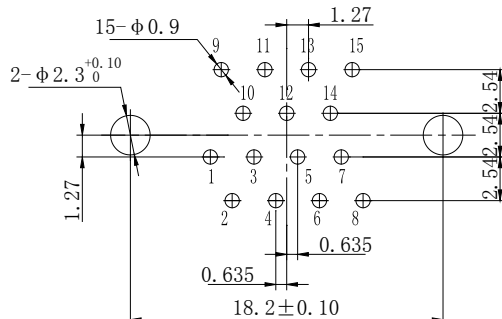


### PCB Layout - RH Connector

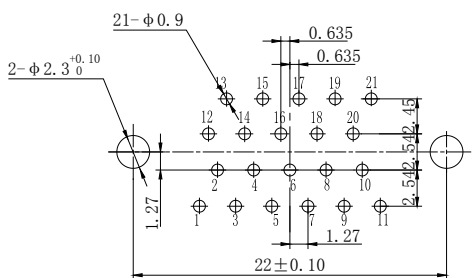
- Patterns shown are for connector mounting side of PC board.
- R04J Straight to PCB- S, S3, S4 Type RH Connector



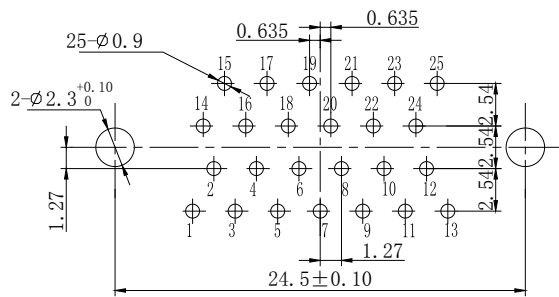
R04J-9RHS, RHS3, RHS4



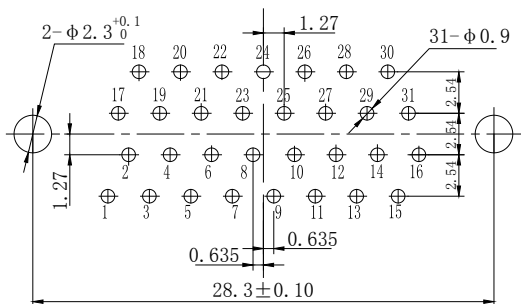
R04J-15RHS, RHS3, RHS4



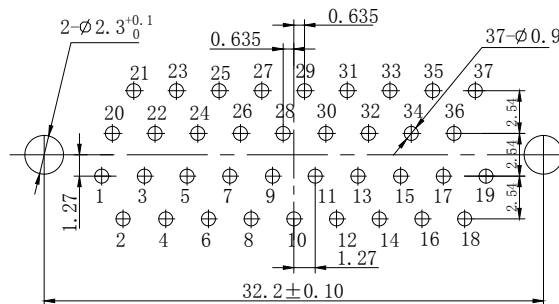
R04J-21RHS, RHS3, RHS4



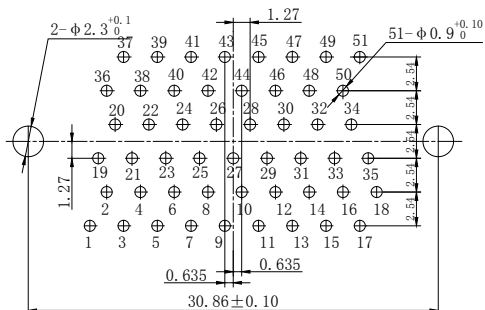
R04J-25RHS, RHS3, RHS4



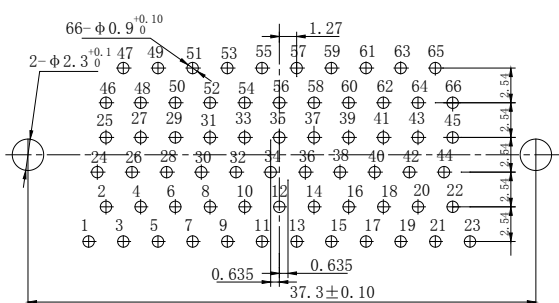
R04J-31RHS, RHS3, RHS4



R04J-37RHS, RHS3, RHS4



R04J-51RHS, RHS3, RHS4



R04J-66RHS, RHS3, RHS4

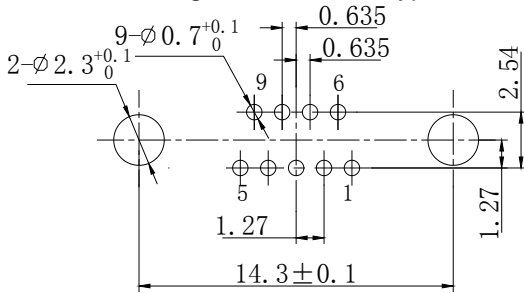
Remark: All dimensions are in mm



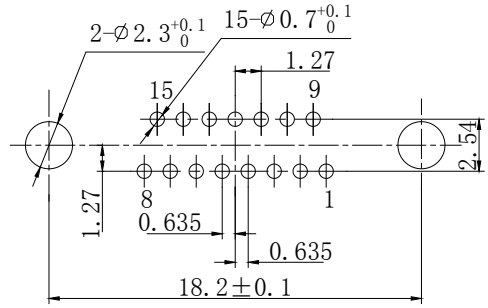


## PCB Layout - PI Connector

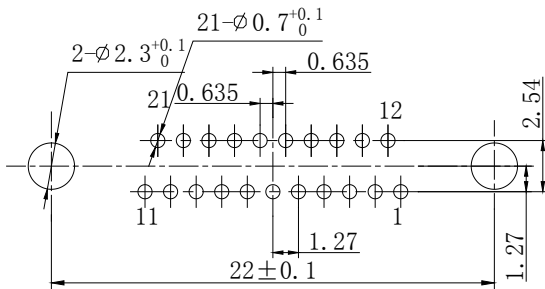
- Patterns shown are for connector mounting side of PC board.
- R04J Straight to PCB- S-J Type PI Connector



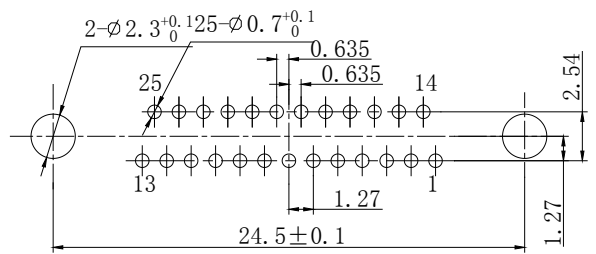
R04J-9PIS-J



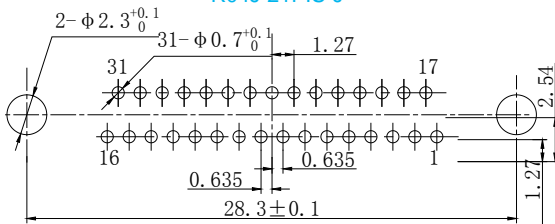
R04J-15PIS-J



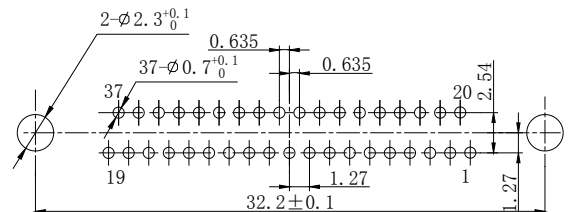
R04J-21PIS-J



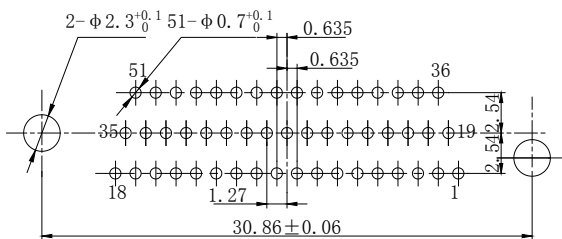
R04J-25PIS-J



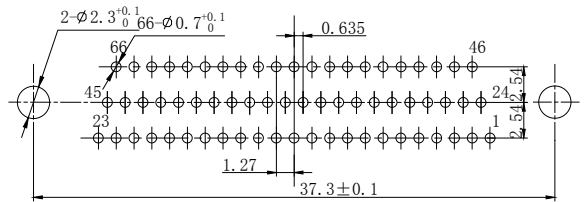
R04J-31PIS-J



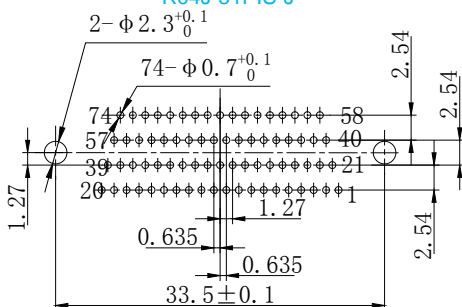
R04J-37PIS-J



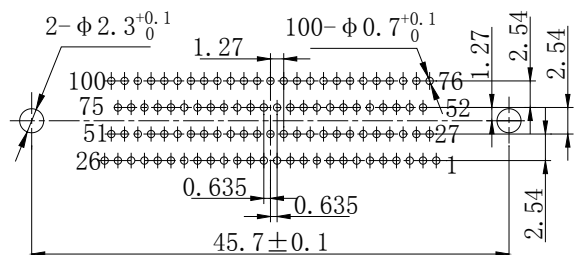
R04J-51PIS-J



R04J-66PIS-J



R04J-74PIS-J



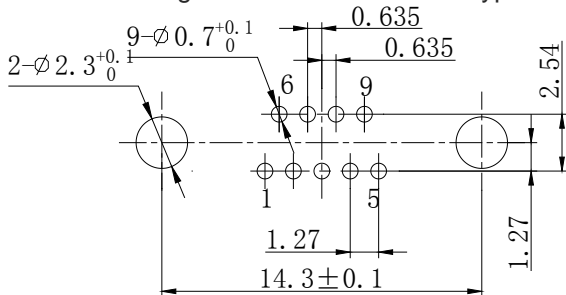
R04J-100PIS-J

Remark: All dimensions are in mm

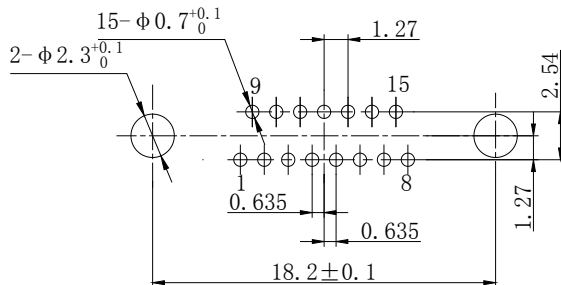


### PCB Layout - RH Connector

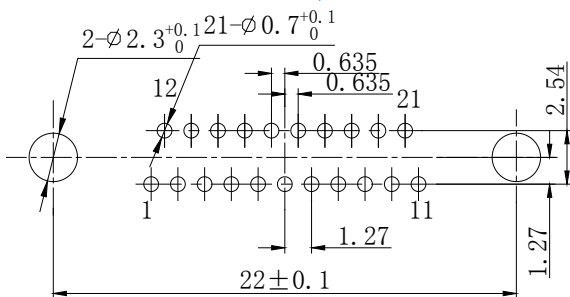
- Patterns shown are for connector mounting side of PC board.
- R04J Straight to PCB- S-J & S4 -J Type RH Connector



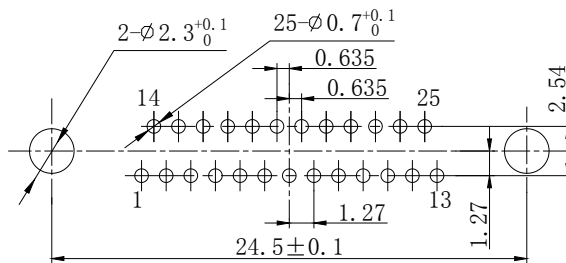
R04J-9RHS-J, RHS4-J



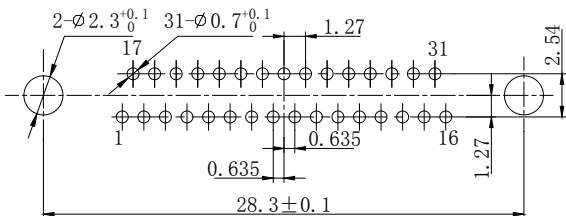
R04J-15RHS-J, RHS4-J



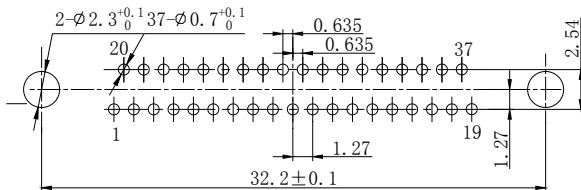
R04J-21RHS-J, RHS4-J



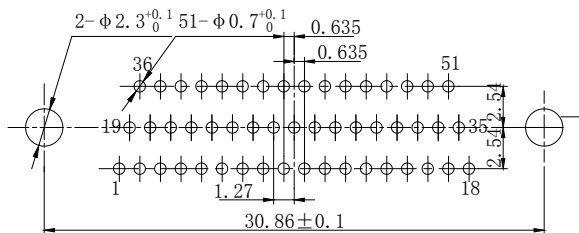
R04J-25RHS-J, RHS4-J



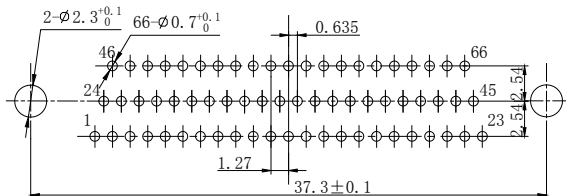
R04J-31RHS-J, RHS4-J



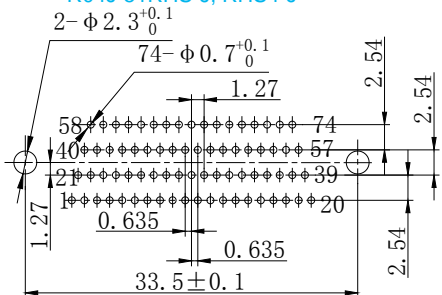
R04J-37RHS-J, RHS4-J



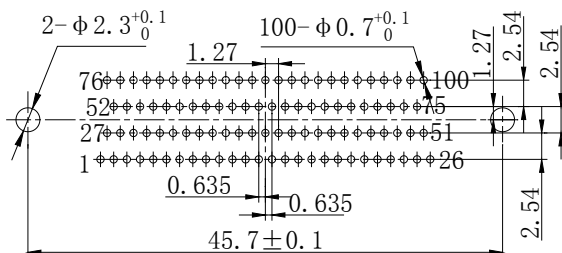
R04J-51RHS-J, RHS4-J



R04J-66RHS-J, RHS4-J



R04J-74RHS-J, RHS4-J



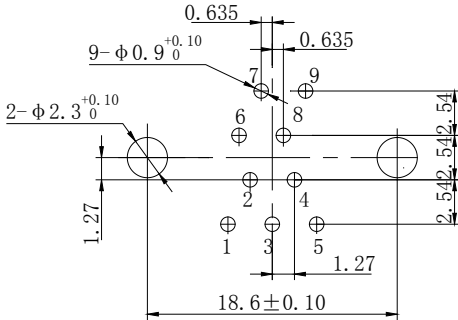
R04J-100RHS-J, RHS4-J

Remark: All dimensions are in mm

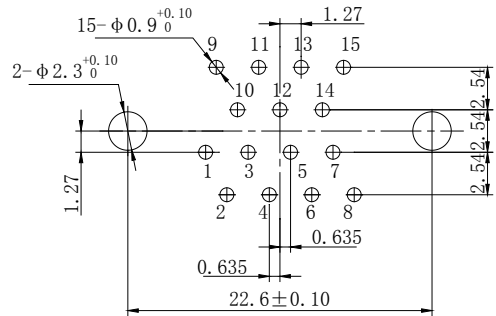


## PCB Layout - fast lock RH Connector

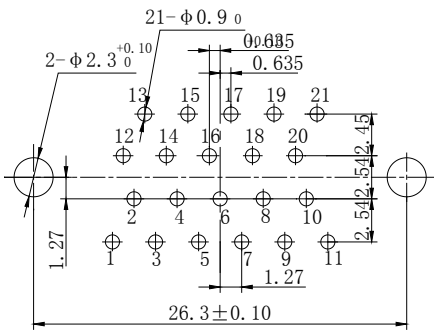
- Patterns shown are for connector mounting side of PC board.
- R04JA Straight to PCB- S Type RH Connector



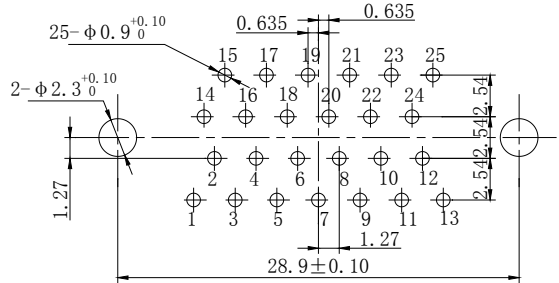
R04JA-9RHS



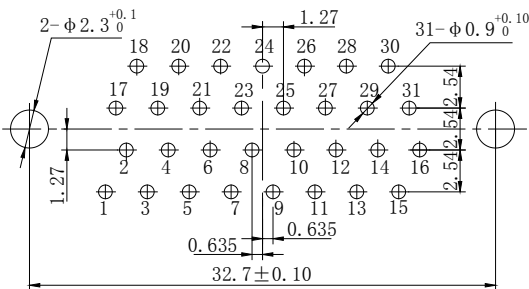
R04JA-15RHS



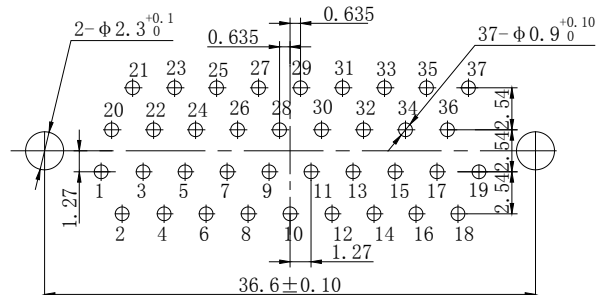
R04JA-21RHS



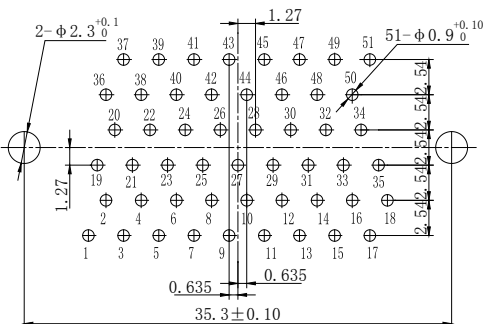
R04JA-25RHS



R04JA-31RHS



R04JA-37RHS



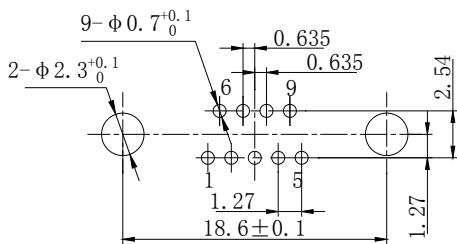
R04JA-51RHS

Remark: All dimensions are in mm

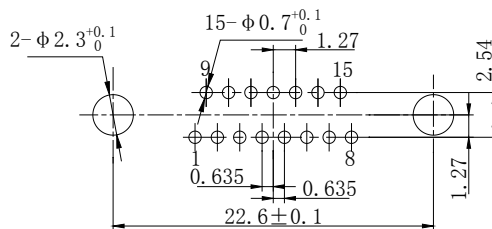


PCB Layout - fast lock RH Connector

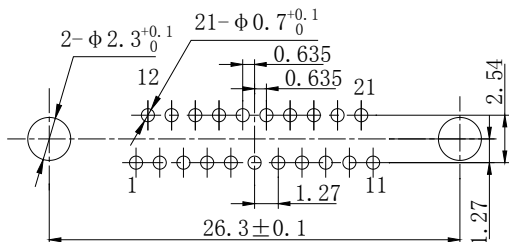
- Patterns shown are for connector mounting side of PC board.
- R04JA Straight to PCB- S-J Type RH Connector



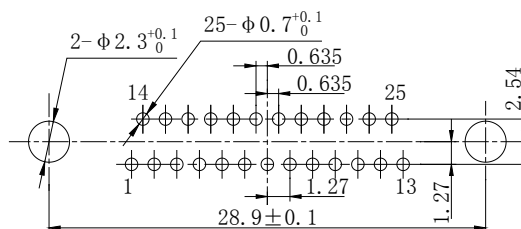
R04JA-9RHS-J



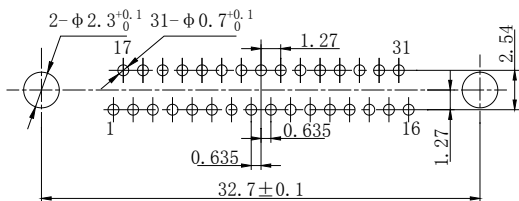
R04JA-15RHS-J



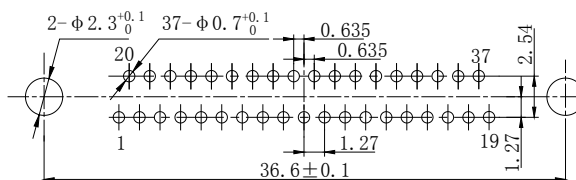
R04JA-21RHS-J



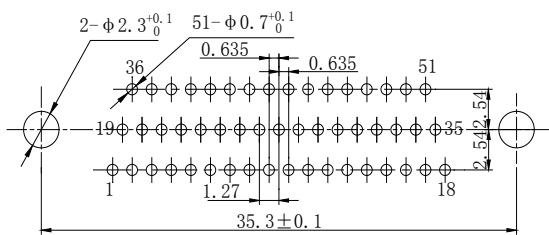
R04JA-25RHS-J



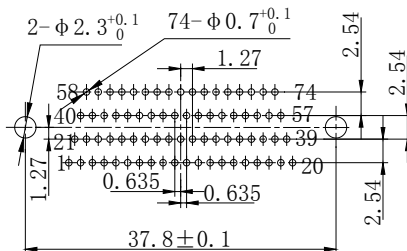
R04JA-31RHS-J



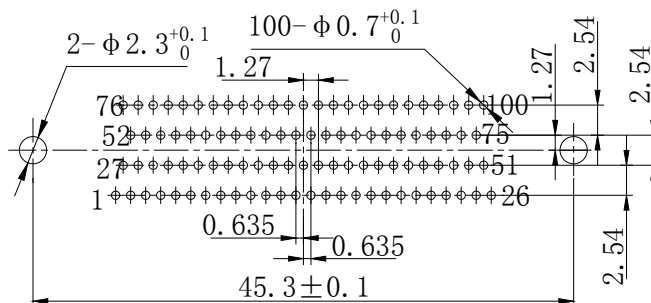
R04JA-37RHS-J



R04JA-51RHS-J



R04JA-74RHS-J

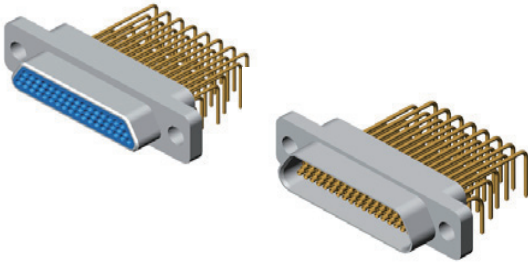


R04JA-100RHS-J

Remark: All dimensions are in mm

# MIL-DTL-83513 Micro D-Sub Connectors

## R04J Series Right Angle to PCB Type



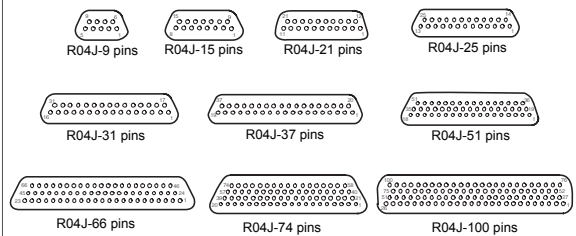
### Introduction

- Micro D-sub connectors
- Twist pin contact, high density interconnection
- Metal shell, plated nickel or cadmium
- Right angle to PCB type
- Meet MIL-DTL-83513

### Specification

- Environment temperature: -55°C~125°C
- Vibration: 10Hz~2000Hz, 196m/s<sup>2</sup>
- Random vibration: Power spectrum density 0.4G<sup>2</sup>/Hz  
root mean square value of total acceleration 23.1G
- Shock: 735m/s<sup>2</sup> 11sm
- Rated current: 3A
- Contact resistance: ≤ 10mΩ
- Insulation resistance: ≥ 5000 MΩ
- Dielectric strength: 800V
- Durability: 500 times

### Contacts Layout

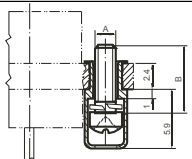
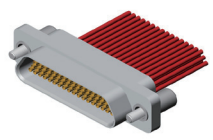
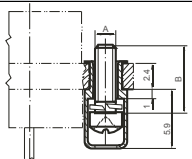
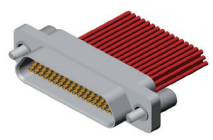
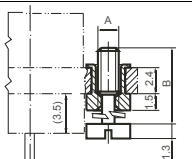
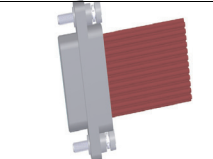
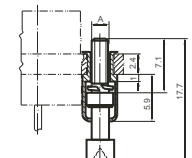
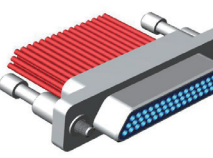
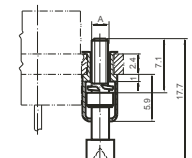
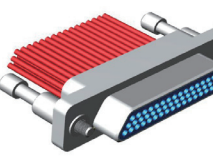


### How To Order Right Angle to PCB Connector

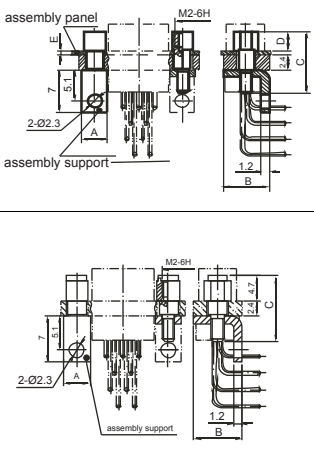
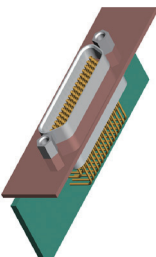
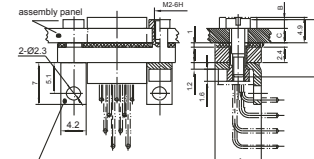
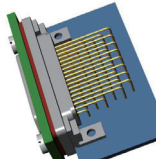
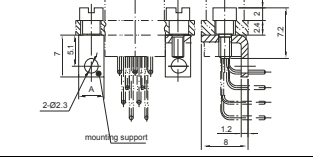
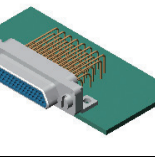
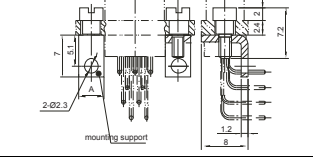
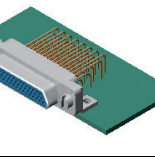
<b>Sample part number</b>	<b>R04J</b>	<b>— 25</b>	<b>PI</b>	<b>F</b>	<b>Q7</b>		<b>— J</b>
<b>Series:</b>	<p>R04J—standar type</p> <p>R04JA—fast lock type</p> <p>R04JC—Sn-P bronze shell, finish nickel</p>						
<b>Contact number:</b>	<p>9, 15, 21, 25, 31, 37, 51, 66, 74, 100pins</p>						
<b>Contact type :</b>	<p>PI—pin in plug      RH—socket in receptacle</p>						
<b>Tail termination type:</b>	<p>F—90° right angle to PCB</p>						
<b>Locking component type:</b>	<p>blank—without      Regarding locking component type, please see page2</p>						
<b>Shell material and finish :</b>	<p>Blank—Aluminum shell, finish nickel      G—Aluminum shell, finish cadmium</p>						
<b>Extended Series :</b>	<p>Blank—standard type</p> <p>Q—widen the flange</p> <p>Q8—the flange size and assembly hole size are enlarged from the standard type</p>						
<b>PCB layout :</b>	<p>J—1.27*2.54mm      Blank—2.54*2.54mm</p>						



**R04J series free end locking component**

Type	A	B	Outline dimension	Assembly picture	Matched with locking component
W	M2-6h	7.1			Q,Q0,Q2,Q3,Q4,Q5,Q7,Q8,Q9,Q10,Q11, Q14,Q15,Q17,Q23,Q25,Q29,Q32,Q35, Q36,Q37,Q41,Q42,Q43,Q45,Q46
W8	#2-56UNC-2A	7.1			Q1
W7	M2-6h	7.1			Q,Q0,Q2,Q3,Q4,Q5,Q7,Q8,Q9,Q10,Q11, Q14,Q15,Q17,Q23,Q25,Q29,Q32,Q35, Q36,Q37,Q41,Q42,Q43,Q45,Q46
N	M2-6h				Q,Q0,Q2,Q3,Q4,Q5,Q7,Q8,Q9,Q10,Q11, Q14,Q15,Q17,Q23,Q25,Q29,Q32,Q35, Q36,Q37,Q41,Q42,Q43,Q45,Q46
N1	#2-56UNC-2A				Q1

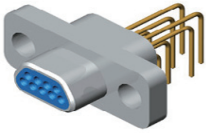
**R04J series fixed end locking component for right angle to PCB**

Type	Pin count	A	B	C	D	E	Outline dimension	Assembly picture	Matched with locking component
Q2	9~37	4.2	7.6	11.6	3.7	1			W, W7, W9, N  Note: Just suitable for rear panel mounting
	51	4.2	8.7	11.6	3.7	1			
	74	4.2	9.7	11.6	3.7	1			
Q14	9~37	4.2	7.6	10.7	1.7	3			
	51	4.2	8.7	10.7	1.7	3			
	74	4.2	9.7	10.7	1.7	3			
Q7	9~37	4.2	7.6	10.7					
	51	4.2	8.7	10.7					
	74	4.2	9.7	10.7					
Q42	9~37	4.2	7.6	9.7					
	51	4.2	8.7	9.7					
	74	4.2	9.7	9.7					
Q15	9~37	7.6	1.9	2.5	9.7				W,W7,W9,N  Note: 1. Just suitable for R04J-9~51PIF/RHF-Q8, front panel mounting
	51	8.7	1.9	2.5	9.7				
Q35	9~37	7.6	2.4	1.8	9.5				Not need to lock with locking component of free end
	51	8.7	2.4	1.8	9.5				
V1	9~37	4.2	7.6	9.7					Not need to lock with locking component of free end
	51	4.2	8.7	9.7					
	74	4.2	9.7	9.7					

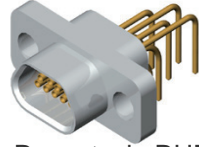
Remark:1. Fixed end locking component apply to fix the connector on the mounting panel or the PCB. Most fixed end locking component can mate with free end locking component. Few fixed end locking component can't mate with free end locking component. (eg. : Q44)

2. All dimensions are in mm

R04J series standard type inserting to PCB - right angle to PCB



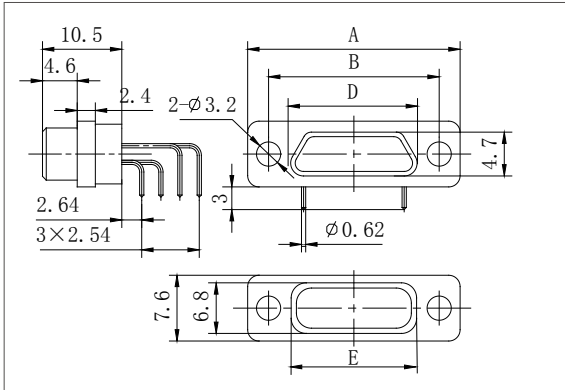
Plug:PIF



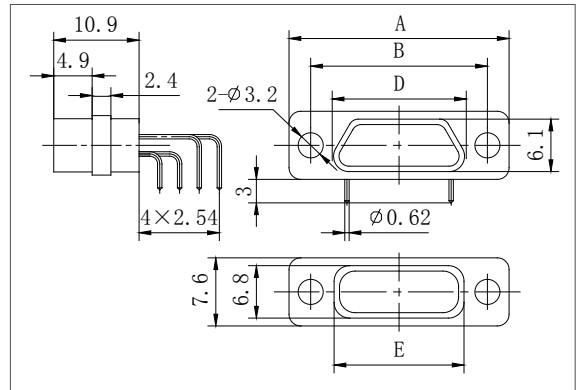
Receptacle:RHF

- Shell Plating Finish: Nickel or Cadmium
- The PCB Layout: 2.54\*2.54mm
- Contacts:  
R04J- 9, 15, 21, 25, 31, 37, 51, 66, PIF/RHF

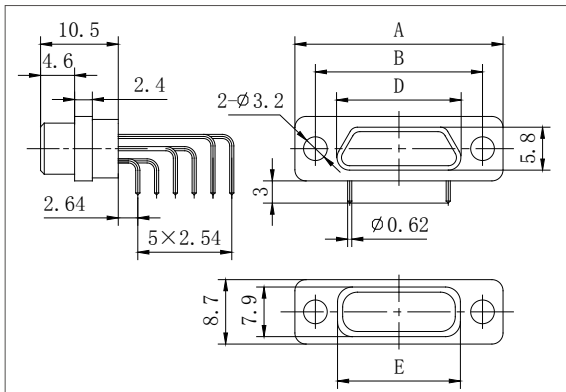
Outline Dimension



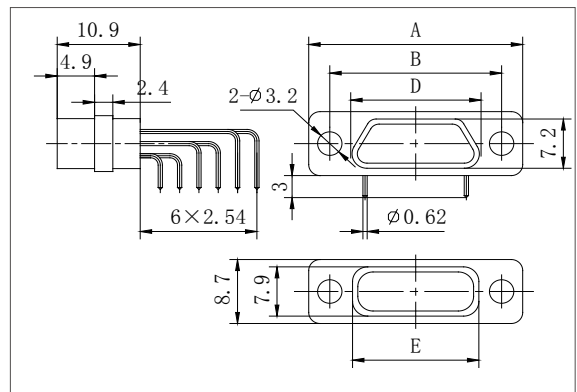
R04J-9~37PIF



R04J-9~37RHF



R04J-51, 66 PIF



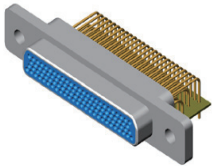
R04J-51, 66 RHF

Part Number	A	B	D		E
			PIF	RHF	
R04J-9PIF/RHF	19.6	14.3	8.3	9.8	9.9
R04J-15PIF/RHF	23.5	18.2	12.3	13.7	13.8
R04J-21PIF/RHF	27.4	22	16	17.4	17.6
R04J-25PIF/RHF	29.8	24.5	18.6	20	20.2
R04J-31PIF/RHF	33.6	28.3	22.4	23.8	24
R04J-37PIF/RHF	37.4	32.2	26.3	27.7	27.8
R04J-51PIF/RHF	36.4	30.86	25	26.5	26.6
R04J-66PIF/RHF	42.9	37.3	31.4	32.9	33

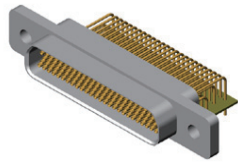
Remark:All dimensions are in mm



**R04J series right angle to PCB -J type**



Plug:PIF-J



Receptacle:RHF-J

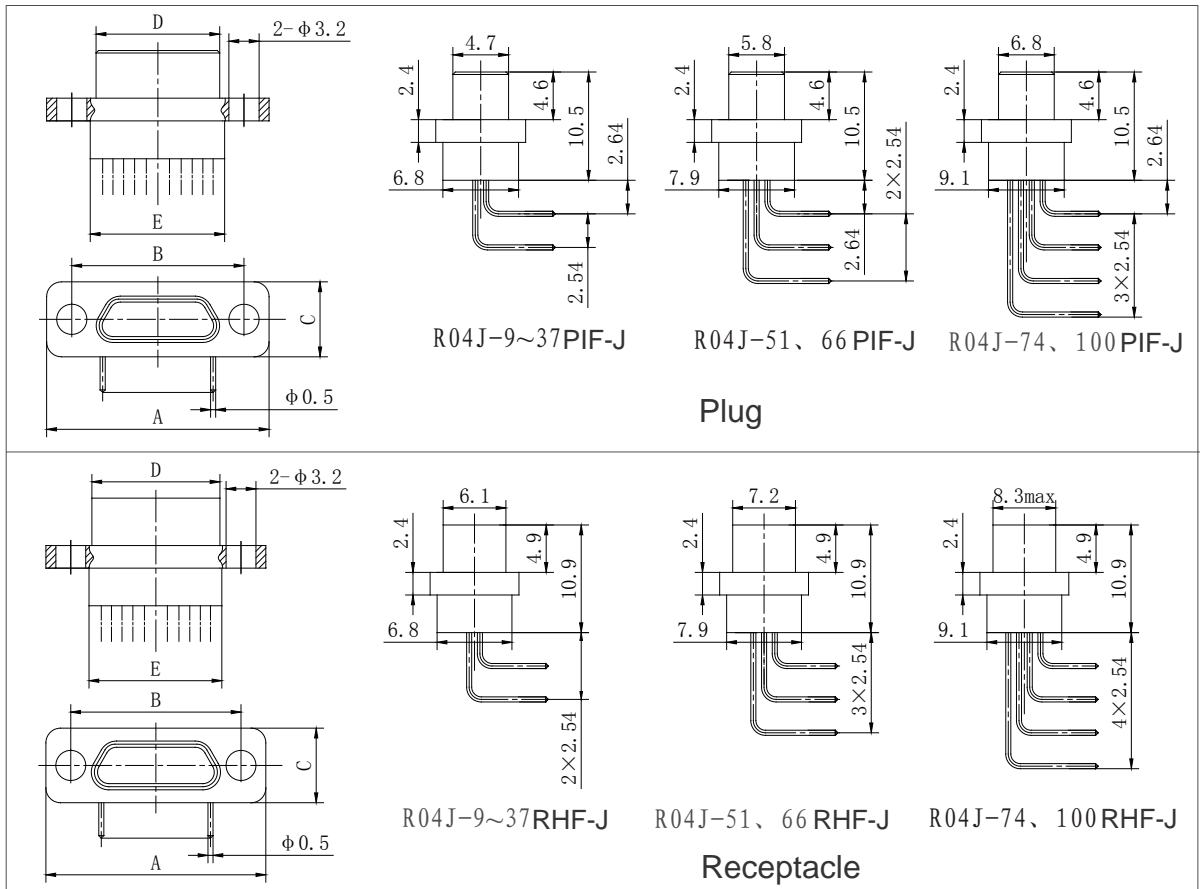
■ **Shell Plating Finish:** Nickel or Cadmium

■ **The PCB Layout:** 1.27\*2.54mm

■ **Contacts:**

R04J- 9, 15, 21, 25, 31, 37, 51, 66, 74,100PIF/RHF-J

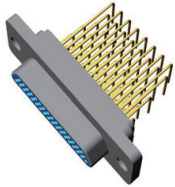
**Outline Dimension**



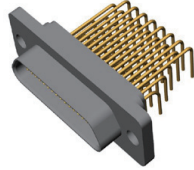
Part Number	A	B	C	D		E
				PIF-J	RHF-J	
R04J-9PIF-J/RHF-J	19.6	14.3	7.6	8.3	9.8	9.9
R04J-15PIF-J/RHF-J	23.5	18.2	7.6	12.3	13.7	13.8
R04J-21PIF-J/RHF-J	27.4	22	7.6	16	17.4	17.6
R04J-25PIF-J/RHF-J	29.8	24.5	7.6	18.6	20	20.2
R04J-31PIF-J/RHF-J	33.6	28.3	7.6	22.4	23.8	24
R04J-37PIF-J/RHF-J	37.4	32.2	7.6	26.3	27.7	27.8
R04J-51PIF-J/RHF-J	36.4	30.86	8.7	25	26.5	26.6
R04J-66PIF-J/RHF-J	42.9	37.3	8.7	31.4	32.9	33
R04J-74PIF-J/RHF-J	38.8	33.5	9.7	27.5	29	29.1
R04J-100PIF-J/RHF-J	54.7	45.7	9.7	35	36.6	36.6

Remark:All dimensions are in mm

## R04J series right angle to PCB -Q8 type



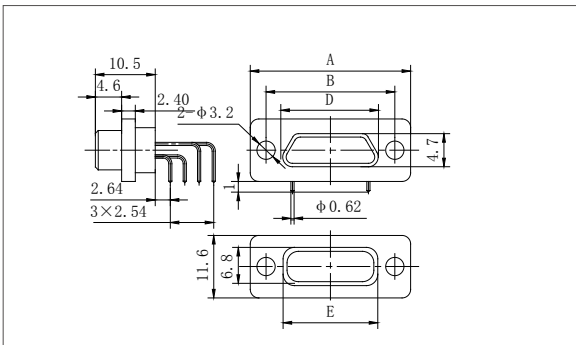
Plug:PIF-Q8



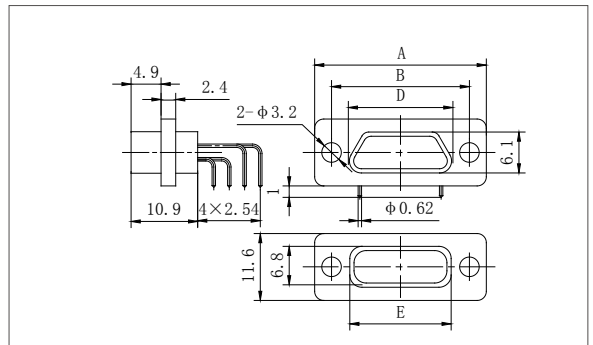
Receptacle:RHF-Q8

- **Shell Plating Finish:** Nickel or Cadmium
- **The PCB Layout:** 2.54\*2.54mm
- **Contacts:**  
R04J- 9, 15, 21, 25, 31, 37, 51PIF-Q8/RHF-Q8

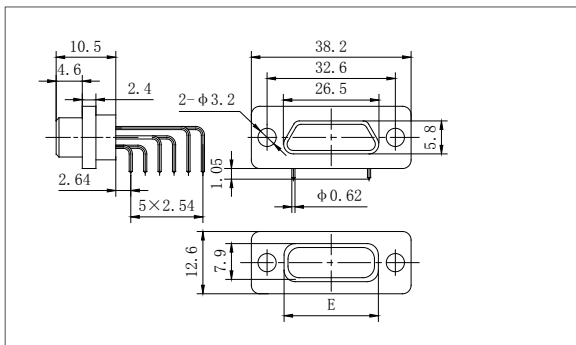
### Outline Dimension



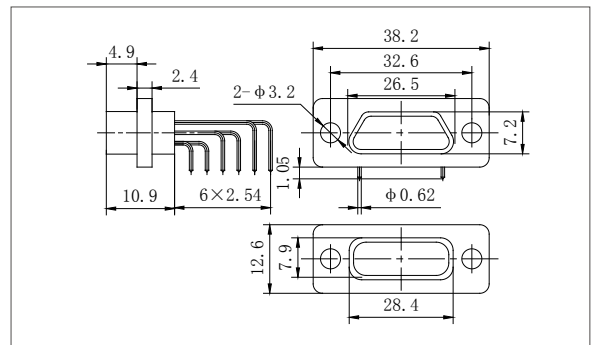
R04J-9~37 PIF-Q8



R04J-9~37 RHF-Q8



R04J-51PIF-Q8

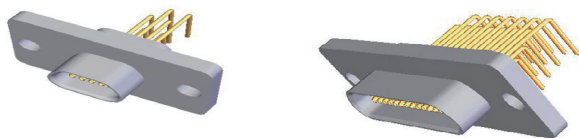


R04J-51 RHF-Q8

Part Number	A	B	D		E
			PIF-Q8	RHF-Q8	
R04J-9 PIF/ RHF-Q8	21.4	16.1	8.3	9.8	11.7
R04J-15 PIF/ RHF-Q8	25.3	20	12.3	13.7	15.6
R04J-21 PIF/ RHF-Q8	29.2	23.8	16	17.4	19.4
R04J-25 PIF/ RHF-Q8	31.6	26.3	18.6	20	22
R04J-31 PIF/ RHF-Q8	35.4	30.1	22.4	23.8	25.8
R04J-37 PIF/ RHF-Q8	39.2	34	26.3	27.7	29.6
R04J-51 PIF/ RHF-Q8	show on the outline dimension drawing				

Remark:All dimensions are in mm

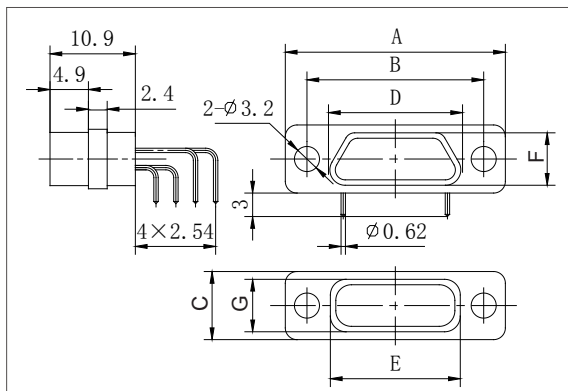
**R04J series extended type right angle to PCB - R04JC-Q type**



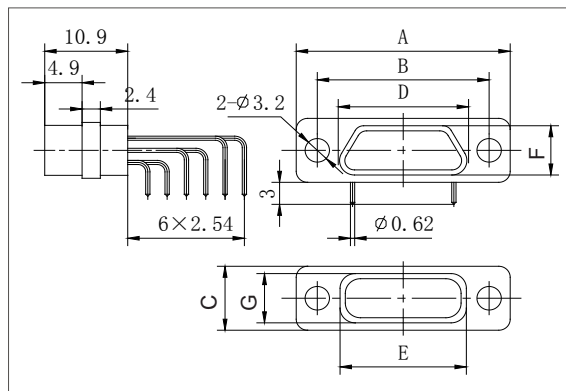
Receptacle:R04JC-\*RHF-Q

- **Outer shell:** Sn-p outer shell,plated nickel
- **The PCB Layout:** 2.54\*2.54mm
- **Widen the flange**
- **Receptacle**
- **Contacts:**  
R04JC- 9, 15, 21, 25, 31, 37, 51,66RHF-Q

**Outline Dimension**



R04JC-9~ 37RHF-Q

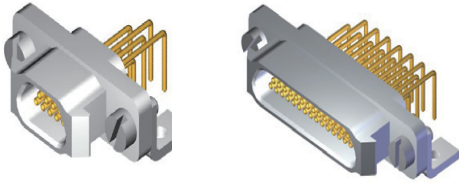


R04JC-51、 66 RHF-Q

Part Number	A	B	C	D	E	F	G
R04JC-9RHF-Q	26	21	14	9.8	9.9	6.1	6.8
R04JC-15RHF-Q	29.9	24.9	14	13.7	13.8	6.1	6.8
R04JC-21RHF-Q	33.8	28.7	14	17.4	17.6	6.1	6.8
R04JC-25RHF-Q	36.2	31.2	14	20	20.2	6.1	6.8
R04JC-31RHF-Q	40	35	14	23.8	24	6.1	6.8
R04JC-37RHF-Q	43.8	38.9	14	27.7	27.8	6.1	6.8
R04JC-51RHF-Q	42.6	37.6	15.2	26.5	26.6	7.2	7.9
R04JC-66RHF-Q	49.3	44	15.2	32.9	33	7.2	7.9

Remark:All dimensions are in mm

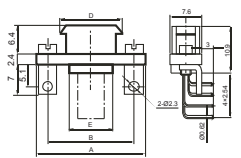
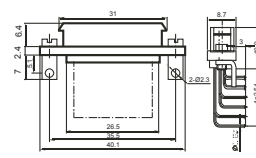
## R04J series extended type right angle to PCB - fast lock type



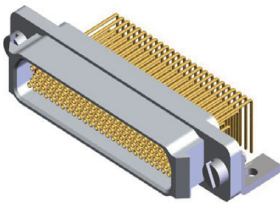
Receptacle:R04JA-\*RHF

- **Shell Plating Finish:** Nickel or Cadmium
- **The PCB Layout:** 2.54\*2.54mm
- **With fast locking**
- **Receptacle**
- **Contacts:**  
R04JA- 9, 15, 21, 25, 31, 37, 51RHF

### Outline Dimension

		Part Number	A	B	D	E
R04JA-9~37RHF	R04JA-51RHF	R04JA-9RHF	23.4	18.6	14.3	9.8
		R04JA-15RHF	27.4	22.6	18.3	13.8
		R04JA-21RHF	31.1	26.3	22	17.5
		R04JA-25RHF	33.7	28.9	24.6	20.1
		R04JA-31RHF	37.5	32.7	28.4	24.1
		R04JA-37RHF	41.4	36.6	32.3	27.8

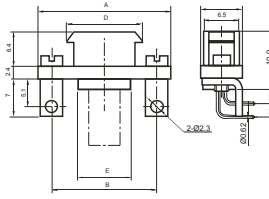
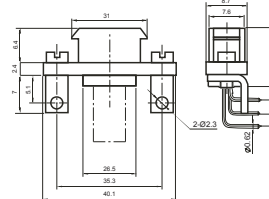
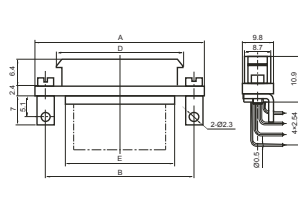
## R04J series extended type right angle to PCB - fast lock - J type



Receptacle:R04JA-\*RHF-J

- **Shell Plating Finish:** Nickel or Cadmium
- **The PCB Layout:** 1.27\*2.54mm
- **With fast locking**
- **Receptacle**
- **Contacts:**  
R04JA- 9, 15, 21, 25, 31, 37, 51, 66, 74, 100RHF-J

### Outline Dimension

		
R04JA-9~37RHF-J	R04JA-51RHF-J	R04JA-74, 100RHF-J

Part Number	A	B	D	E
R04JA-9RHF-J	23.4	18.6	14.3	9.8
R04JA-15RHF-J	27.4	22.6	18.3	13.8
R04JA-21RHF-J	31.1	26.3	22	17.5
R04JA-25RHF-J	33.7	28.9	24.6	20.1
R04JA-31RHF-J	37.5	32.7	28.4	24.1
R04JA-37RHF-J	41.4	36.6	32.3	27.8
R04JA-74RHF-J	42.6	37.8	33.5	29
R04JA-100RHF-J	50.1	45.3	41	36.5
R04JA-51RHF-J	See outerline dimension drawing			

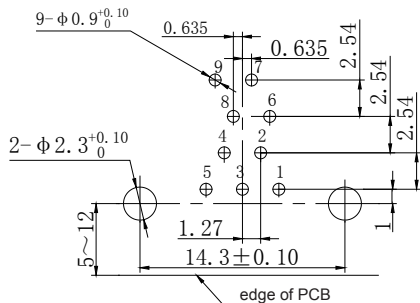
Remark:All dimensions are in mm



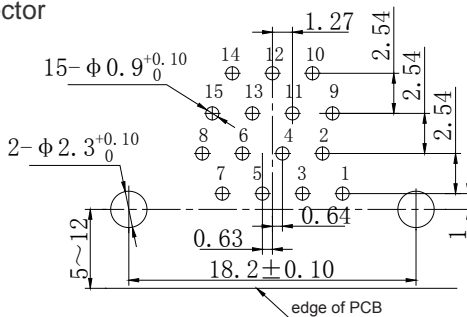
### PCB Layout - PI Connector

■ Patterns shown are for connector mounting side of PC board

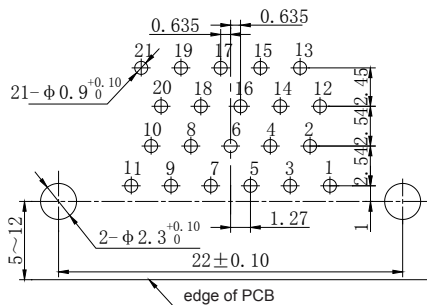
■ R04J Right Angle to PCB Standard Type PI Connector



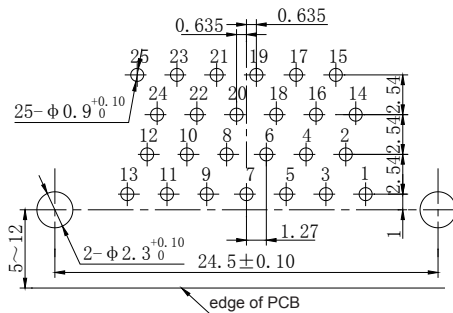
R04J-9PIF



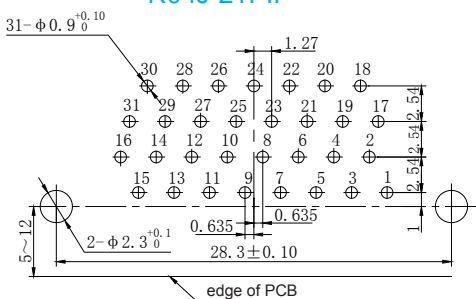
R04J-15PIF



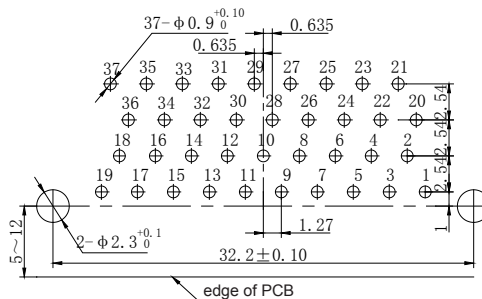
R04J-21PIF



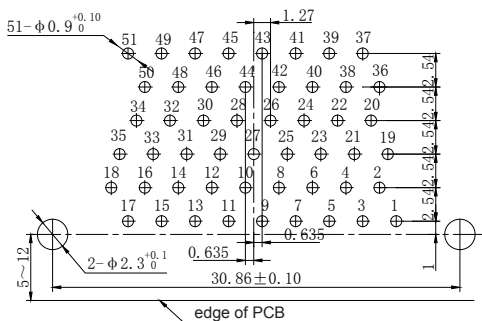
R04J-25PIF



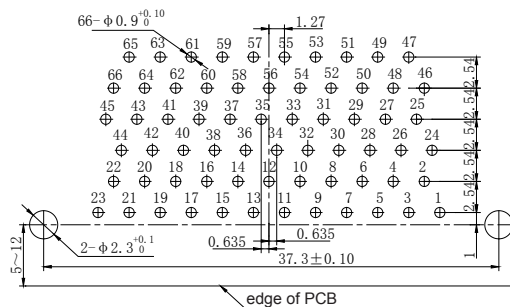
R04J-31PIF



R04J-37PIF



R04J-51PIF



R04J-66PIF

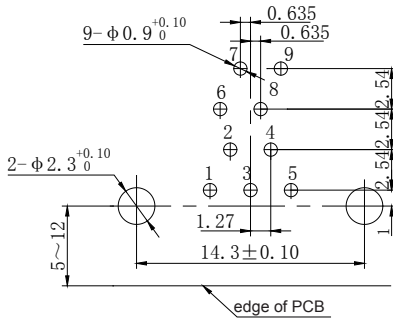
Remark: All dimensions are in mm



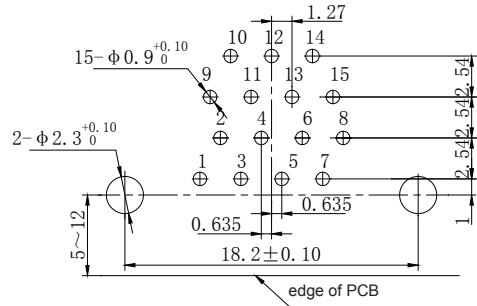
**PCB Layout - RH Connector**

■ Patterns shown are for connector mounting side of PC board

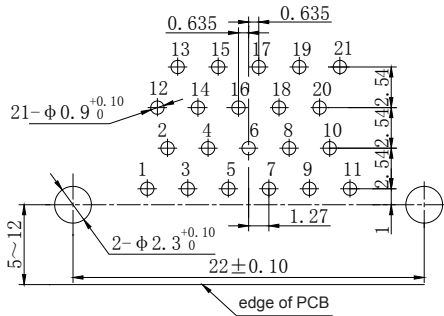
■ R04J Right Angle to PCB Standard Type RH Connector



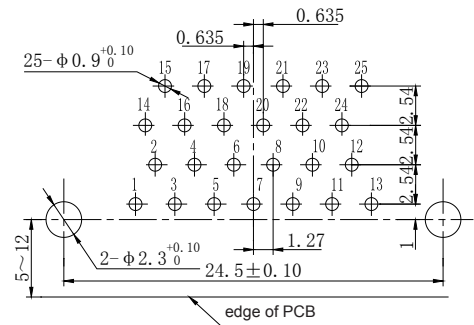
**R04J-9RHF**



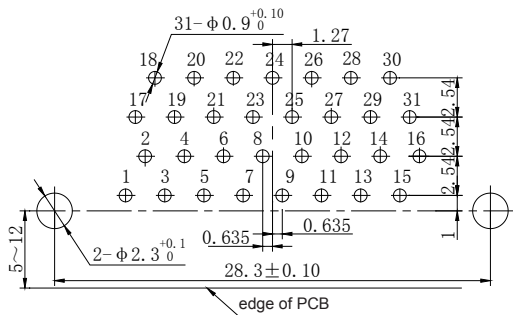
**R04J-15RHF**



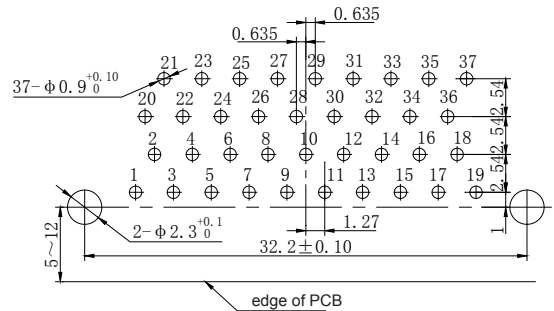
**R04J-21RHF**



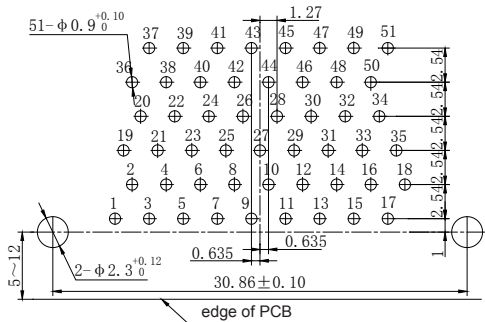
**R04J-25RHF**



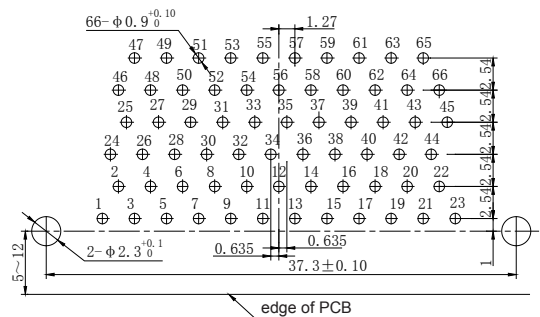
**R04J-31RHF**



**R04J-37RHF**



**R04J-51RHF**



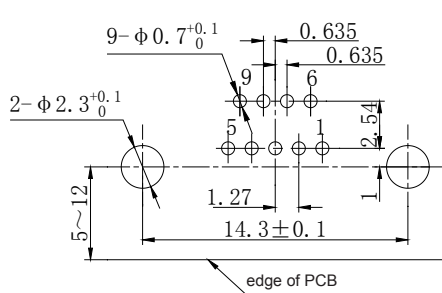
**R04J-66RHF**

Remark: All dimensions are in mm

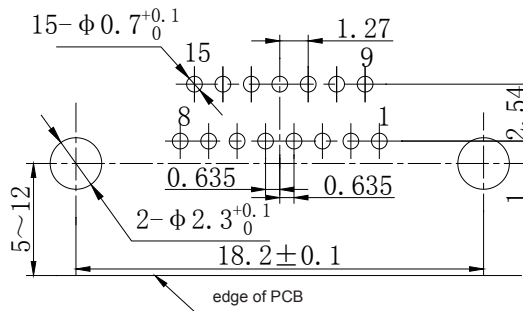


PCB Layout - PI Connector

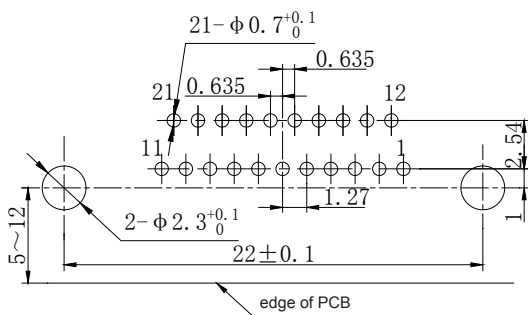
- Patterns shown are for connector mounting side of PC board
- R04J Right Angle to PCB F-J Type PI Connector



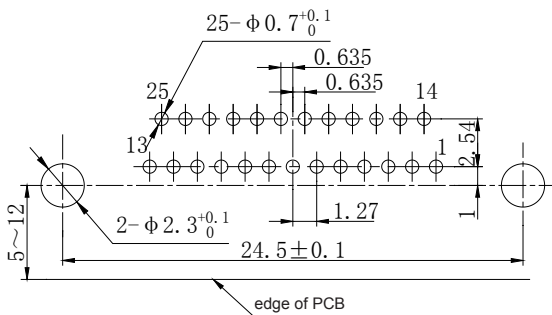
R04J-9PIF-J



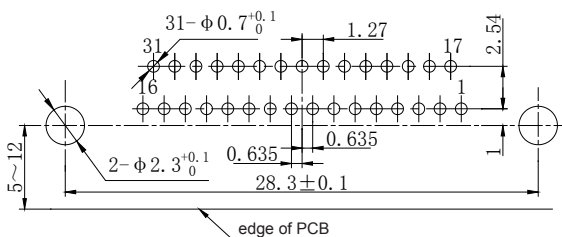
R04J-15PIF-J



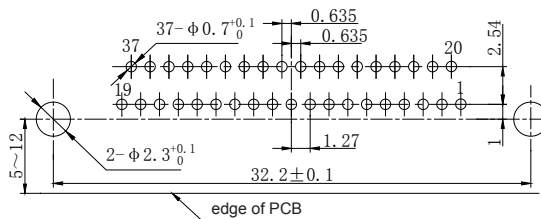
R04J-21PIF-J



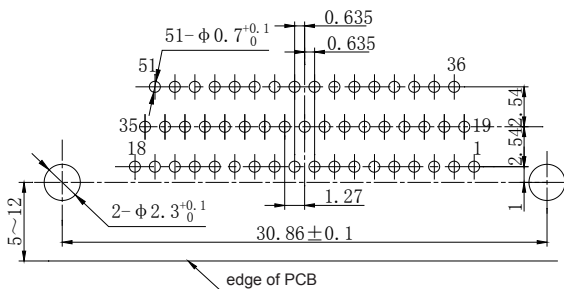
R04J-25PIF-J



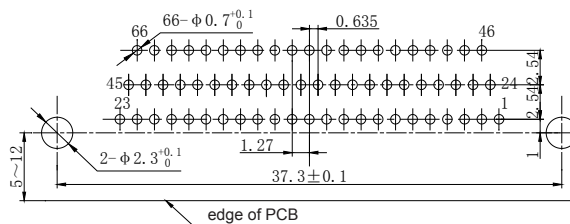
R04J-31PIF-J



R04J-37PIF-J



R04J-51PIF-J

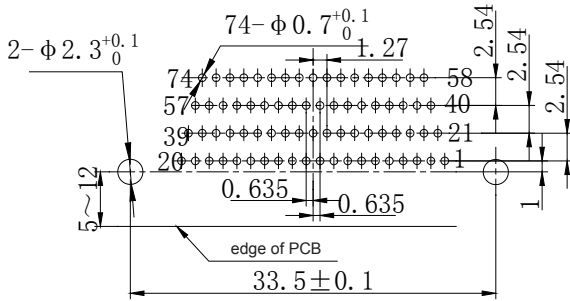


R04J-66PIF-J

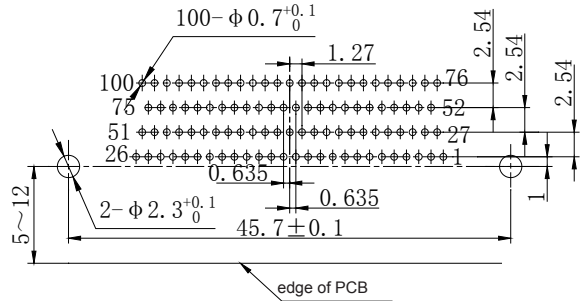
Remark: All dimensions are in mm

## PCB Layout - PI Connector

- Patterns shown are for connector mounting side of PC board
- R04J Right Angle to PCB F-J Type PI Connector



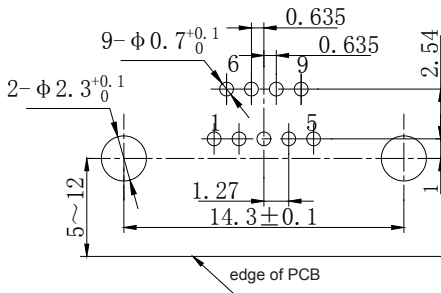
R04J-74PIF-J



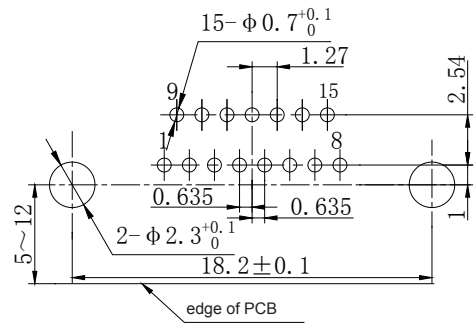
R04J-100PIF-J

## PCB Layout - RH Connector

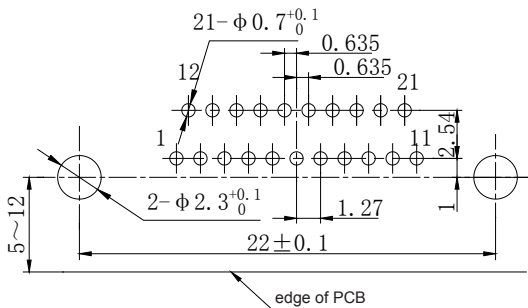
- Patterns shown are for connector mounting side of PC board
- R04J Right Angle to PCB F-J Type RH Connector



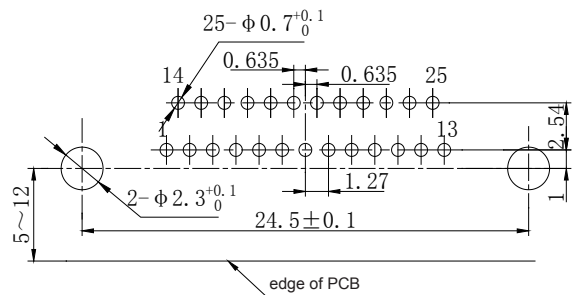
R04J-9RHF-J



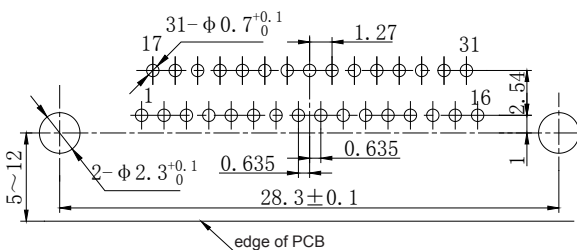
R04J-15RHF-J



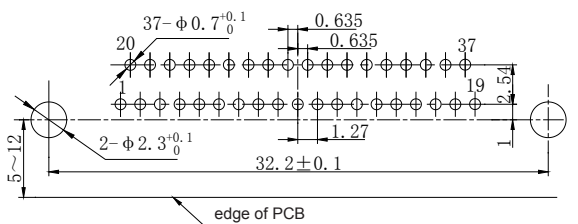
R04J-21RHF-J



R04J-25RHF-J



R04J-31RHF-J



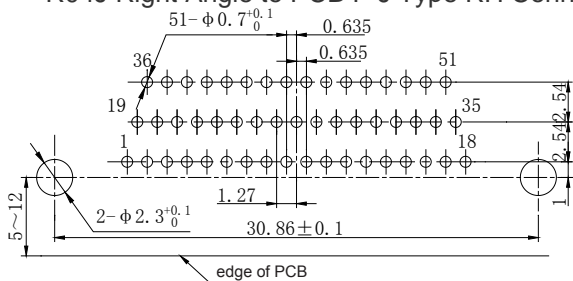
R04J-37RHF-J

Remark: All dimensions are in mm

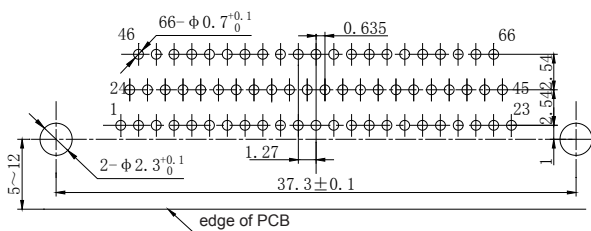


### PCB Layout - RH Connector

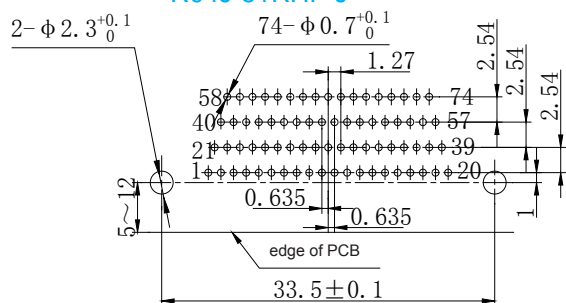
- Patterns shown are for connector mounting side of PC board
- R04J Right Angle to PCB F-J Type RH Connector



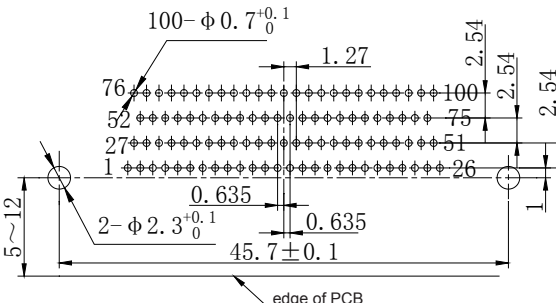
R04J-51RHF-J



R04J-66RHF-J



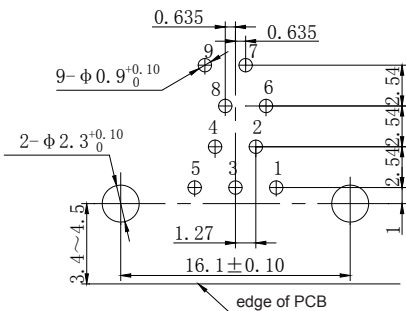
R04J-74RHF-J



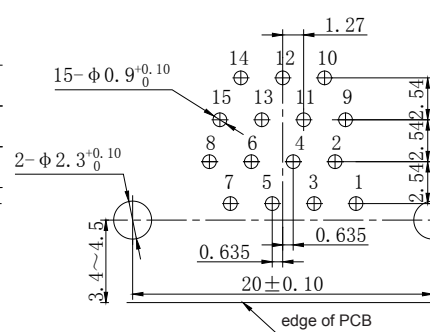
R04J-100RHF-J

### PCB Layout - PI Connector

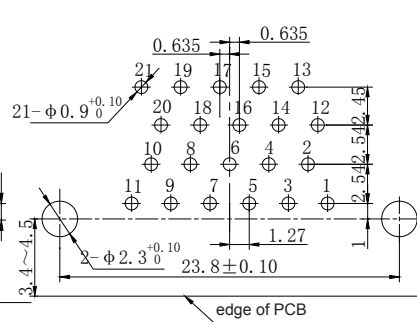
- Patterns shown are for connector mounting side of PC board
- R04J Right Angle to PCB F-Q8 Type PI Connector



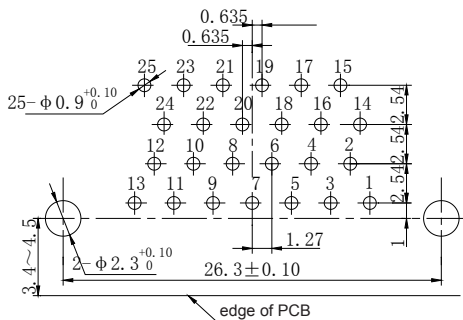
R04J-9PIF-Q8



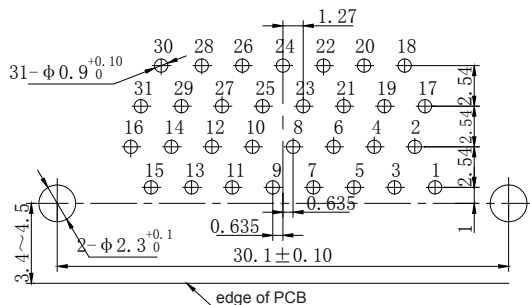
R04J-15PIF-Q8



R04J-21PIF-Q8



R04J-25PIF-Q8



R04J-31PIF-Q8

Remark: All dimensions are in mm

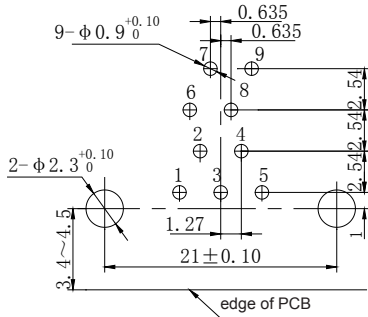




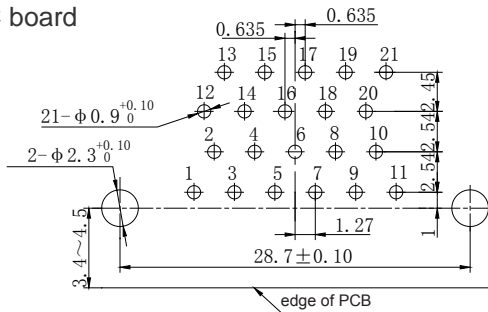
### PCB Layout - RH Connector

■ Patterns shown are for connector mounting side of PC board

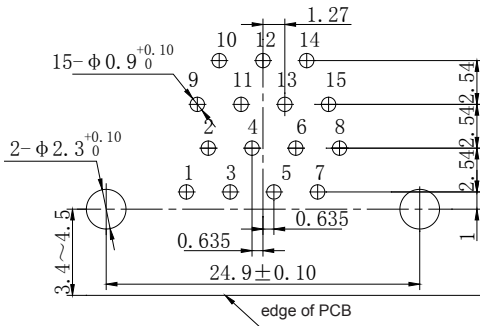
■ R04JC Right Angle to PCB F-Q Type RH Connector



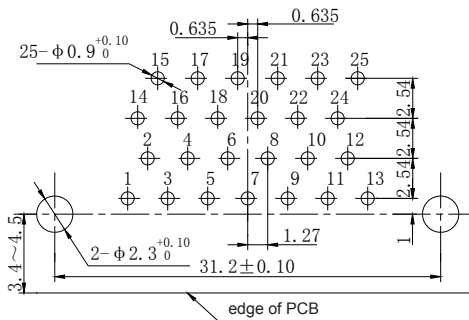
R04JC-9RHF-Q



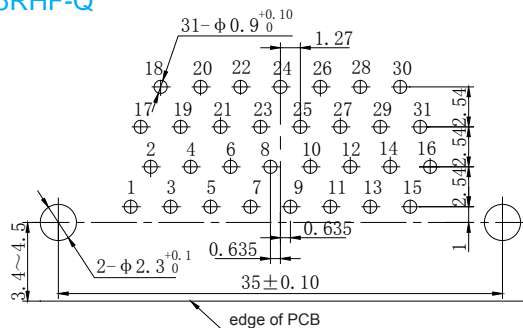
R04JC-21RHF-Q



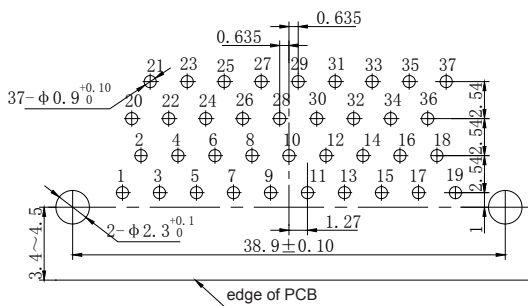
R04JC-15RHF-Q



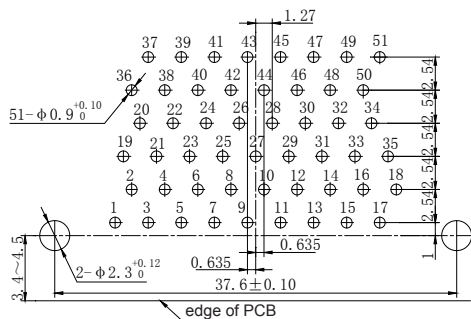
R04JC-25RHF-Q



R04JC-31RHF-Q



R04JC-37RHF-Q



R04JC-51RHF-Q

Remark: All dimensions are in mm

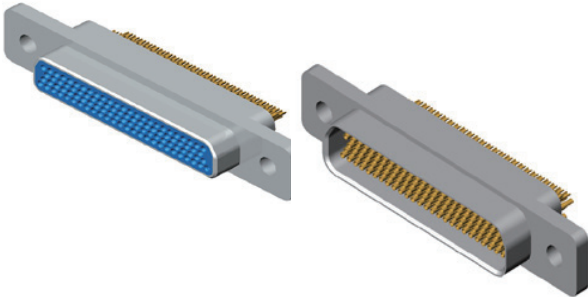






# MIL-DTL-83513 Micro D-Sub Connectors

## R04J Series Solder Cup Connector



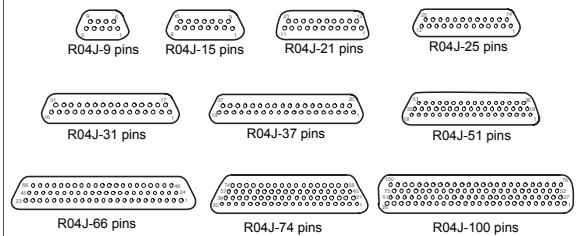
### Introduction

- Micro D-sub connectors
- Twist pin contact, high density interconnection
- Metal shell, plated nickel or cadmium
- Solder cup connector
- Meet MIL-DTL-83513

### Specification

- Environment temperature:  $-55^{\circ}\text{C} \sim 125^{\circ}\text{C}$
- Vibration: 10Hz~2000Hz,  $196\text{m/s}^2$
- Random vibration: Power spectrum density  $0.4\text{G}^2/\text{Hz}$   
root mean square value of total acceleration 23.1G
- Shock:  $735\text{m/s}^2$  11sm
- Rated current: 3A
- Contact resistance:  $\leq 10\text{m}\Omega$
- Insulation resistance:  $\geq 5000\text{M}\Omega$
- Dielectric strength: 800V
- Durability: 500 times

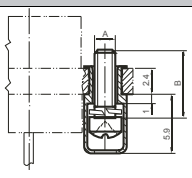
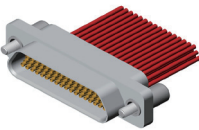
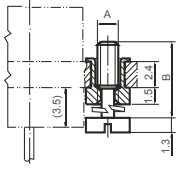
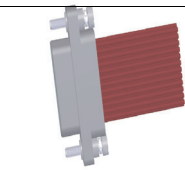
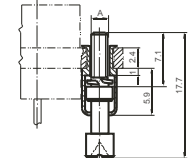
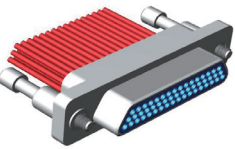
### Contact arrangements



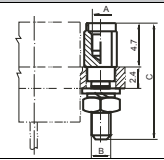
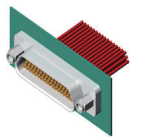
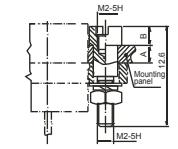
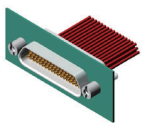
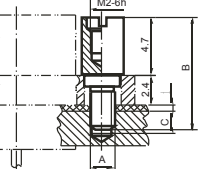
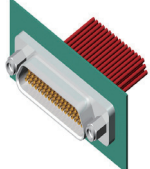
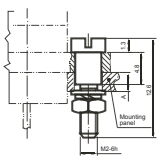
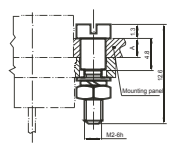
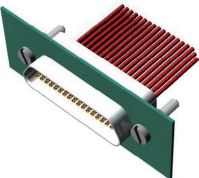
### How to Order Solder Cup Connector

Sample part number	R04J	-25	PI	J	W	G	—A3
<b>Series:</b>	<ul style="list-style-type: none"> <li>R04J—standar type</li> <li>R04JS—glue sealing</li> <li>R04JS1—glass-sinter sealing, please see pages 6 to 7</li> </ul>						
<b>Contact number:</b>	9, 15, 21, 25, 31, 37, 51, 66, 74, 100pins						
<b>Contact type :</b>	PI—pin in plug      RH—socket in receptacle						
<b>Tail termination type:</b>	J—solder cup connector						
<b>Locking component type:</b>	blank—without      W— locking component type, please see page2						
<b>Shell material and finish :</b>	Blank—Aluminum shell, finish nickel      G—Aluminum shell, finish cadmium						
<b>Shelded cable clamp type:</b>	Please see page3						

### R04J series free end locking component

Type	A	B	Outline dimension	Assembly picture	Matched with locking component
W	M2-6h	7.1			Q, Q0, Q2, Q3, Q4, Q5, Q7, Q8, Q9, Q10, Q11, Q14, Q15, Q17, Q23, Q25, Q29, Q32, Q35, Q36, Q37, Q41, Q42, Q43, Q45, Q46
W8	#2-56UNC-2A	7.1			Q1
W7	M2-6h	7.1			Q, Q0, Q2, Q3, Q4, Q5, Q7, Q8, Q9, Q10, Q11, Q14, Q15, Q17, Q23, Q25, Q29, Q32, Q35, Q36, Q37, Q41, Q42, Q43, Q45, Q46
N	M2-6h				Q, Q0, Q2, Q3, Q4, Q5, Q7, Q8, Q9, Q10, Q11, Q14, Q15, Q17, Q23, Q25, Q29, Q32, Q35, Q36, Q37, Q41, Q42, Q43, Q45, Q46
N1	#2-56UNC-2A				Q1

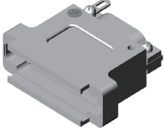

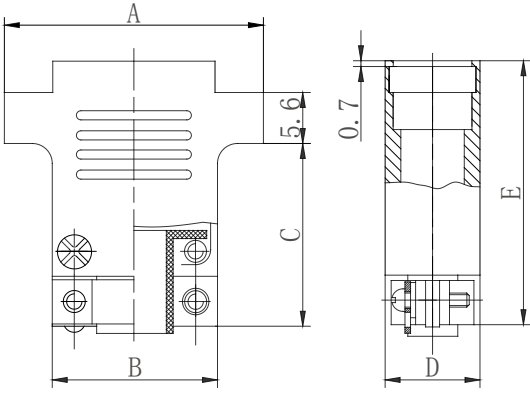
### R04J series fixed end locking component for solder cup connector

Type	A	B	C	Outline dimension	Assembly picture	Matched with locking component
Q	M2-6h	M2-6h	12.6			W, W7, W9, N
Q1	#2-56UNC-2B	#2-56UNC-2A	12.6			W8, N1
Q8	M2-6h	M2-6h	15.6			W, W7, W9, N
Q9	M2-6h	M2-6h	21.6			W, W7, N
Q0	4.1	0.6	12.6			W, W7, W9, N
Q3	3.3	1.4	12.6			Note: These Kinds of components just suitable for rear panel mounting
Q4	2.5	2.2	12.6			
Q11	1.3	3.4	12.6			
Q45	2.7	2	20			
Q29	M3-6h	10.5	3.3min			W, W7, W9, N
Q36	M3-6h	14.7	6 min			Note: 1. Just suitable for front panel mounting 2. Suitable for R04JS series
Q37	M2-6h	10	2.8min			
Q43	M3-6h	11.7	4 min			
Q44	 front panel mounting		 rear panel mounting			Note: 1. Not need to lock with locking component of free end 2. Front panel mounting, A dimension is 2.5-3.5mm 3. Rear panel mounting, (1) Mated with connector without locking component, A dimension is 3.5mm max (2) Mated with connector which have fixed end locking component, A dimension = 4.9-1.3-(distance between bolt and flange of mated with connector)

Remark: 1. Fixed end locking component apply to fix the connector on the mounting panel or the PCB. Most fixed end locking component can mate with free end locking component. Few fixed end locking component can't mate with free end locking component. (eg.: Q44)  
 2. All dimensions are in mm

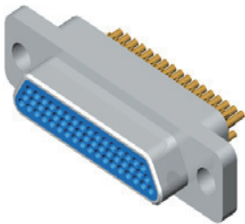


### R04J series A3 cable clamp

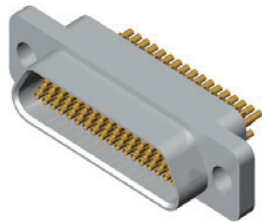
Stereogram	  <p>Without connector, only A3 cable clamp      Plug with A3 cable clamp</p>	Outline Dimensions				
		Pin Count	A	B	C	D
<b>Outline Dimension</b> 	<b>9</b>	19.6	9.9	18.2	10.4	27
	<b>15</b>	23.5	13.8	18.2	10.4	27
	<b>21</b>	27.4	17.6	19.2	10.4	28
	<b>25</b>	29.8	20.2	19.2	10.4	28
	<b>31</b>	33.6	24	19.2	10.4	28
	<b>37</b>	37.4	27.8	19.2	10.4	28
	<b>51</b>	36.4	26.6	21.2	11.2	30
<b>Using Conditon</b> A3 cable clamp suitable for R04J solder cup basic type and R04J crimp contact basic type	<b>66</b>	42.9	29.1	21.2	11.2	30
	<b>74</b>	38.8	29.1	21.2	12	30
	<b>100</b>	54.7	40.7	21.2	12	30

Remark:All dimensions are in mm

### R04J series solder cup connector - basic type



Plug:PIJ



Receptacle:RHJ

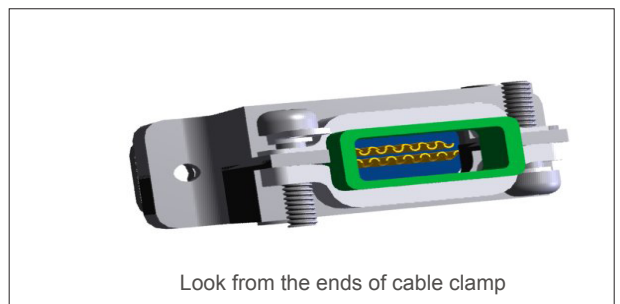
- **Shell Plating Finish:** Nickel or Cadmium
- **The spacing of arrangemet of the tail:** 1.27x1.1mm
- **Termination type:** Solder cup
- **Contacts:**

R04J- 9, 15, 21, 25, 31, 37, 51, 66,74, 100 PI J/RHJ

### R04J series solder contact basic type are assembled with cable clamp



Look from connecting ends

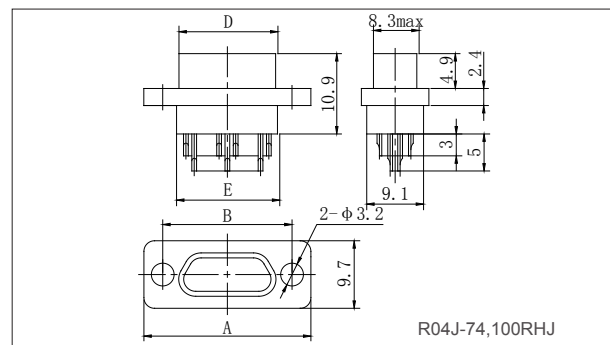
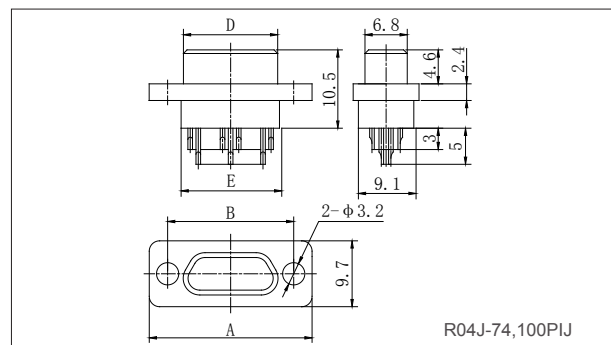
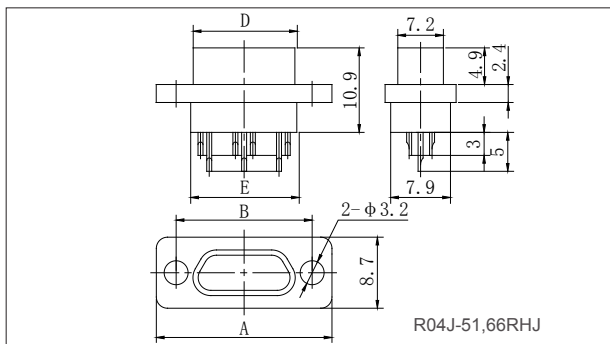
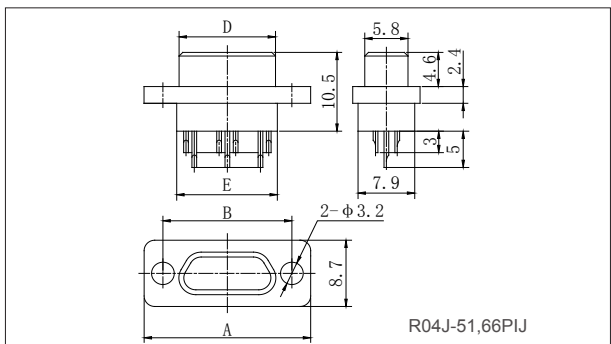
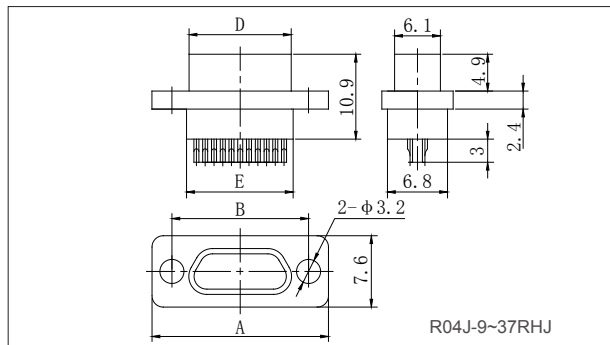
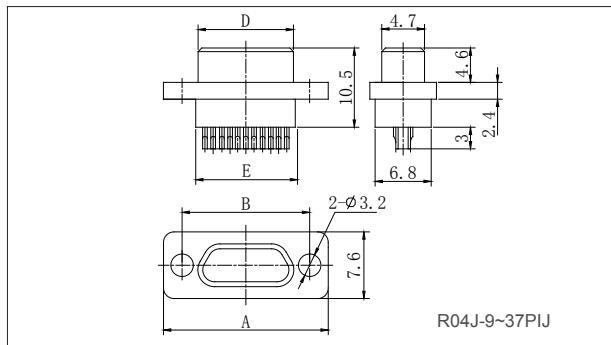


Look from the ends of cable clamp

Remark:in order to make the picture clear,product solid picture don't show the A3 type cable clamp.Actually , all R04J solder series are with a A3 type cable clamp.



### Outline Dimension

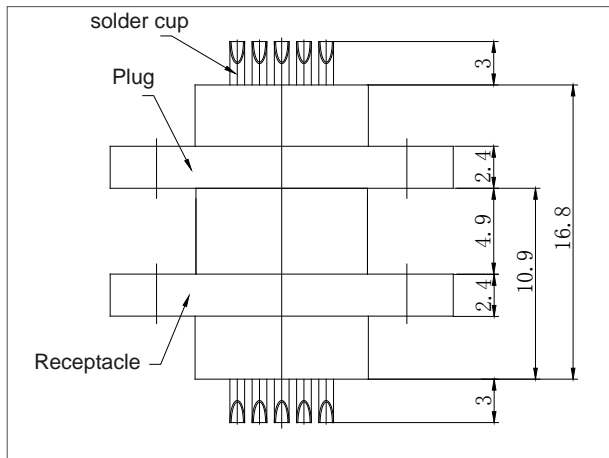


Part number	A	B	D		E
			PIJ	RHJ	
R04J-9PIJ/RHJ	19.6	14.3	8.3	9.8	9.9
R04J-15PIJ/RHJ	23.5	18.2	12.3	13.7	13.8
R04J-21PIJ/RHJ	27.4	22	16	17.4	17.6
R04J-25PIJ/RH J	29.8	24.5	18.6	20	20.2
R04J-31PIJ/RHJ	33.6	28.3	22.4	23.8	24
R04J-37PIJ/RHJ	37.4	32.2	26.3	27.7	27.8
R04J-51PIJ/RHJ	36.4	30.86	25	26.5	26.6
R04J-6SPIJ/RHJ	42.9	37.3	31.4	32.9	33
R04J-74PIJ/RHJ	38.8	33.5	27.5	29	29.1
R04J -100PIJ/RHJ	54.7	45.7	35	36.6	36.6

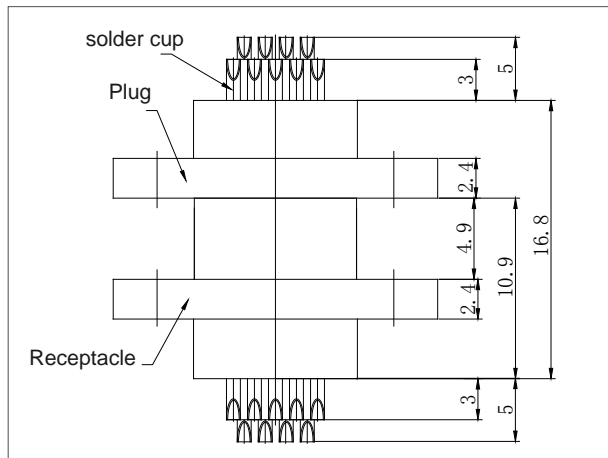
Remark: All dimensions are in mm



### Outline Dimension after Mating(without A3 cable clamp)

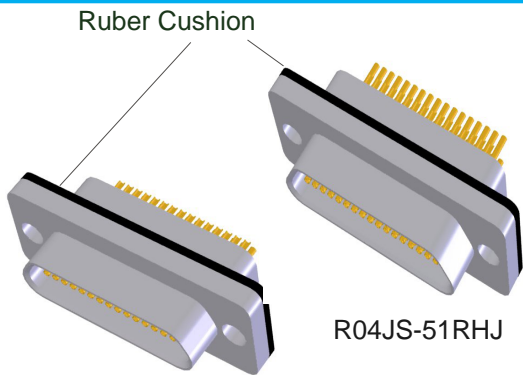


R04J-9~37pins



R04J-51~100pins

### R04J series solder cup type - glue sealing connector

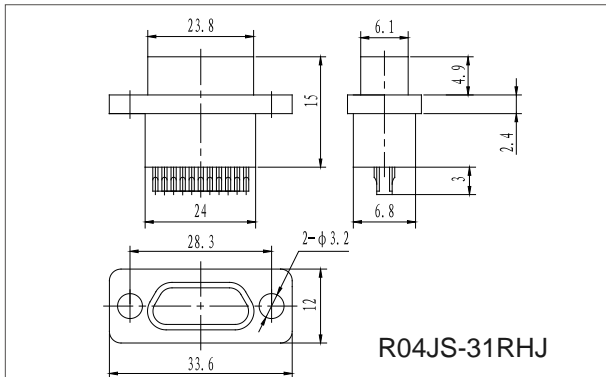


R04JS-31RHJ

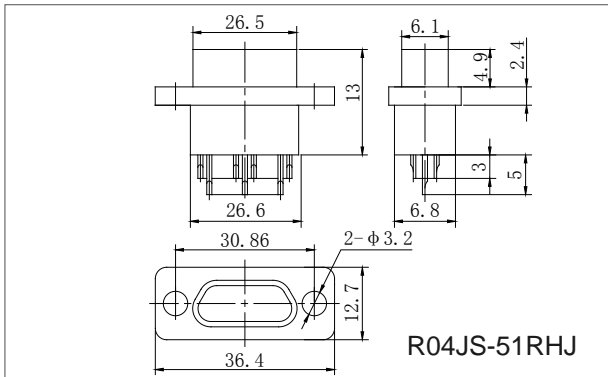
R04JS-51RHJ

- **Shell Plating Finish:** Nickel or Cadmium
- **The spacing of arrangement of the tail:** 1.27x1.1mm
- **Termination type:** Solder cup
- **Receptacle**
- **The flange with a rubber cushion, thickness:** 1mm
- **Glue sealing connector**
- **The air leakage rate:**  $5 \times 10^{-2} \text{ Pa} \cdot \text{CM}^3/\text{s}$
- **Insulation resistance:**  $\geq 2000 \text{ M}\Omega$
- **Contacts:** R04JS-31, 51 RHJ

### Outline Dimension



R04JS-31RHJ

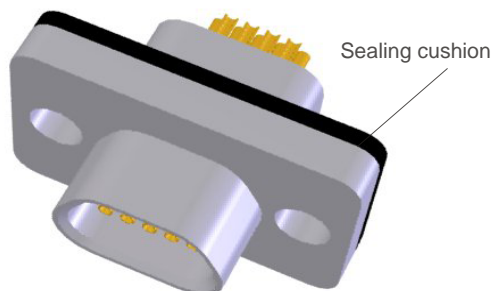


R04JS-51RHJ

Remark: All dimensions are in mm



## R04J series solder cup type - glass-sintered sealing connector



R04JS1-\* RHJ

- **Shell:** Kovar alloy shell,finish gold
- **The spacing of arrangemet of the tail:**1.27x1.1mm
- **Termination type:** Solder cup
- **Receptacle**
- **The flange with a rubber cushion,thickness:**1mm
- **Glass-sintered sealing connector**
- **The air leakage rate:**  $1 \times 10^{-3} \text{ Pa} \cdot \text{CM}^3/\text{s}$
- **Insulation resistance:**  $\geq 5000 \text{ M}\Omega$
- **Contact resistance:**  $\leq 30 \text{ m}\Omega$
- **Dielectric strength:** 600Vr.m.s
- **Contacts:** R04JS1-9, 15, 21, 25, 31, 37, 51RHJ
- **Other performance is the same as R04J series**

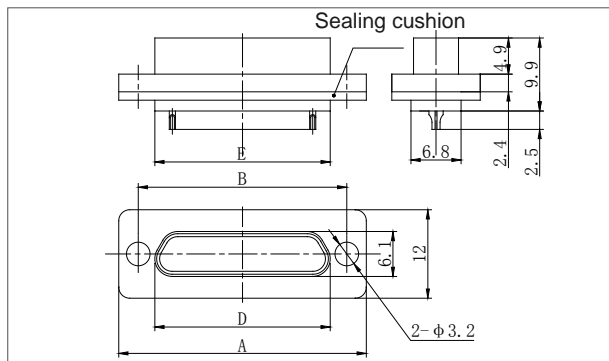
## How to Order Solder Cup Connector---R04JS1 Series

<b>Sample part number</b>	R04JS1	25	RH	J	Q29	K	—A3
<b>Series:</b>	R04JS1—glass-sinter sealing						
<b>Contact number:</b>	9, 15, 21, 25, 31, 37, 51pins						
<b>Contact type :</b>	RH—socket in receptacle						
<b>Tail termination type:</b>	J—solder cup connector						
<b>Locking component type:</b>	Q29, Q36, Q37,Q43, more informations ,please see page2			blank—without			
<b>Shell material and finish :</b>	K— Kovar alloy shell,finish gold						
<b>Shelded cable clamp type:</b>	Please see page3						

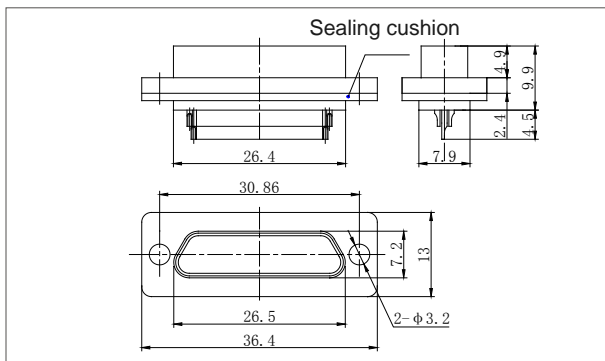
Remark:This product is front panel mounting , suggest to use the un-throught threaded mounting hole.  
 Matching with locking component :Q29, Q36, Q37,Q43 etc. other mounting type need to customize.



### Outline Dimension



R04JS1-9~37RHJ

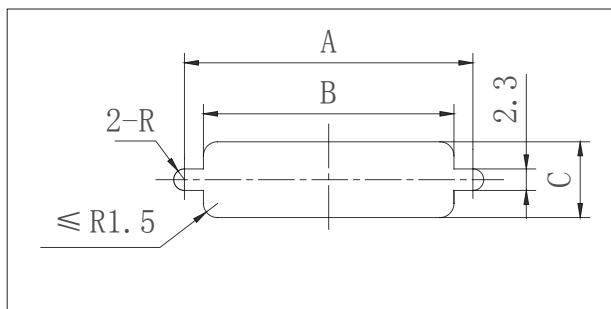


R04JS1-51RHJ

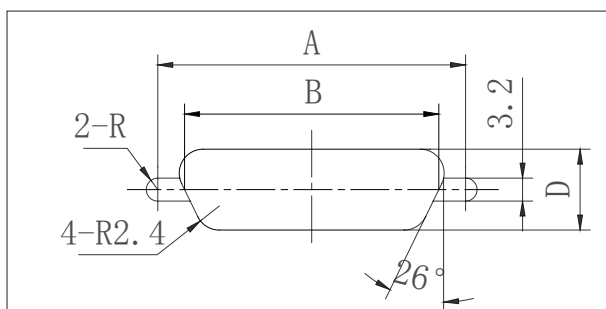
Part number	A	B	D	E
R04JS1-9RHJ	19.6	14.3	9.8	9.7
R04JS1-15RHJ	23.5	18.2	13.7	13.6
R04JS1-21RHJ	27.4	22	17.4	17.4
R04JS1-25RHJ	29.8	24.5	20	20
R04JS1-31RHJ	33.6	28.3	23.8	23.8
R04JS1-37RHJ	37.4	32.2	27.7	27.6
R04JS1-51RHJ	see outline dimension of page 5			

### Solder cup type(R04JS and R04JS1) - mounting hole dimensions

■ Suitable for product: R04JS-\*RHJ and R04JS1-\*RHJ



Mounting hole dimension for front panel mounting



Mounting hole dimension for rear panel mounting

Contacts of No.	A	B	C	D	Contacts of No.	A	B	C	D
9 pins	14.3	10.2	7	6.3	37 pins	32.2	28.1	7	6.3
15 pins	18.2	14.1	7	6.3	51pins	30.86	26.9	8.1	7.4
21 pins	22	17.9	7	6.3	66 pins	37.3	33.4	8.1	7.4
25 pins	24.5	20.5	7	6.3	74 pins	33.5	29.4	9.3	8.6
31 pins	28.3	24.3	7	6.3	100 pins	45.7	37	9.3	8.6

Remark: 1. R04JS and R04JS1 are both sealing products, we suggest to use un-through threaded mounting hole for front panel mounting  
2. All dimensions are in mm





## Company Profile:

Sunkye International Co., Limited.(Connector) Business Group, with sixty five years of experience, specializes in designing and producing connectors, related components and cables. A wide range of connector products, twist pin connector, optical fiber connector, RF coaxial connector, separable connector, custom and application-

# *Company profile*

specific connector, etc, which are widely used in military area: aerospace, aviation, electrical, ship-building, defense system, etc and civil area: communication, telecom, automotive, rail, etc.

Design team focuses on meeting customers' requirement with continuous innovative technology, manufacture team provides high quality products by utilizing advanced equipments in standardized processes to ensure customers' benefits.

Sunkye is ISO 9001 certified, UL, VDE, CE certification passed, and ensures products quality by testing in realistic conditions with advanced test facilities, professional test employees.

Sunkye team is committed to offering high quality products, best service, prompt delivery and competitive price for you.



## Manufacture Equipment:

Five-Axis CNC, AGIE EDM, SODICK WEDM-LS, 40G Vector Network Analyzers, Vacuum Heat Treatment Equipment, Glass-sintered System, Laser Processing Center, High Velocity Ram Machine, Gold, Nickel and Cadmium Plating Production Line, Thermosetting Injection Machine, Thermoplastic Injection Machine, Swiss Automatic Lathe, etc.

## Test Facilities:

Comprehensive Test Instrument of Temperature, Humidity and Vibration; Experimental Box of Temperature and Shock; layer thickness meter; Coordinate Measurement Machine, etc.



Space grade micro D connector

**SUNKYE**





# CONTENT



Space grade micro D connector

## R04S Series Connectors for Space Applications

### Space Grade Micro D Connector Crimp type



#### Brief Introduction

- Micro-D connectors for space applications
- Twist pin contacts, high density interconnection, 1.27mm contact spacing and 1.1mm spacing between rows.
- Contacts:9,15,21,31,37, A51,51,69,100pins
- Product feature:small and light, antivibration etc. high performance.
- Wire AWG:26AWG or 28 AWG
- Meet space applications.

#### Material and finish

Item	Material	Finish
shell	Aluminum alloy	Electroless nickel plating
insulator	20%GPPS	—
seal ring	Silicone rubber	—
contacts	copper alloy	gold plating
locking hardware	stainless steel	passivation
backshell	Aluminum alloy	Electroless nickel plating

#### Electrical Performance

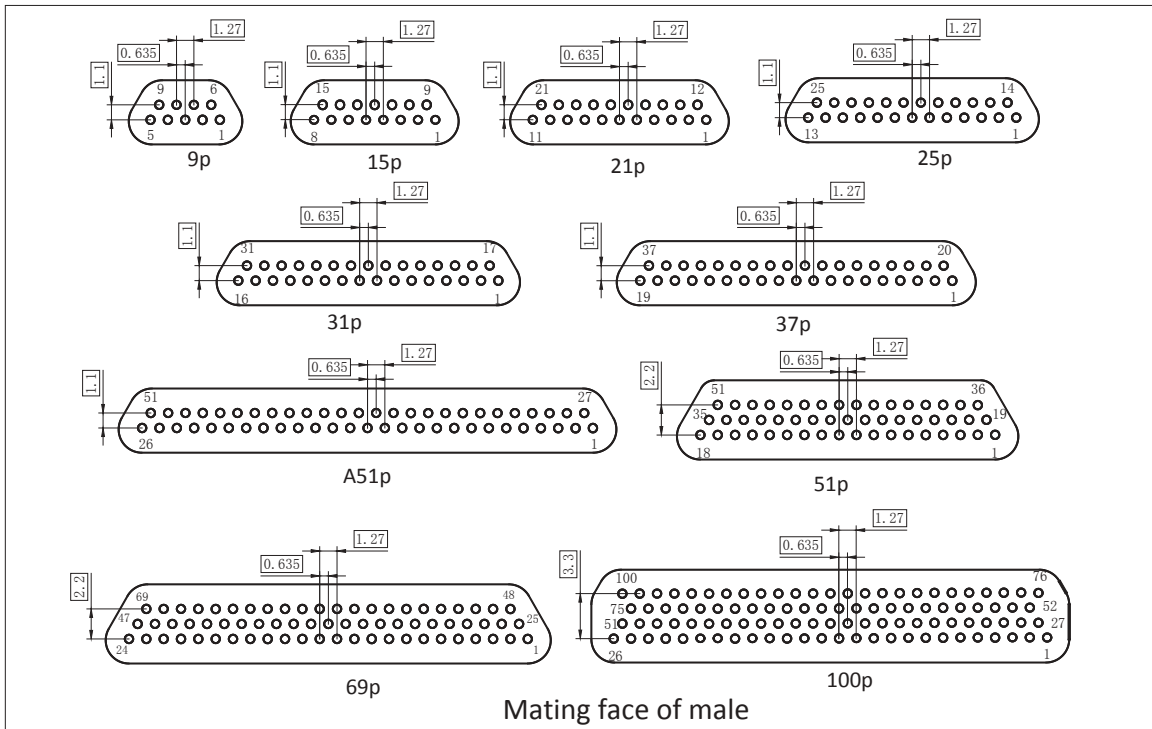
Performance	Marking	Rating value
Current rating(max)	I	3A (24#), 13A (16#)
Dielectric withstanding voltage (sea level)	U	800 Vr.m.x(50Hz)
Contact resistance	R	≤ 10mΩ (24#), ≤ 5 mΩ (16#)
Insulation resistance(500VDS, sea level)	R	≥ 5000MΩ

#### Environment performance

Performance	Rating value	Test method
Environment temperature range:	-55 ~ +125 °C	/
Durability	500 mating cycles	/
Vibration	10Hz ~ 2000Hz, 294m <sup>2</sup> /s	EIA-364-28, test condition IV
Random vibration	Power spectral density 0.6G <sup>2</sup> /Hz, root mean square value of total acceleration 28.4G	/
Shock	980m/s <sup>2</sup> 、6ms	EIA-364-27, test condition E
Salt spray	96h	EIA-364-26, test condition B
Humidity	240h	EIA-364-31, test condition IV
Thermal shock	-55 ~ +125°C	EIA-364-32, test condition IV
Contact engaging and separating force	0.3 ~ 1.5 N (24#) 0.56 ~ 8.35 N(16#)	/
Irradiation resistant	Total dose:1X10 <sup>5</sup> Gy	/
Thermal vacuum outgassing	TML ≤ 1%, CVCM ≤ 0.1%	/
Magnetic permeability	200 gamma	/



## Contact arrangements



## How to order

Sample part number:	R04S	-31	PI	B01	AA	(Remark)
Series:	R04S-Micro D connectors for space applications.					
Contact number:	9,15,21,25,31,37,A51,51,69,100pins					
Contact type:	PI-pin in plug      RH-socket in receptacle					
Locking hardware:	blank-without      B01-locking hardware, please see page4 to page8					
Backshell:	blank-without      AA-AA style backshell, please see page9 to page11.					
Cable detail:	Please fill the cale size including the length, AWG etc.					



## R04S series crimp type connectors

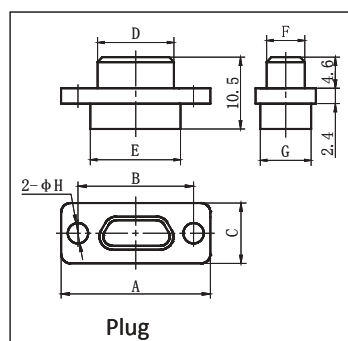
### Product stereogram



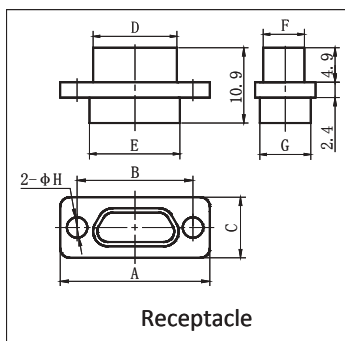
Plug

Receptacle

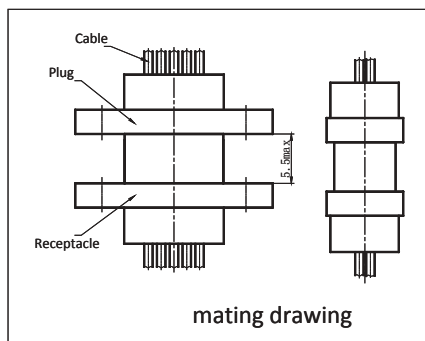
### Outline Dimension



Plug



Receptacle



mating drawing

Contact Nos	Outline dimension(in mm)							
	A	B	C	D	E	F	G	H
9PI	19.6	14.3	7.6	8.4	9.9	4.7	6.8	2.31
15PI	23.5	18.2	7.6	12.3	13.8	4.7	6.8	2.31
21PI	27.3	22	7.6	16.1	17.6	4.7	6.8	2.31
25PI	29.8	24.5	7.6	18.6	20.2	4.7	6.8	2.31
31PI	33.6	28.3	7.6	22.4	24	4.7	6.8	2.31
37PI	37.4	32.1	7.6	26.2	27.8	4.7	6.8	2.31
A51PI	46.3	41	7.6	35	36.7	4.7	6.8	2.31
51PI	36.2	30.9	8.7	25	26.6	5.8	7.9	2.31
69PI	43.8	38.5	8.7	32.6	34.2	5.8	7.9	2.31
100PI	54.7	45.7	9.7	35.1	36.6	6.8	9.1	3.7
9RH	19.6	14.3	7.6	9.9	9.9	6.1	6.8	2.31
15RH	23.5	18.2	7.6	13.7	13.8	6.1	6.8	2.31
21RH	27.3	22	7.6	17.5	17.6	6.1	6.8	2.31
25RH	29.8	24.5	7.6	20.1	20.2	6.1	6.8	2.31
31RH	33.6	28.3	7.6	23.9	24	6.1	6.8	2.31
37RH	37.4	32.1	7.6	27.7	27.8	6.1	6.8	2.31
A51RH	46.3	41	7.6	36.5	36.7	6.1	6.8	2.31
51RH	36.2	30.9	8.7	26.5	26.6	7.2	7.9	2.31
69RH	43.8	38.5	8.7	34.1	34.2	7.2	7.9	2.31
100RH	54.7	45.7	9.7	36.6	36.6	8.3	9.1	3.7

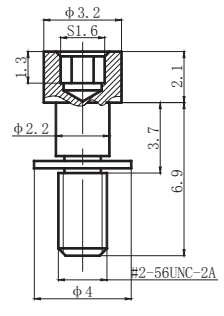
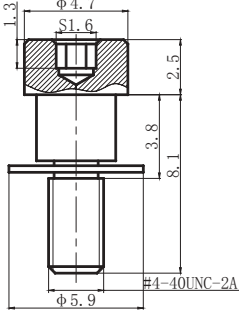
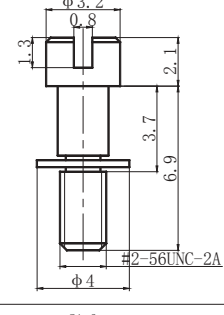
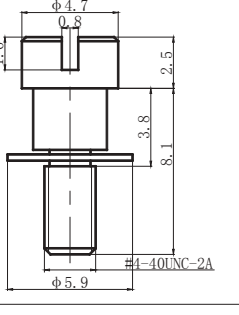
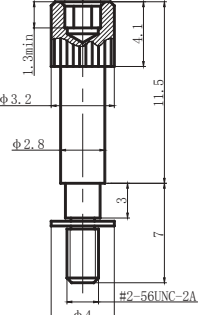
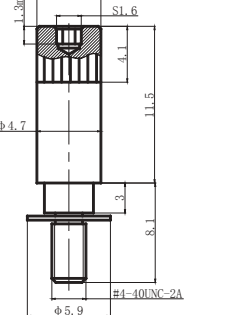
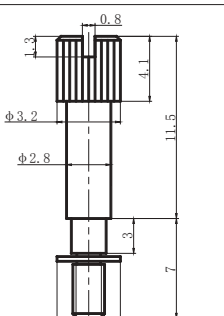
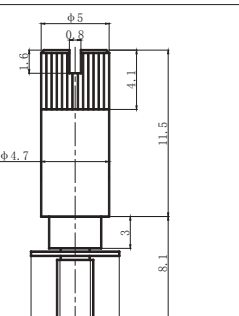


### The mating locking hardware

Code	Feature	Outline dimension	
		for 9~69pins	for 100pins
B01	<ol style="list-style-type: none"> <li>1. Removable hardware.</li> <li>2. Short jackscrew with a retainer ring.</li> <li>3. Hex socket head</li> </ol>		
B02	<ol style="list-style-type: none"> <li>1. Removable hardware.</li> <li>2. Short jackscrew with a retainer ring.</li> <li>3. Slot head</li> </ol>		
B03	<ol style="list-style-type: none"> <li>1. Removable hardware.</li> <li>2. Long jackscrew with a retainer ring.</li> <li>3. Hex socket head</li> </ol>		
B04	<ol style="list-style-type: none"> <li>1. Removable hardware.</li> <li>2. Long jackscrew with a retainer ring.</li> <li>3. Slot head</li> </ol>		

Note: all dimensions are in mm.

**The mating locking hardware**

Code	Feature	Outline dimension	
		for 9~69pins	for 100pins
B05	<ol style="list-style-type: none"> <li>1. Removable hardware.</li> <li>2. Short jackscrew with a retainer ring.</li> <li>3. Hex socket head</li> <li>4. Used for connetors with AA, AB, AC, AD AG type backshell</li> </ol>	 <p>Technical drawing showing dimensions for B05 hardware for 9~69 pins. Dimensions include: top diameter <math>\phi 3.2</math>, hex socket head diameter <math>S1.6</math>, hex head height <math>1.3</math>, hex head width <math>\phi 2.2</math>, distance from hex head to retainer ring <math>3.7</math>, total height <math>6.9</math>, retainer ring diameter <math>\phi 4</math>, and thread specification <math>\#2-56UNC-2A</math>.</p>	 <p>Technical drawing showing dimensions for B05 hardware for 100 pins. Dimensions include: top diameter <math>\phi 4.7</math>, hex socket head diameter <math>S1.6</math>, hex head height <math>1.3</math>, hex head width <math>\phi 5.9</math>, distance from hex head to retainer ring <math>3.8</math>, total height <math>8.1</math>, retainer ring diameter <math>\phi 5.9</math>, and thread specification <math>\#4-40UNC-2A</math>.</p>
B06	<ol style="list-style-type: none"> <li>1. Removable hardware.</li> <li>2. Short jackscrew with a retainer ring.</li> <li>3. Slot head</li> <li>4. Used for connetors with AA, AB, AC, AD AG type backshell</li> </ol>	 <p>Technical drawing showing dimensions for B06 hardware for 9~69 pins. Dimensions include: top diameter <math>\phi 3.2</math>, slot head diameter <math>0.8</math>, hex head height <math>1.3</math>, hex head width <math>\phi 4</math>, distance from hex head to retainer ring <math>3.7</math>, total height <math>6.9</math>, retainer ring diameter <math>\phi 4</math>, and thread specification <math>\#2-56UNC-2A</math>.</p>	 <p>Technical drawing showing dimensions for B06 hardware for 100 pins. Dimensions include: top diameter <math>\phi 4.7</math>, slot head diameter <math>0.8</math>, hex head height <math>1.6</math>, hex head width <math>\phi 5.9</math>, distance from hex head to retainer ring <math>3.8</math>, total height <math>8.1</math>, retainer ring diameter <math>\phi 5.9</math>, and thread specification <math>\#4-40UNC-2A</math>.</p>
B07	<ol style="list-style-type: none"> <li>1. Removable hardware.</li> <li>2. Long jackscrew with a retainer ring.</li> <li>3. Hex socket head</li> <li>4. Used for connetors with AA, AB, AC, AD AG type backshell</li> </ol>	 <p>Technical drawing showing dimensions for B07 hardware for 9~69 pins. Dimensions include: top diameter <math>\phi 3.2</math>, hex socket head diameter <math>S1.6</math>, hex head height <math>1.3</math> (min), hex head width <math>\phi 2.8</math>, distance from hex head to retainer ring <math>3</math>, total height <math>7</math>, retainer ring diameter <math>\phi 4</math>, and thread specification <math>\#2-56UNC-2A</math>.</p>	 <p>Technical drawing showing dimensions for B07 hardware for 100 pins. Dimensions include: top diameter <math>\phi 4.7</math>, hex socket head diameter <math>S1.6</math>, hex head height <math>1.3</math> (min), hex head width <math>\phi 5.9</math>, distance from hex head to retainer ring <math>3</math>, total height <math>8.1</math>, retainer ring diameter <math>\phi 5.9</math>, and thread specification <math>\#4-40UNC-2A</math>.</p>
B08	<ol style="list-style-type: none"> <li>1. Removable hardware.</li> <li>2. Long jackscrew with a retainer ring.</li> <li>3. Slot head</li> <li>4. Used for connetors with AA, AB, AC, AD AG type backshell</li> </ol>	 <p>Technical drawing showing dimensions for B08 hardware for 9~69 pins. Dimensions include: top diameter <math>\phi 3.2</math>, slot head diameter <math>0.8</math>, hex head height <math>1.3</math>, hex head width <math>\phi 2.8</math>, distance from hex head to retainer ring <math>3</math>, total height <math>7</math>, retainer ring diameter <math>\phi 4</math>, and thread specification <math>\#2-56UNC-2A</math>.</p>	 <p>Technical drawing showing dimensions for B08 hardware for 100 pins. Dimensions include: top diameter <math>\phi 4.7</math>, slot head diameter <math>0.8</math>, hex head height <math>1.6</math>, hex head width <math>\phi 5.9</math>, distance from hex head to retainer ring <math>3</math>, total height <math>8.1</math>, retainer ring diameter <math>\phi 5.9</math>, and thread specification <math>\#4-40UNC-2A</math>.</p>

Note: all dimensions are in mm.





### The mating locking hardware

Code	Feature	Outline dimension	
		for 9~69pins	for 100pins
B10	<ol style="list-style-type: none"> <li>1. Removable hardware.</li> <li>2. Short jackscrew with a retainer ring.</li> <li>3. Hex socket head</li> <li>4. Used for connetors with AH, AJ type backshell.</li> </ol>		
B11	<ol style="list-style-type: none"> <li>1. Removable hardware.</li> <li>2. Short jackscrew with a retainer ring.</li> <li>3. Slot head</li> <li>4. Used for connetors with AH, AJ type backshell.</li> </ol>		
B12	<ol style="list-style-type: none"> <li>1. Removable hardware.</li> <li>2. Long jackscrew with a retainer ring.</li> <li>3. Hex socket head</li> <li>4. Used for connetors with AH, AJ type backshell.</li> </ol>		
B13	<ol style="list-style-type: none"> <li>1. Removable hardware.</li> <li>2. Long jackscrew with a retainer ring.</li> <li>3. Slot head</li> <li>4. Used for connetors with AH, AJ type backshell.</li> </ol>		

Note: all dimensions are in mm.



The mating locking hardware

Code	Feature	Outline dimension	
		for 9~69pins	for 100pins
S01	<ol style="list-style-type: none"> <li>1. Non removable hardware.</li> <li>2. Short jackscrew with a retainer sleeve.</li> <li>3. Hex socket head</li> </ol>		
S02	<ol style="list-style-type: none"> <li>1. Non removable hardware.</li> <li>2. Short jackscrew with a retainer sleeve.</li> <li>3. Slot socket head</li> </ol>		
S03	<ol style="list-style-type: none"> <li>1. Non removable hardware.</li> <li>2. Long jackscrew with a retainer sleeve.</li> <li>3. Hex socket head</li> </ol>		
S04	<ol style="list-style-type: none"> <li>1. Non removable hardware.</li> <li>2. Long jackscrew with a retainer sleeve.</li> <li>3. Slot socket head</li> </ol>		

Note: all dimensions are in mm.

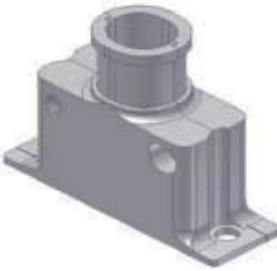
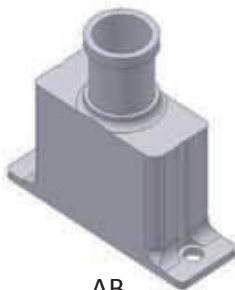
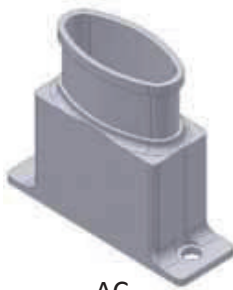
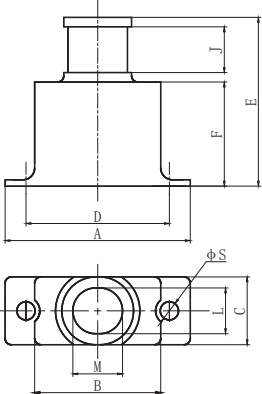
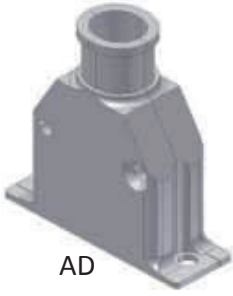
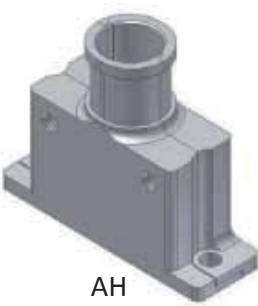
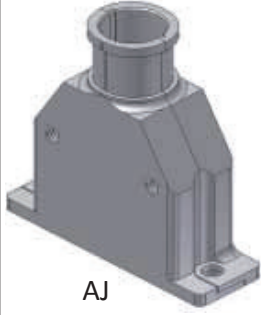
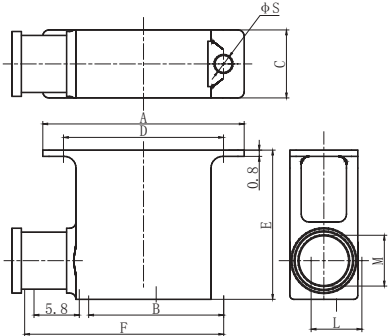
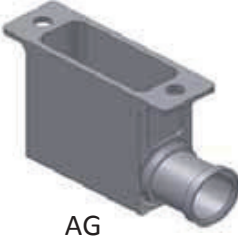


### The mating locking hardware

Code	Feature	Outline dimension	
		for 9~69pins	for 100pins
N01	<ol style="list-style-type: none"> <li>Hex head jackpost.</li> <li>Suitable for front panel mounting.</li> <li>The thickness of panel is not more than 2mm.</li> </ol>		
N06	<ol style="list-style-type: none"> <li>Hex head jackpost.</li> <li>Used for connectors with backshell.</li> </ol>		
N07	<ol style="list-style-type: none"> <li>Hex head jackpost.</li> <li>Used for front panel mounting.</li> <li>The thickness of panel is not more than 5mm.</li> </ol>		

Note: all dimensions are in mm.

## Backshell

Stereogram & feature			Outline dimension
 <b>AA</b>	 <b>AB</b>	 <b>AC</b>	
<p>AA style: two-piece, standard type</p>	<p>AB style: one-piece, standard type</p>	<p>AC style: one-piece, wide entry.</p>	
 <b>AD</b>	 <b>AH</b>	 <b>AJ</b>	
<p>AD style: two-piece, elongated type</p>	<p>AH style: two-piece, non-skid type</p>	<p>AJ style: two-piece, non-skid and elongated type</p>	
 <b>AG</b>	<p>AG style: one-piece, standard type with 90° entry.</p>		

Notes: all dimensions are in mm.



### Outline dimension of backshell

Part No.	Outline dimension( in mm)									
	A	B	C	D	E	F	J	φS	L	M
R04S-9-AA	19.6	12.1	8.7	14.3	21.4	13.2	5.8	2.31	-	4.7
R04S-15-AA	23.5	16	8.7	18.2	21.4	13.2	5.8	2.31	-	5.8
R04S-21-AA	27.3	19.8	8.7	22	21.4	13.2	5.8	2.31	-	6.5
R04S-25-AA	29.8	22.3	8.7	24.5	21.4	13.2	5.8	2.31	6.6	7.9
R04S-31-AA	33.6	26.1	8.7	28.3	21.4	13.2	5.8	2.31	6.6	8.4
R04S-37-AA	37.4	29.9	8.7	32.1	21.4	13.2	5.8	2.31	6.6	9.5
R04S-A51-AA	46.3	38.8	8.7	41	21.4	13.2	5.8	2.31	6.6	13.1
R04S-51-AA	36.2	28.7	9.7	30.9	23.7	15.5	5.8	2.31	7.5	11.9
R04S-69-AA	43.8	36.3	9.7	38.5	23.7	15.5	5.8	2.31	7.5	15.7
R04S-100-AA	54.7	38.8	11	45.7	24.2	16	5.8	3.7	8.7	17.5
R04S-9-AB	19.6	11.2	8.7	14.3	21.4	13.2	5.8	2.31	-	4.7
R04S-15-AB	23.5	15	8.7	18.2	21.4	13.2	5.8	2.31	-	5.8
R04S-21-AB	27.3	18.8	8.7	22	21.4	13.2	5.8	2.31	-	6.5
R04S-25-AB	29.8	21.4	8.7	24.5	21.4	13.2	5.8	2.31	6.7	7.8
R04S-31-AB	33.6	25.2	8.7	28.3	21.4	13.2	5.8	2.31	6.7	8.3
R04S-37-AB	37.4	29	8.7	32.1	21.4	13.2	5.8	2.31	6.7	9.5
R04S-A51-AB	46.3	37.9	8.7	41	21.4	13.2	5.8	2.31	6.7	13
R04S-51-AB	36.2	27.8	9.7	30.9	23.7	15.5	5.8	2.31	7.5	11.9
R04S-69-AB	43.8	35.4	9.7	38.5	23.7	15.5	5.8	2.31	7.5	15.7
R04S-100-AB	54.7	38.7	11	45.7	24.2	16	5.8	3.7	8.7	17.4
R04S-9-AC	19.6	11.2	8.7	14.3	21.4	13.2	5.8	2.31	6.7	7.9
R04S-15-AC	23.5	15	8.7	18.2	21.4	13.2	5.8	2.31	6.7	11.6
R04S-21-AC	27.3	18.8	8.7	22	21.4	13.2	5.8	2.31	6.7	15.4
R04S-25-AC	29.8	21.4	8.7	24.5	21.4	13.2	5.8	2.31	6.7	18
R04S-31-AC	33.6	25.2	8.7	28.3	21.4	13.2	5.8	2.31	6.7	21.8
R04S-37-AC	37.4	29	8.7	32.1	21.4	13.2	5.8	2.31	6.7	25.6
R04S-A51-AC	46.3	37.9	8.7	41	21.4	13.2	5.8	2.31	6.7	26.2
R04S-51-AC	36.2	27.8	9.7	30.9	23.7	15.5	5.8	2.31	7.5	23.4
R04S-69-AC	43.8	35.4	9.7	38.5	23.7	15.5	5.8	2.31	7.5	29.4
R04S-100-AC	54.7	38.7	11	45.7	24.2	16	5.8	3.7	8.7	34.1
R04S-9-AD	19.6	12.1	8.7	14.3	29.4	21.2	5.8	2.31	-	4.7
R04S-15-AD	23.5	16	8.7	18.2	29.4	21.2	5.8	2.31	-	5.8
R04S-21-AD	27.3	19.8	8.7	22	29.4	21.2	5.8	2.31	-	6.5
R04S-25-AD	29.8	22.3	8.7	24.5	29.4	21.2	5.8	2.31	6.6	7.9
R04S-31-AD	33.6	26.1	8.7	28.3	29.4	21.2	5.8	2.31	6.6	8.4
R04S-37-AD	37.4	29.9	8.7	32.1	29.4	21.2	5.8	2.31	6.6	9.5
R04S-A51-AD	46.3	38.8	8.7	41	29.4	21.2	5.8	2.31	6.6	13.1
R04S-51-AD	36.2	28.7	9.7	30.9	31.7	23.5	5.8	2.31	7.5	11.9
R04S-69-AD	43.8	36.3	9.7	38.5	31.7	23.5	5.8	2.31	7.5	15.7
R04S-100-AD	54.7	38.8	11	45.7	32.2	24	5.8	3.7	8.7	17.5
R04S-9-AH	19.6	11.2	8.7	14.3	21.4	13.2	5.8	2.31	-	4.7
R04S-15-AH	23.5	15	8.7	18.2	21.4	13.2	5.8	2.31	-	5.8
R04S-21-AH	27.3	18.8	8.7	22	21.4	13.2	5.8	2.31	-	6.5
R04S-25-AH	29.8	21.4	8.7	24.5	21.4	13.2	5.8	2.31	6.7	7.8

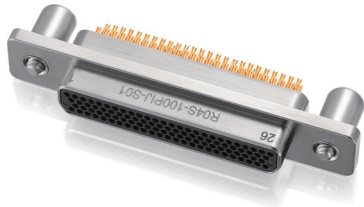
### Outline dimension of backshell

Part No.	Outline dimension( in mm)									
	A	B	C	D	E	F	J	φS	L	M
R04S-31-AH	33.6	25.2	8.7	28.3	21.4	13.2	5.8	2.31	6.7	8.3
R04S-37-AH	37.4	29	8.7	32.1	21.4	13.2	5.8	2.31	6.7	9.5
R04S-A51-AH	46.3	37.9	8.7	41	21.4	13.2	5.8	2.31	6.7	13
R04S-51-AH	36.2	27.8	9.7	30.9	23.7	15.5	5.8	2.31	7.5	11.9
R04S-69-AH	43.8	35.4	9.7	38.5	23.7	15.5	5.8	2.31	7.5	15.7
R04S-100-AH	54.7	38.7	11	45.7	24.2	16	5.8	3.7	8.7	17.4
R04S-9-AJ	19.6	12.1	8.7	14.3	29.4	21.2	5.8	2.31	-	4.7
R04S-15-AJ	23.5	16	8.7	18.2	29.4	21.2	5.8	2.31	-	5.8
R04S-21-AJ	27.3	19.8	8.7	22	29.4	21.2	5.8	2.31	-	6.5
R04S-25-AJ	29.8	22.3	8.7	24.5	29.4	21.2	5.8	2.31	6.6	7.9
R04S-31-AJ	33.6	26.1	8.7	28.3	29.4	21.2	5.8	2.31	6.6	8.4
R04S-37-AJ	37.4	29.9	8.7	32.1	29.4	21.2	5.8	2.31	6.6	9.5
R04S-A51-AJ	46.3	38.8	8.7	41	29.4	21.2	5.8	2.31	6.6	13.1
R04S-51-AJ	36.2	28.7	9.7	30.9	31.7	23.5	5.8	2.31	7.5	11.9
R04S-69-AJ	43.8	36.3	9.7	38.5	31.7	23.5	5.8	2.31	7.5	15.7
R04S-100-AJ	54.7	38.8	11	45.7	32.2	24	5.8	3.7	8.7	17.5
R04S-9-AG	19.6	11.2	8.7	14.3	17.3	19.4	-	2.31	-	4.7
R04S-15-AG	23.5	15	8.7	18.2	18.4	23.2	-	2.31	-	5.8
R04S-21-AG	27.3	18.8	8.7	22	19.1	27	-	2.31	-	6.5
R04S-25-AG	29.8	21.4	8.7	24.5	20.4	29.6	-	2.31	6.7	7.8
R04S-31-AG	33.6	25.2	8.7	28.3	20.9	33.4	-	2.31	6.7	8.3
R04S-37-AG	37.4	29	8.7	32.1	22.1	37.2	-	2.31	6.7	9.5
R04S-A51-AG	46.3	37.9	8.7	41	25.6	46.1	-	2.31	6.7	13
R04S-51-AG	36.2	27.8	9.7	30.9	24.5	36	-	2.31	7.5	11.9
R04S-69-AG	43.8	35.4	9.7	38.5	28.3	43.6	-	2.31	7.5	15.7
R04S-100-AG	54.7	38.7	11	45.7	30	46.9	-	3.7	8.7	17.4





## R04S Series Connectors for Space Applications Space Grade Micro D Connector Solder Cup Style



### Brief Introduction

- Micro-D connectors for space applications
- Twist pin contacts, high density interconnection, 1.27mm contact spacing and 1.1mm spacing between rows.
- Contacts:9,15,21,31,37, A51,51,69,100pins
- Product feature:small and light, antivibration etc. high performance.
- The solder cup can mate with AWG26 and AWG28 wire.
- Meet space applications.

### Material and finish

Item	Material	Finish
shell	Aluminum alloy	Electroless nickel plating
insulator	20%GPPS	—
seal ring	Silicone rubber	—
contacts	copper alloy	gold plating
locking hardware	stainless steel	passivation
backshell	Aluminum alloy	Electroless nickel plating

### Electrical Performance

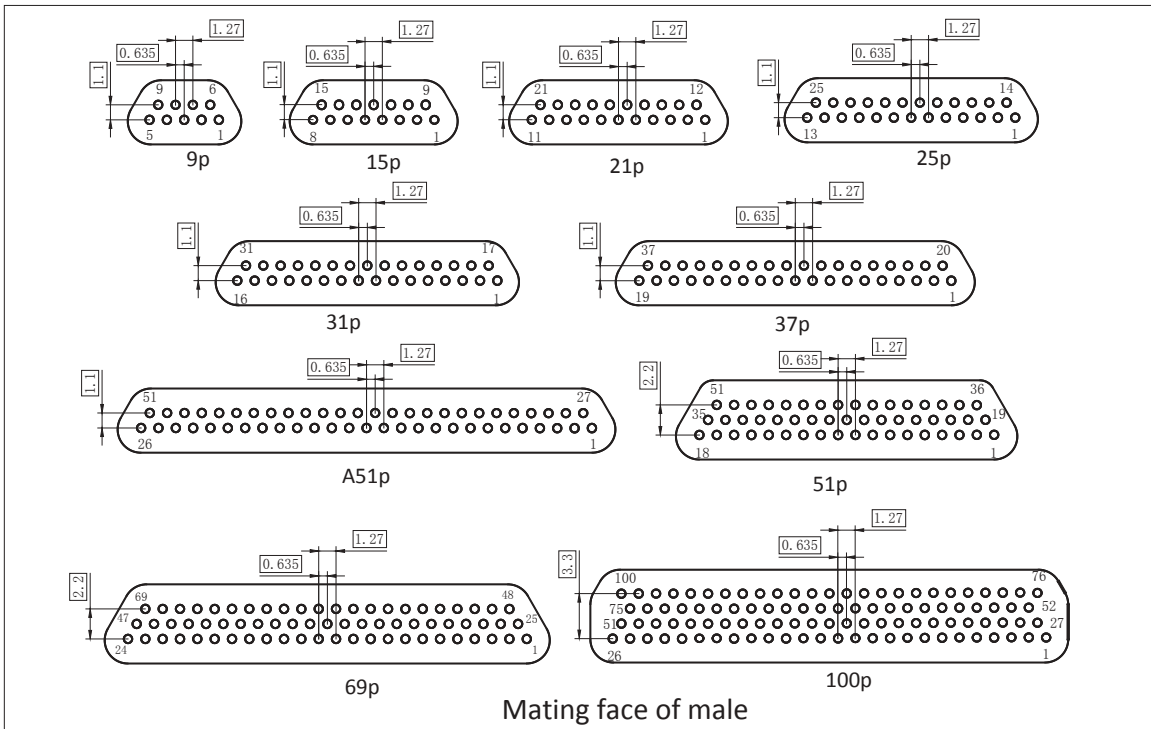
Performance	Marking	Rating value
Current rating(max)	I	3A (24#), 13A (16#)
Dielectric withstanding voltage (sea level)	U	800 Vr.m.x(50Hz)
Contact resistance	R	≤ 10mΩ (24#), ≤ 5 mΩ (16#)
Insulation resistance(500VDS, sea level)	R	≥ 5000MΩ

### Environment performance

Performance	Rating value	Test method
Environment temperature range:	-55 ~ +125 °C	/
Durability	500 mating cycles	/
Vibration	10Hz ~ 2000Hz, 294m <sup>2</sup> /s	EIA-364-28, test condition IV
Random vibration	Power spectral density 0.6G <sup>2</sup> /Hz, root mean square value of total acceleration 28.4G	/
Shock	980m/s <sup>2</sup> 、6ms	EIA-364-27, test condition E
Salt spray	96h	EIA-364-26, test condition B
Humidity	240h	EIA-364-31, test condition IV
Thrmal shock	-55 ~ +125°C	EIA-364-32, test condition IV
Contact engaging and separating force	0.3 ~ 1.5 N (24#) 0.56 ~ 8.35N (16#)	/
Irradiation resistant	Total dose:1X10 <sup>5</sup> Gy	/
Thermal vacuum outgassing	TML ≤ 1%, CVM ≤ 0.1%	/
Magnetic permeability	200 gamma	/



### Contact arrangements



### How to order

Sample part number:	R04S	-31	PI	J	B01	AB
Series:	R04S-Micro D connectors for space applications.					
Contact number:	9,15,21,25,31,37,A51,51,69,100pins					
Contact type:	PI-pin in plug      RH-socket in receptacle					
Termination style:	J- solder cup connector					
Locking hardware:	blank-without      B01-locking hardware, please see page5 to page9					
Backshell:	blank-without      AB-AB style backshell, please see page10 to page12.					



## R04S series Solder cup connectors

### Product stereogram

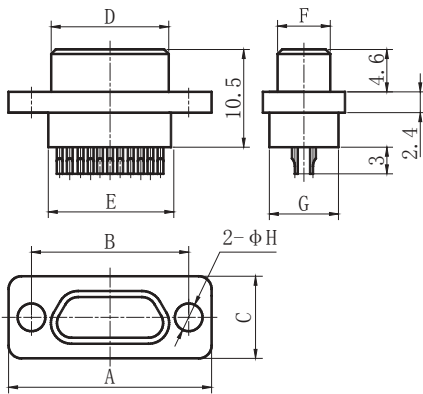


Plug

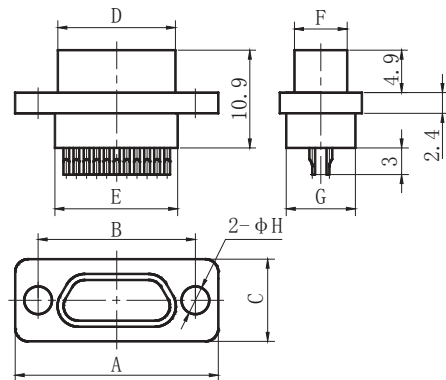


Receptacle

### Outline Dimension



Plug for 9~A51pins



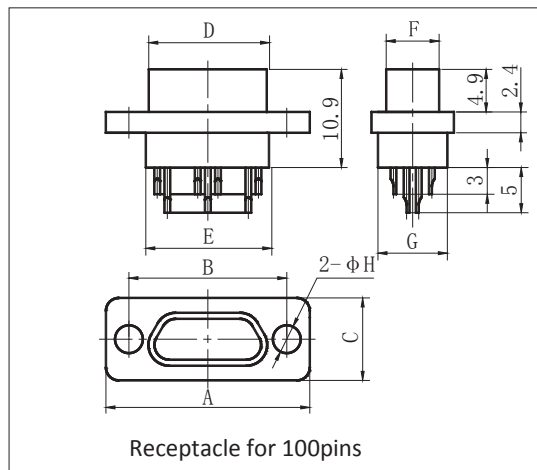
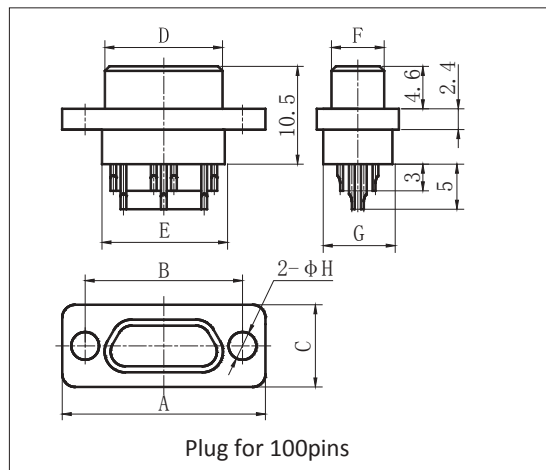
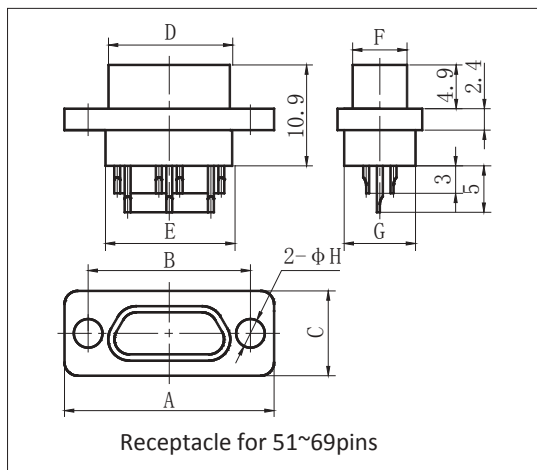
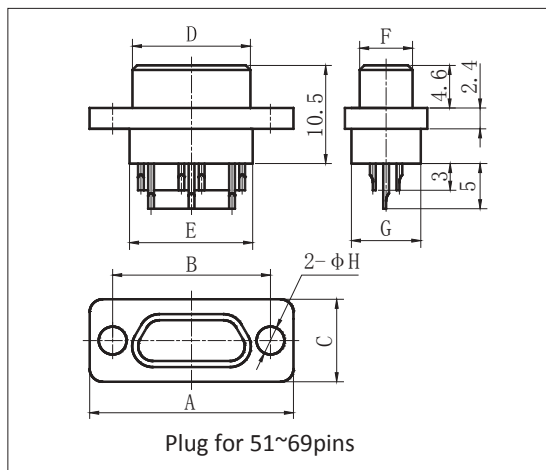
Receptacle for 9~A51pins

Contact Nos	Outline dimension(in mm)							
	A	B	C	D	E	F	G	H
9PI	19.6	14.3	7.6	8.4	9.9	4.7	6.8	2.31
15PI	23.5	18.2	7.6	12.3	13.8	4.7	6.8	2.31
21PI	27.3	22	7.6	16.1	17.6	4.7	6.8	2.31
25PI	29.8	24.5	7.6	18.6	20.2	4.7	6.8	2.31
31PI	33.6	28.3	7.6	22.4	24	4.7	6.8	2.31
37PI	37.4	32.1	7.6	26.2	27.8	4.7	6.8	2.31
A51PI	46.3	41	7.6	35	36.7	4.7	6.8	2.31
9RH	19.6	14.3	7.6	9.9	9.9	6.1	6.8	2.31
15RH	23.5	18.2	7.6	13.7	13.8	6.1	6.8	2.31
21RH	27.3	22	7.6	17.5	17.6	6.1	6.8	2.31
25RH	29.8	24.5	7.6	20.1	20.2	6.1	6.8	2.31
31RH	33.6	28.3	7.6	23.9	24	6.1	6.8	2.31
37RH	37.4	32.1	7.6	27.7	27.8	6.1	6.8	2.31
A51RH	46.3	41	7.6	36.5	36.7	6.1	6.8	2.31



## R04S series Solder cup connectors

### Outline Dimension



Contact Nos	Outline dimension(in mm)							
	A	B	C	D	E	F	G	H
51PI	36.2	30.9	8.7	25	26.6	5.8	7.9	2.31
69PI	43.8	38.5	8.7	32.6	34.2	5.8	7.9	2.31
100PI	54.7	45.7	9.7	35.1	36.6	6.8	9.1	3.7
51RH	36.2	30.9	8.7	26.5	26.6	7.2	7.9	2.31
69RH	43.8	38.5	8.7	34.1	34.2	7.2	7.9	2.31
100RH	54.7	45.7	9.7	36.6	36.6	8.3	9.1	3.7

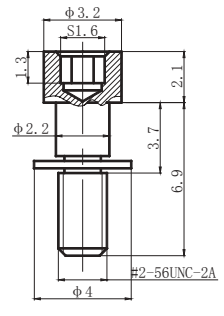
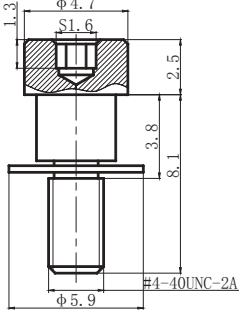
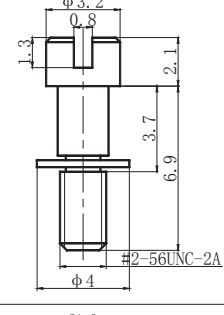
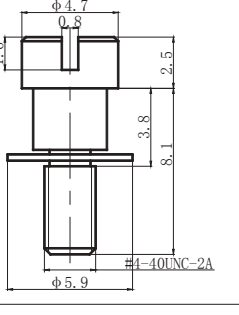
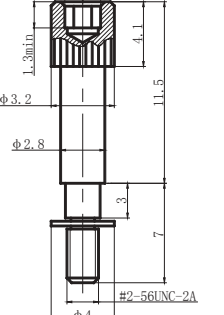
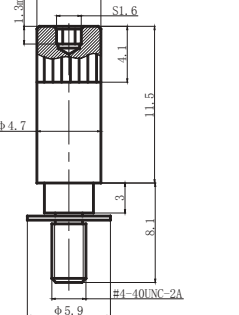
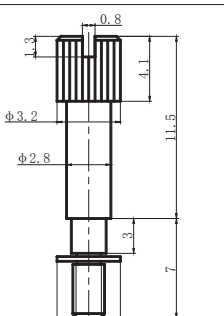
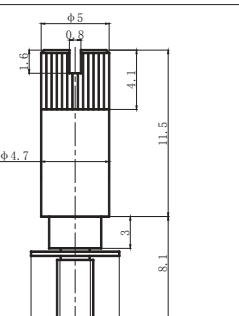


### The mating locking hardware

Code	Feature	Outline dimension	
		for 9~69pins	for 100pins
B01	<ol style="list-style-type: none"> <li>Removable hardware.</li> <li>Short jackscrew with a retainer ring.</li> <li>Hex socket head</li> </ol>		
B02	<ol style="list-style-type: none"> <li>Removable hardware.</li> <li>Short jackscrew with a retainer ring.</li> <li>Slot head</li> </ol>		
B03	<ol style="list-style-type: none"> <li>Removable hardware.</li> <li>Long jackscrew with a retainer ring.</li> <li>Hex socket head</li> </ol>		
B04	<ol style="list-style-type: none"> <li>Removable hardware.</li> <li>Long jackscrew with a retainer ring.</li> <li>Slot head</li> </ol>		

Note: all dimensions are in mm.

**The mating locking hardware**

Code	Feature	Outline dimension	
		for 9~69pins	for 100pins
B05	1. Removable hardware. 2. Short jackscrew with a retainer ring. 3. Hex socket head 4. Used for connetors with AA, AB, AC, AD AG type backshell	 <p>Technical drawing showing dimensions for the 9~69 pins version of B05 hardware. Dimensions include: top diameter <math>\phi 3.2</math>, hex socket width <math>S1.6</math>, hex height <math>1.3</math>, retainer ring diameter <math>\phi 2.2</math>, retainer ring height <math>3.7</math>, total height <math>6.9</math>, and bottom diameter <math>\phi 4</math>. Thread specification: #2-56UNC-2A.</p>	 <p>Technical drawing showing dimensions for the 100 pins version of B05 hardware. Dimensions include: top diameter <math>\phi 4.7</math>, hex socket width <math>S1.6</math>, hex height <math>1.3</math>, retainer ring diameter <math>\phi 5.9</math>, retainer ring height <math>3.8</math>, total height <math>8.1</math>, and bottom diameter <math>\phi 5.9</math>. Thread specification: #4-40UNC-2A.</p>
B06	1. Removable hardware. 2. Short jackscrew with a retainer ring. 3. Slot head 4. Used for connetors with AA, AB, AC, AD AG type backshell	 <p>Technical drawing showing dimensions for the 9~69 pins version of B06 hardware. Dimensions include: top diameter <math>\phi 3.2</math>, slot width <math>0.8</math>, hex height <math>1.3</math>, retainer ring diameter <math>\phi 2.2</math>, retainer ring height <math>3.7</math>, total height <math>6.9</math>, and bottom diameter <math>\phi 4</math>. Thread specification: #2-56UNC-2A.</p>	 <p>Technical drawing showing dimensions for the 100 pins version of B06 hardware. Dimensions include: top diameter <math>\phi 4.7</math>, slot width <math>0.8</math>, hex height <math>1.6</math>, retainer ring diameter <math>\phi 5.9</math>, retainer ring height <math>3.8</math>, total height <math>8.1</math>, and bottom diameter <math>\phi 5.9</math>. Thread specification: #4-40UNC-2A.</p>
B07	1. Removable hardware. 2. Long jackscrew with a retainer ring. 3. Hex socket head 4. Used for connetors with AA, AB, AC, AD AG type backshell	 <p>Technical drawing showing dimensions for the 9~69 pins version of B07 hardware. Dimensions include: top diameter <math>\phi 3.2</math>, hex socket width <math>S1.6</math>, hex height <math>1.3</math> (min), retainer ring diameter <math>\phi 2.8</math>, retainer ring height <math>4.1</math>, total height <math>11.5</math>, and bottom diameter <math>\phi 4</math>. Thread specification: #2-56UNC-2A.</p>	 <p>Technical drawing showing dimensions for the 100 pins version of B07 hardware. Dimensions include: top diameter <math>\phi 4.7</math>, hex socket width <math>S1.6</math>, hex height <math>1.3</math> (min), retainer ring diameter <math>\phi 5.9</math>, retainer ring height <math>4.1</math>, total height <math>11.5</math>, and bottom diameter <math>\phi 5.9</math>. Thread specification: #4-40UNC-2A.</p>
B08	1. Removable hardware. 2. Long jackscrew with a retainer ring. 3. Slot head 4. Used for connetors with AA, AB, AC, AD AG type backshell	 <p>Technical drawing showing dimensions for the 9~69 pins version of B08 hardware. Dimensions include: top diameter <math>\phi 3.2</math>, slot width <math>0.8</math>, hex height <math>1.3</math>, retainer ring diameter <math>\phi 2.8</math>, retainer ring height <math>4.1</math>, total height <math>11.5</math>, and bottom diameter <math>\phi 4</math>. Thread specification: #2-56UNC-2A.</p>	 <p>Technical drawing showing dimensions for the 100 pins version of B08 hardware. Dimensions include: top diameter <math>\phi 4.7</math>, slot width <math>0.8</math>, hex height <math>1.6</math>, retainer ring diameter <math>\phi 5.9</math>, retainer ring height <math>4.1</math>, total height <math>11.5</math>, and bottom diameter <math>\phi 5.9</math>. Thread specification: #4-40UNC-2A.</p>

Note: all dimensions are in mm.





### The mating locking hardware

Code	Feature	Outline dimension	
		for 9~69pins	for 100pins
B10	<ol style="list-style-type: none"> <li>1. Removable hardware.</li> <li>2. Short jackscrew with a retainer ring.</li> <li>3. Hex socket head</li> <li>4. Used for connetors with AH, AJ type backshell.</li> </ol>		
B11	<ol style="list-style-type: none"> <li>1. Removable hardware.</li> <li>2. Short jackscrew with a retainer ring.</li> <li>3. Slot head</li> <li>4. Used for connetors with AH, AJ type backshell.</li> </ol>		
B12	<ol style="list-style-type: none"> <li>1. Removable hardware.</li> <li>2. Long jackscrew with a retainer ring.</li> <li>3. Hex socket head</li> <li>4. Used for connetors with AH, AJ type backshell.</li> </ol>		
B13	<ol style="list-style-type: none"> <li>1. Removable hardware.</li> <li>2. Long jackscrew with a retainer ring.</li> <li>3. Slot head</li> <li>4. Used for connetors with AH, AJ type backshell.</li> </ol>		

Note: all dimensions are in mm.



The mating locking hardware

Code	Feature	Outline dimension	
		for 9~69pins	for 100pins
S01	<ol style="list-style-type: none"> <li>1. Non removable hardware.</li> <li>2. Short jackscrew with a retainer sleeve.</li> <li>3. Hex socket head</li> </ol>		
S02	<ol style="list-style-type: none"> <li>1. Non removable hardware.</li> <li>2. Short jackscrew with a retainer sleeve.</li> <li>3. Slot socket head</li> </ol>		
S03	<ol style="list-style-type: none"> <li>1. Non removable hardware.</li> <li>2. Long jackscrew with a retainer sleeve.</li> <li>3. Hex socket head</li> </ol>		
S04	<ol style="list-style-type: none"> <li>1. Non removable hardware.</li> <li>2. Long jackscrew with a retainer sleeve.</li> <li>3. Slot socket head</li> </ol>		

Note: all dimensions are in mm.

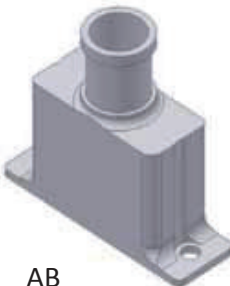
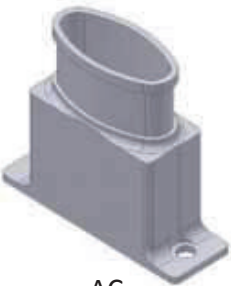
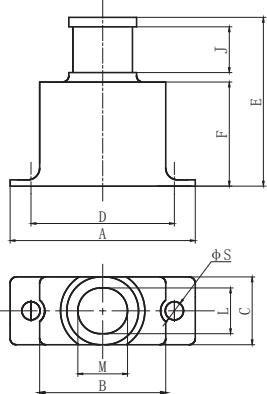
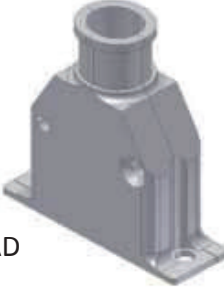
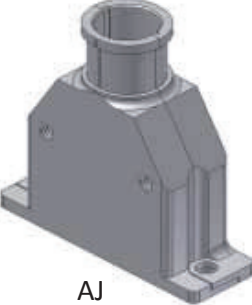
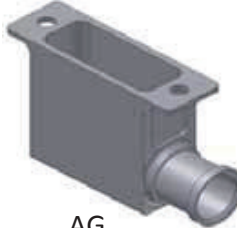
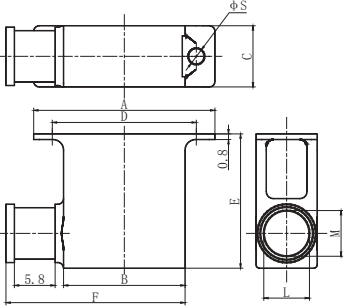


### The mating locking hardware

Code	Feature	Outline dimension	
		for 9~69pins	for 100pins
N01	<ol style="list-style-type: none"> <li>Hex head jackpost.</li> <li>Used for front panel mounting.</li> <li>The thickness of panel is not more than 2mm.</li> </ol>		
N06	<ol style="list-style-type: none"> <li>Hex head jackpost.</li> <li>Used for connectors with backshell.</li> </ol>		
N07	<ol style="list-style-type: none"> <li>Hex head jackpost.</li> <li>Used for front panel mounting.</li> <li>The thickness of panel is not more than 5mm.</li> </ol>		

Note: all dimensions are in mm.

**Backshell**

Stereogram & feature		Outline dimension
 <p style="text-align: center; margin-top: 10px;"><b>AB</b></p> <p>AB style: one-piece, standard type</p>	 <p style="text-align: center; margin-top: 10px;"><b>AC</b></p> <p>AC style: one-piece, wide entry.</p>	
 <p style="text-align: center; margin-top: 10px;"><b>AD</b></p> <p>AD style: two-piece, elongated type</p>	 <p style="text-align: center; margin-top: 10px;"><b>AJ</b></p> <p>AJ style: two-piece, non-skid and elongatad type</p>	
 <p style="text-align: center; margin-top: 10px;"><b>AG</b></p> <p>AD style: one-piece, standard type with 90 ° entry</p>		

Notes: all dimensions are in mm.



### Outline dimension of backshell

Part No.	Outline dimension( in mm)									
	A	B	C	D	E	F	J	φS	L	M
R04S-9-AB	19.6	11.2	8.7	14.3	21.4	13.2	5.8	2.31	-	4.7
R04S-15-AB	23.5	15	8.7	18.2	21.4	13.2	5.8	2.31	-	5.8
R04S-21-AB	27.3	18.8	8.7	22	21.4	13.2	5.8	2.31	-	6.5
R04S-25-AB	29.8	21.4	8.7	24.5	21.4	13.2	5.8	2.31	6.7	7.8
R04S-31-AB	33.6	25.2	8.7	28.3	21.4	13.2	5.8	2.31	6.7	8.3
R04S-37-AB	37.4	29	8.7	32.1	21.4	13.2	5.8	2.31	6.7	9.5
R04S-A51-AB	46.3	37.9	8.7	41	21.4	13.2	5.8	2.31	6.7	13
R04S-51-AB	36.2	27.8	9.7	30.9	23.7	15.5	5.8	2.31	7.5	11.9
R04S-69-AB	43.8	35.4	9.7	38.5	23.7	15.5	5.8	2.31	7.5	15.7
R04S-100-AB	54.7	38.7	11	45.7	24.2	16	5.8	3.7	8.7	17.4
R04S-9-AC	19.6	11.2	8.7	14.3	21.4	13.2	5.8	2.31	6.7	7.9
R04S-15-AC	23.5	15	8.7	18.2	21.4	13.2	5.8	2.31	6.7	11.6
R04S-21-AC	27.3	18.8	8.7	22	21.4	13.2	5.8	2.31	6.7	15.4
R04S-25-AC	29.8	21.4	8.7	24.5	21.4	13.2	5.8	2.31	6.7	18
R04S-31-AC	33.6	25.2	8.7	28.3	21.4	13.2	5.8	2.31	6.7	21.8
R04S-37-AC	37.4	29	8.7	32.1	21.4	13.2	5.8	2.31	6.7	25.6
R04S-A51-AC	46.3	37.9	8.7	41	21.4	13.2	5.8	2.31	6.7	26.2
R04S-51-AC	36.2	27.8	9.7	30.9	23.7	15.5	5.8	2.31	7.5	23.4
R04S-69-AC	43.8	35.4	9.7	38.5	23.7	15.5	5.8	2.31	7.5	29.4
R04S-100-AC	54.7	38.7	11	45.7	24.2	16	5.8	3.7	8.7	34.1
R04S-9-AD	19.6	12.1	8.7	14.3	29.4	21.2	5.8	2.31	-	4.7
R04S-15-AD	23.5	16	8.7	18.2	29.4	21.2	5.8	2.31	-	5.8
R04S-21-AD	27.3	19.8	8.7	22	29.4	21.2	5.8	2.31	-	6.5
R04S-25-AD	29.8	22.3	8.7	24.5	29.4	21.2	5.8	2.31	6.6	7.9
R04S-31-AD	33.6	26.1	8.7	28.3	29.4	21.2	5.8	2.31	6.6	8.4
R04S-37-AD	37.4	29.9	8.7	32.1	29.4	21.2	5.8	2.31	6.6	9.5
R04S-A51-AD	46.3	38.8	8.7	41	29.4	21.2	5.8	2.31	6.6	13.1
R04S-51-AD	36.2	28.7	9.7	30.9	31.7	23.5	5.8	2.31	7.5	11.9
R04S-69-AD	43.8	36.3	9.7	38.5	31.7	23.5	5.8	2.31	7.5	15.7
R04S-100-AD	54.7	38.8	11	45.7	32.2	24	5.8	3.7	8.7	17.5
R04S-9-AJ	19.6	12.1	8.7	14.3	29.4	21.2	5.8	2.31	-	4.7
R04S-15-AJ	23.5	16	8.7	18.2	29.4	21.2	5.8	2.31	-	5.8
R04S-21-AJ	27.3	19.8	8.7	22	29.4	21.2	5.8	2.31	-	6.5
R04S-25-AJ	29.8	22.3	8.7	24.5	29.4	21.2	5.8	2.31	6.6	7.9
R04S-31-AJ	33.6	26.1	8.7	28.3	29.4	21.2	5.8	2.31	6.6	8.4
R04S-37-AJ	37.4	29.9	8.7	32.1	29.4	21.2	5.8	2.31	6.6	9.5
R04S-A51-AJ	46.3	38.8	8.7	41	29.4	21.2	5.8	2.31	6.6	13.1
R04S-51-AJ	36.2	28.7	9.7	30.9	31.7	23.5	5.8	2.31	7.5	11.9
R04S-69-AJ	43.8	36.3	9.7	38.5	31.7	23.5	5.8	2.31	7.5	15.7
R04S-100-AJ	54.7	38.8	11	45.7	32.2	24	5.8	3.7	8.7	17.5
R04S-9-AG	19.6	11.2	8.7	14.3	17.3	19.4	-	2.31	-	4.7
R04S-15-AG	23.5	15	8.7	18.2	18.4	23.2	-	2.31	-	5.8
R04S-21-AG	27.3	18.8	8.7	22	19.1	27	-	2.31	-	6.5
R04S-25-AG	29.8	21.4	8.7	24.5	20.4	29.6	-	2.31	6.7	7.8

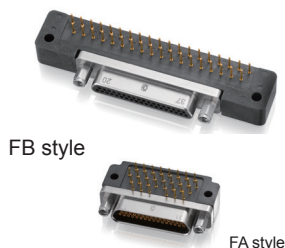
### Outline dimension of backshell

Part No.	Outline dimension( in mm)									
	A	B	C	D	E	F	J	φS	L	M
R04S-31-AG	33.6	25.2	8.7	28.3	20.9	33.4	-	2.31	6.7	8.3
R04S-37-AG	37.4	29	8.7	32.1	22.1	37.2	-	2.31	6.7	9.5
R04S-A51-AG	46.3	37.9	8.7	41	25.6	46.1	-	2.31	6.7	13
R04S-51-AG	36.2	27.8	9.7	30.9	24.5	36	-	2.31	7.5	11.9
R04S-69-AG	43.8	35.4	9.7	38.5	28.3	43.6	-	2.31	7.5	15.7
R04S-100-AG	54.7	38.7	11	45.7	30	46.9	-	3.7	8.7	17.4





## R04S Series Connectors for Space Applications Space Grade Micro D Connector Right Angle to PCB Style



### Brief Introduction

- Micro-D connectors for space applications
- Twist pin contacts, high density interconnection, 1.27mm contact spacing and 1.1mm spacing between rows.
- Contacts:9,15,21,31,37, 51,100pins.
- PCB layout:2.54\*2.54mm
- FA & FB style.
- Product feature:small and light, antivibration etc. high performance.
- Meet space applications.

### Material and finish

Item	Material	Finish
shell	Aluminum alloy	Electroless nickel plating
insulator	20%FPPS	—
seal ring	Silicone rubber	—
contacts	copper alloy	gold plating
locking hardware	stainless steel	passivation
backshell	Aluminum alloy	Electroless nickel plating

### Electrical Performance

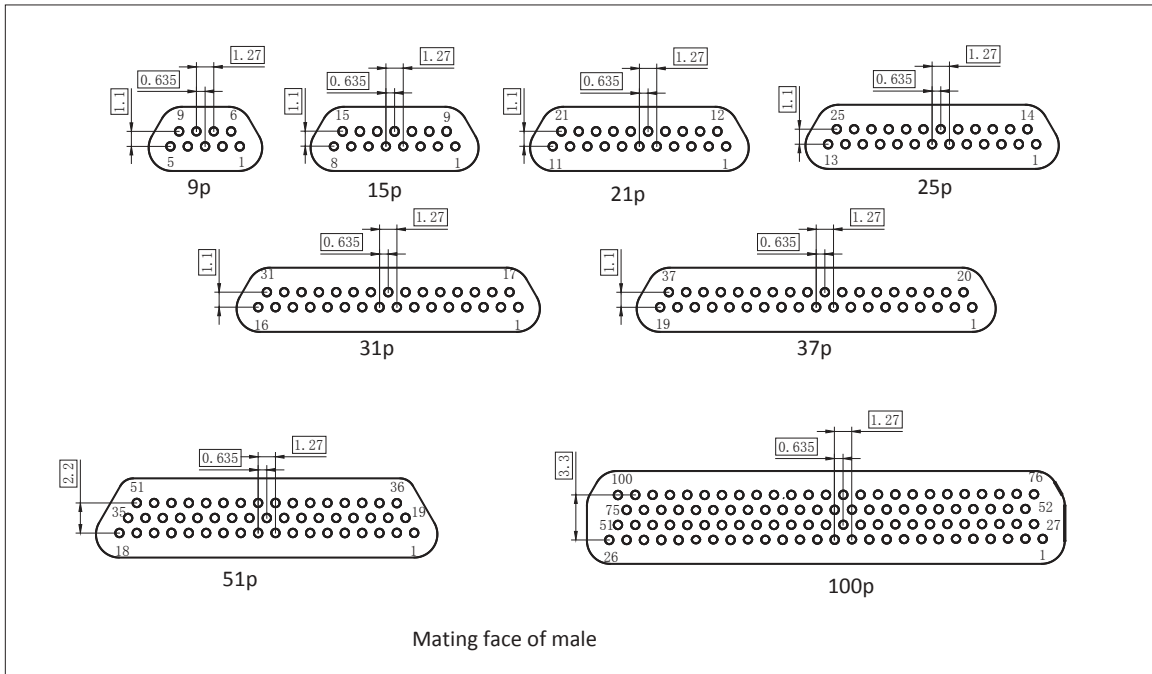
Performance	Marking	Rating value
Current rating(max)	I	3A(24#),13A(16#)
Dielectric withstanding voltage (sea level)	U	800 Vr.m.x(50Hz)
Contact resistance	R	$\leq 10\text{m}\Omega$ (24#), $\leq 5\text{m}\Omega$ (16#)
Insulation resistance(500VDS, sea level)	R	$\geq 5000\text{M}\Omega$

### Environment performance

Performance	Rating value	Test method
Environment temperature range:	-55 ~ +125 °C	/
Durability	500 mating cycles	/
Vibration	10Hz ~ 2000Hz, 294m <sup>2</sup> /s	EIA-364-28, test condition IV
Random vibration	Power spectral density 0.6G <sup>2</sup> /Hz, root mean square value of total acceleration 28.4G	/
Shock	980m/s <sup>2</sup> 、6ms	EIA-364-27, test condition E
Salt spray	96h	EIA-364-26, test condition B
Humidity	240h	EIA-364-31, test condition IV
Thermal shock	-55 ~ +125°C	EIA-364-32, test condition IV
Contact engaging and separating force	0.3 ~ 1.5 N (24#) 0.56 ~ 8.35N (16#)	/
Irradiation resistant	Total dose:1X10 <sup>3</sup> Gy	/
Thermal vacuum outgassing	TML $\leq 1\%$ , CVCM $\leq 0.1\%$	/
Magnetic permeability	200 gamma	/



## Contact arrangements




## How to order

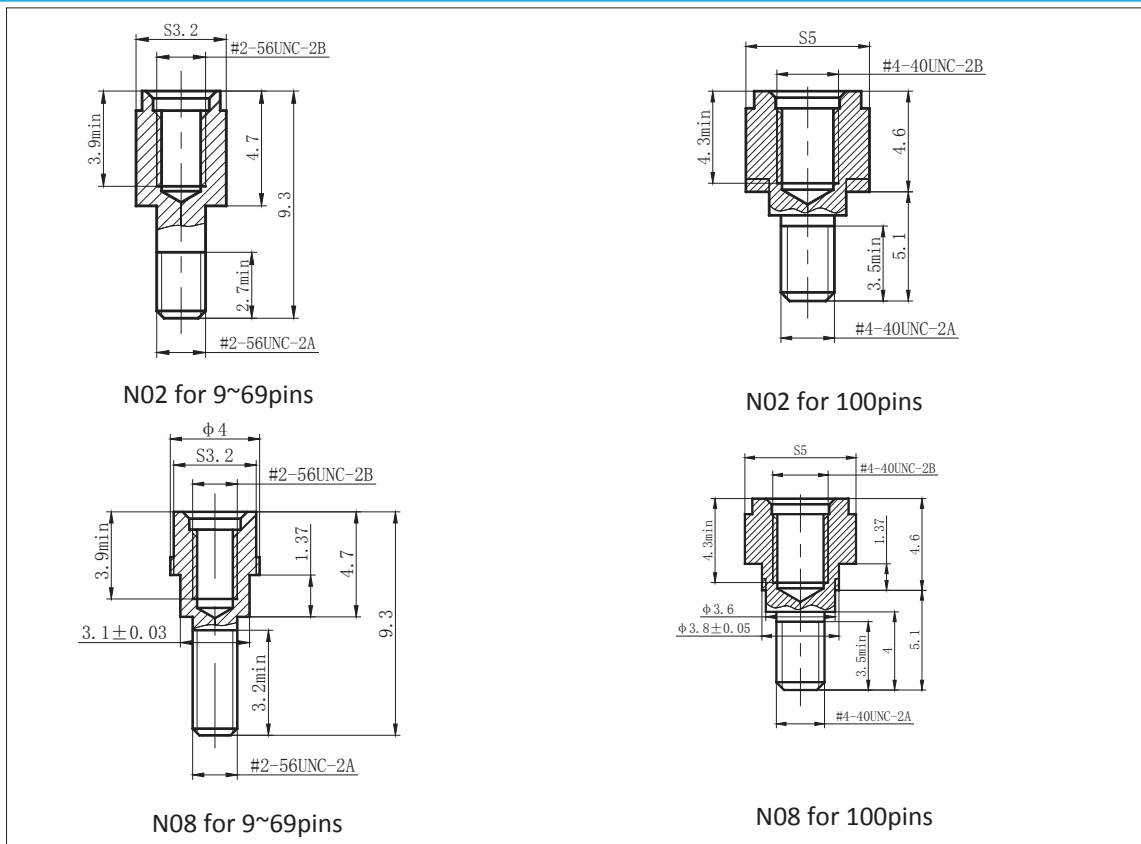
Sample part number:	R04S	-31	PI	FB	3	N02
Series:	R04S-Micro D connectors for space applications.					
Contact number:	9,15,21,25,31,37,51,100pins					
Contact type:	PI-pin in plug      RH-socket in receptacle					
Right angle to PCB type:	FA style and the PCB layout is 2.54*2.54mm FB style and the PCB layout is 2.54*2.54mm					
Tail length(see page3):	1-2.77mm	2-3.56mm	3-4.37mm			
Locking hardware:	blank-without      N02-locking hardware, please see page3					



### The mating locking hardware

Code	Feature	The thickness of mounting panel	Stereogram	Outline dimension
N02	Jackpost with hex head	/		Please see below
N08	1. Jackpost with hex head 2. Fitted to Rear panel mounting only	1.5 <sup>0</sup> <sub>-0.10</sub> mm		

### Outline dimension



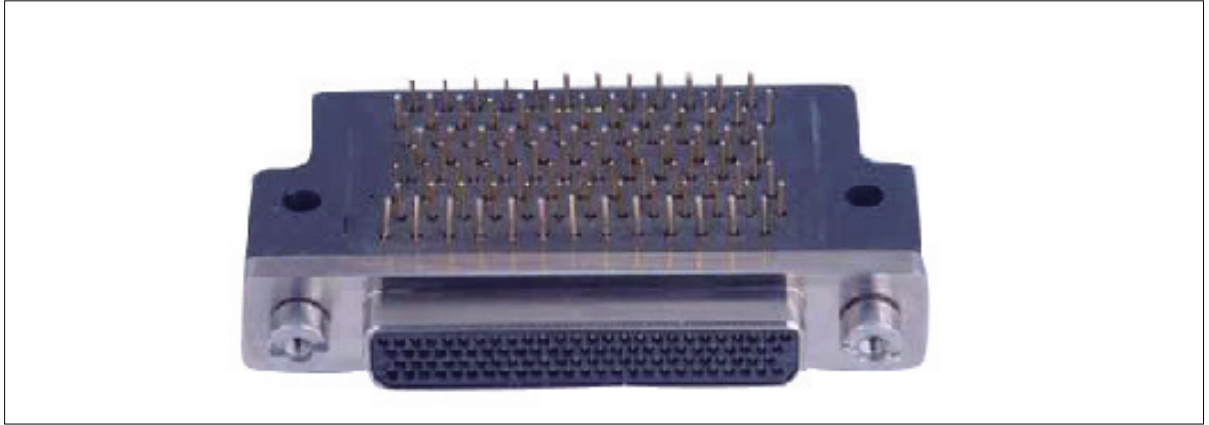
### Tail length

tail code	tail length	Recommend the thickness of PCB(in mm)
1	2.77	1.2~2.2
2	3.56	2.0~3.0
3	4.37	2.8~3.8

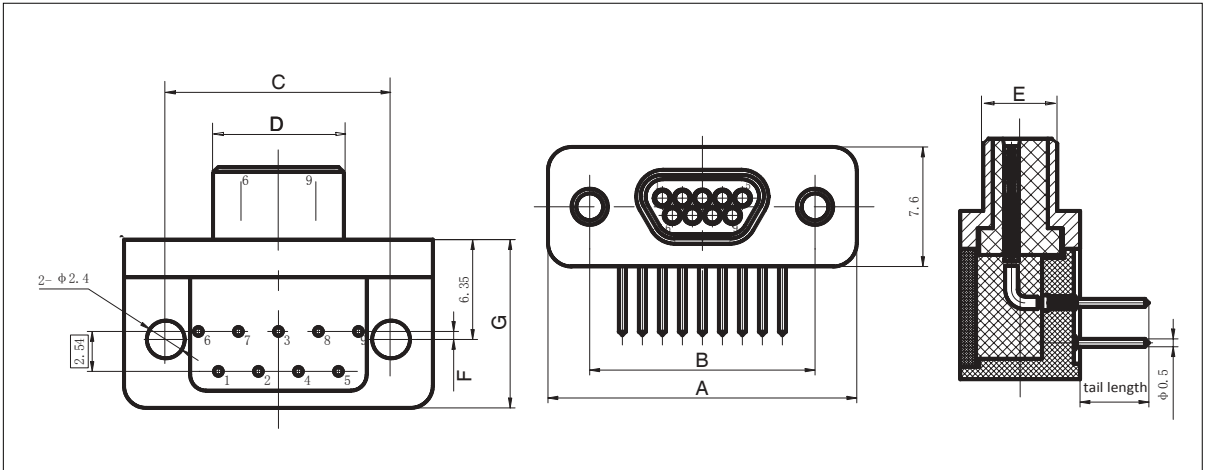
Note: all dimensions are in mm.

## R04S series right angle to PCB connectors for FA style

### Product stereogram



### Outline dimension



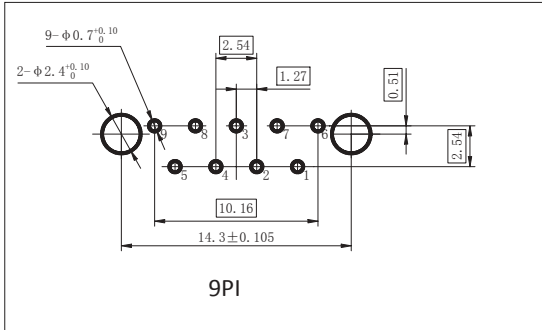
Contact Nos	A	B	C	D		E		F		G	
				PI	RH	PI	RH	PI	RH	PI	RH
9	19.6	14.3	14.3	8.4	10.16	4.7	6.1	0.51	0.51	10.7	10.7
15	23.5	18.2	18.2	12.3	14	4.7	6.1	3.05	3.05	10.7	10.7
21	27.3	22	22	16.1	17.8	4.7	6.1	3.05	3.05	10.7	10.7
25	29.8	24.5	24.5	18.6	20.3	4.7	6.1	3.05	3.05	10.7	10.7
31	33.6	28.3	28.3	22.4	24.12	4.7	6.1	3.05	3.05	13.1	13.1
37	37.4	32.1	32	26.3	27.9	4.7	6.1	3.05	3.05	13.1	13.1

Note: all dimensions are in mm.

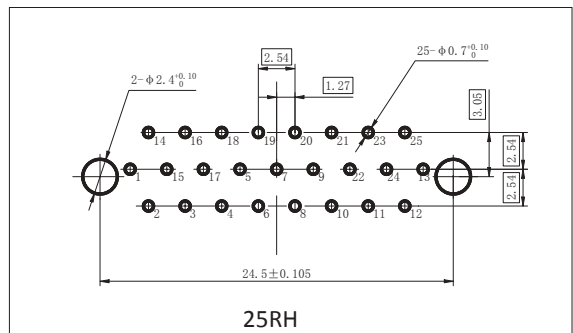
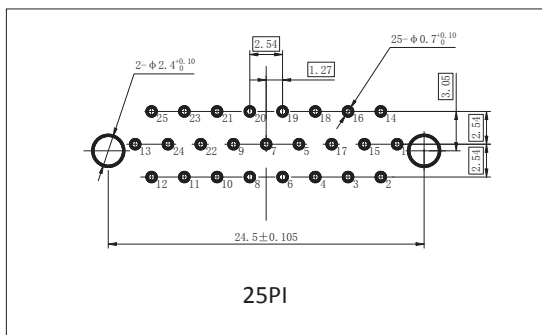
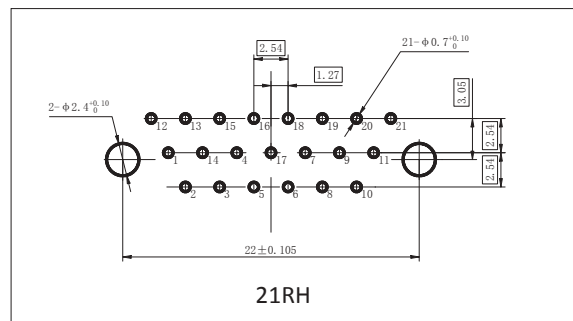
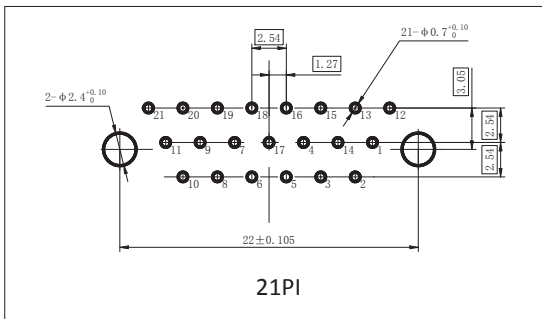
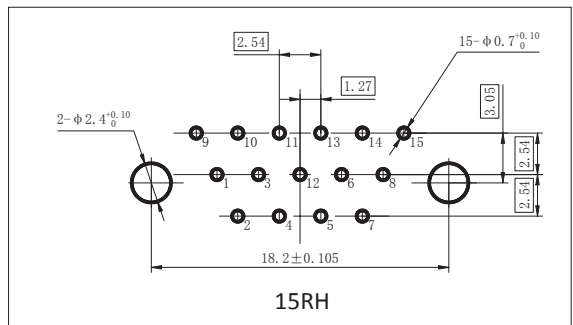
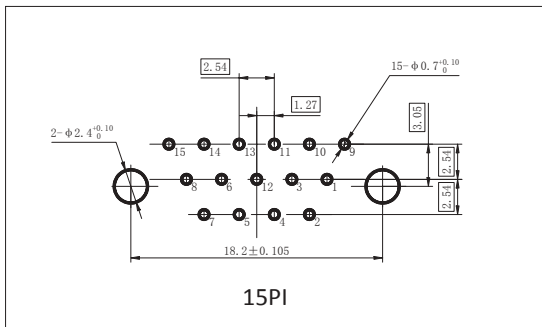
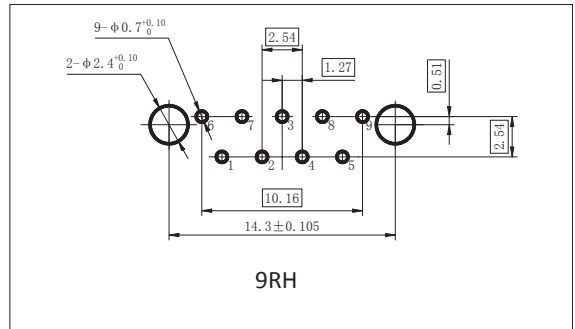


## Recommend PCB layout for FA style

### PCB layout for plug



### PCB layout for receptacle

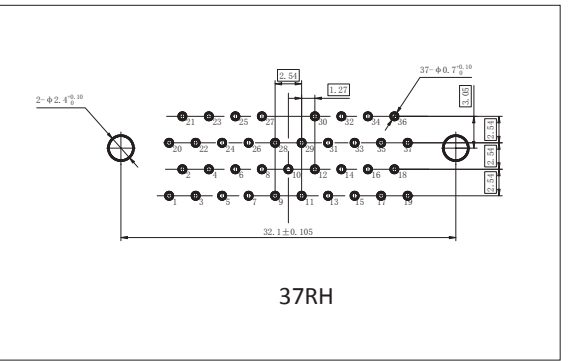
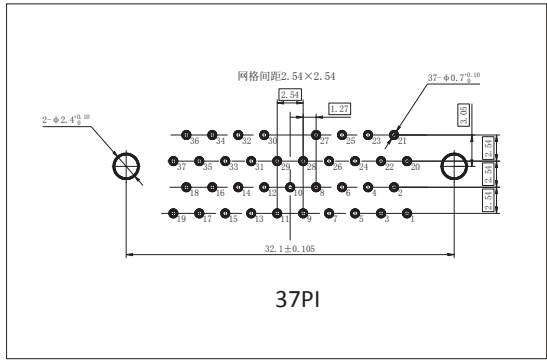
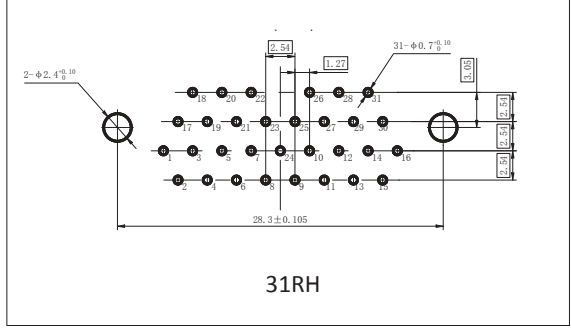
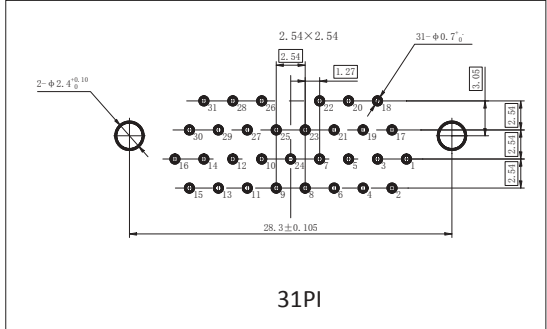


Notes: 1. all dimensions are in mm. 2.View top side of PCB board.

**Recommend PCB layout for FA style**

**PCB layout for plug**

**PCB layout for receptacle**

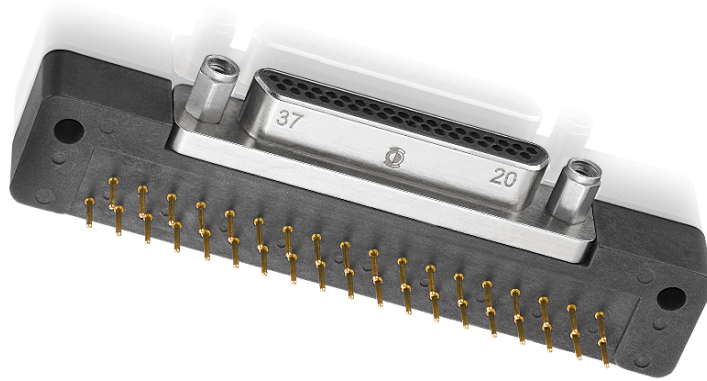


Notes: 1. all dimensions are in mm.      2.View top side of PCB board.

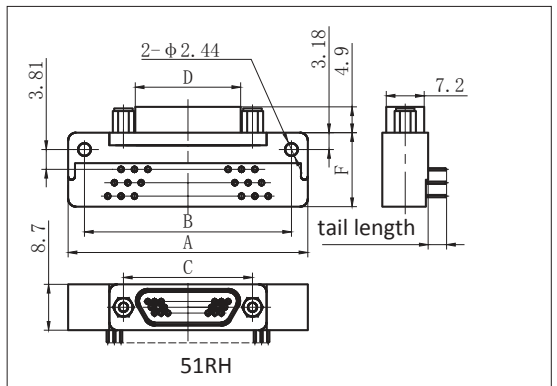
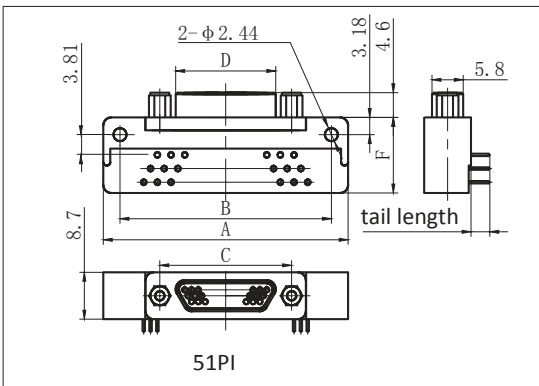
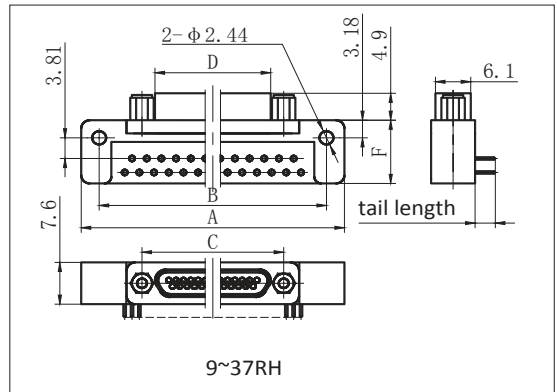
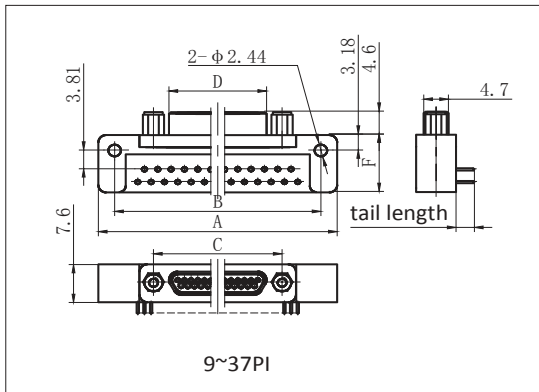


# R04S series right angle to PCB connectors for FB style

## Product stereogram



## Outline Dimension

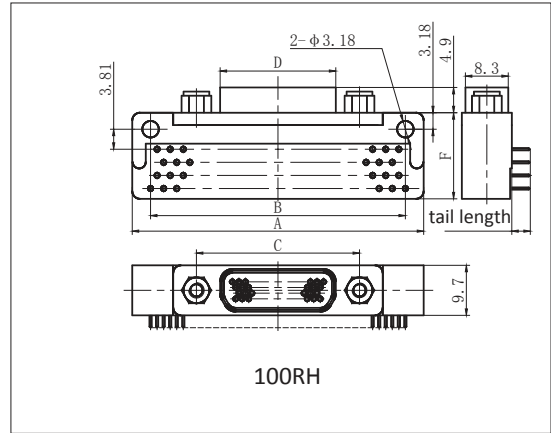
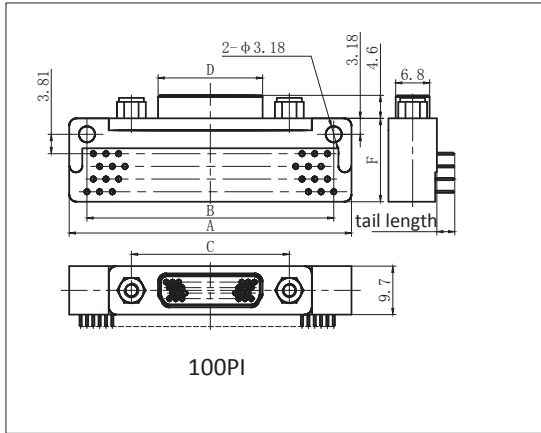


Notes: 1. all dimensions are in mm.





### Outline Dimension



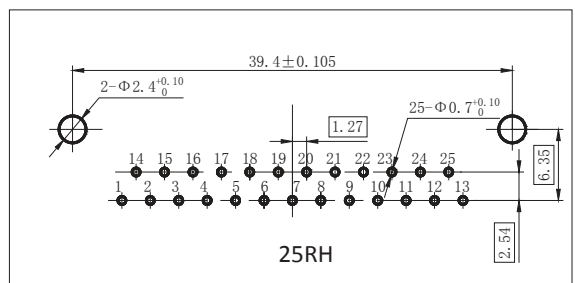
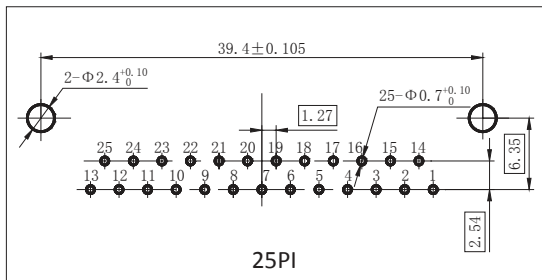
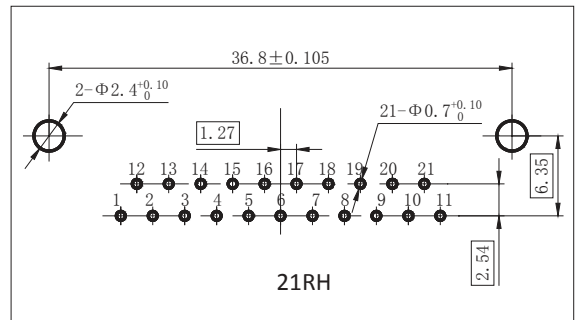
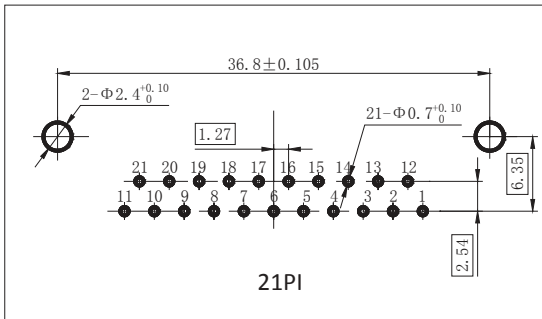
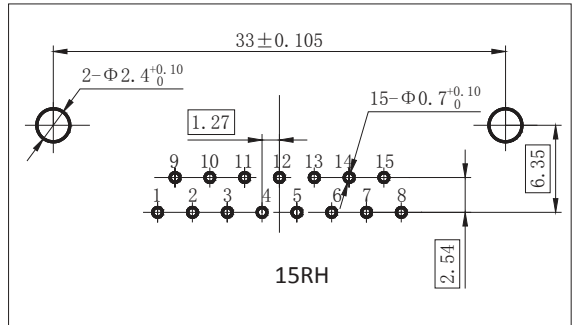
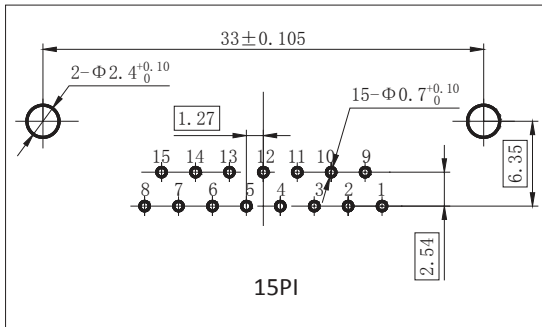
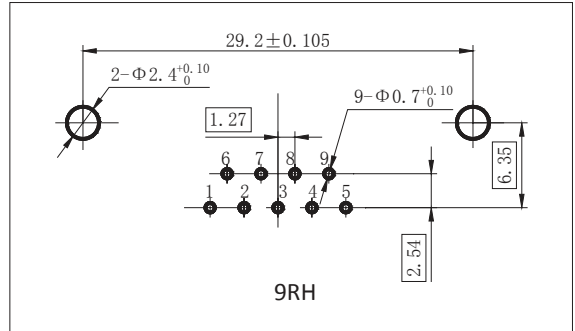
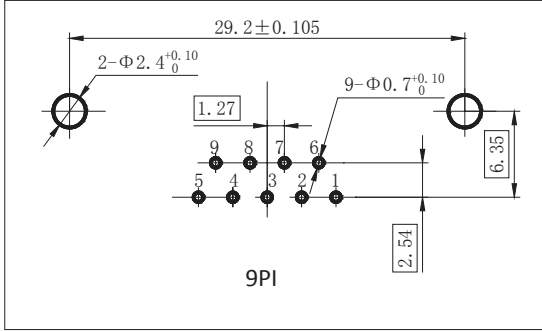
Contact Nos	Outline dimension(in mm)				
	A	B	C	D	F
9PI	35.2	29.2	14.3	8.4	11.5
15PI	39	33	18.2	12.3	11.5
21PI	42.8	36.8	22	16.1	11.5
25PI	45.4	39.4	24.5	18.6	11.5
31PI	51.7	45.7	28.3	22.4	11.5
37PI	59.3	53.3	32.1	26.2	11.5
51PI	47.6	40.6	30.9	25	14.3
100PI	70.5	63.5	45.7	35.1	16.8
9RH	35.2	29.2	14.3	8.4	11.5
15RH	39	33	18.2	12.3	11.5
21RH	42.8	36.8	22	16.1	11.5
25RH	45.4	39.4	24.5	18.6	11.5
31RH	51.7	45.7	28.3	22.4	11.5
37RH	59.3	53.3	32.1	26.2	11.5
51RH	47.6	40.6	30.9	25	14.3
100RH	70.5	63.5	45.7	35.1	16.8



Recommend the PCB layout for FB style

PCB layout for plug

PCB layout for receptacle

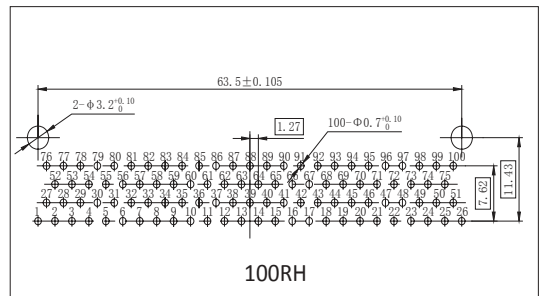
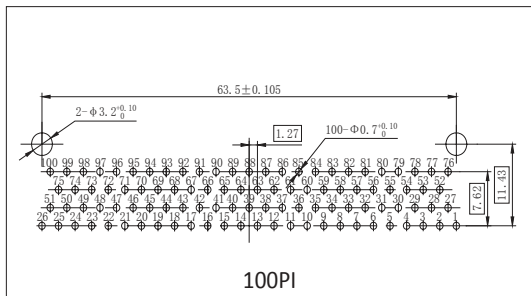
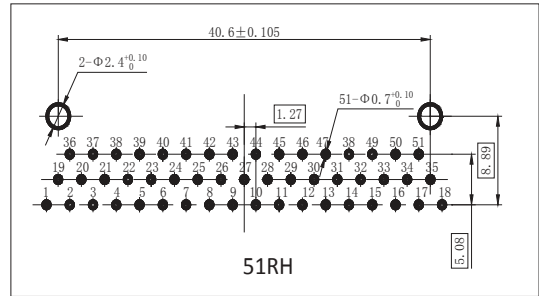
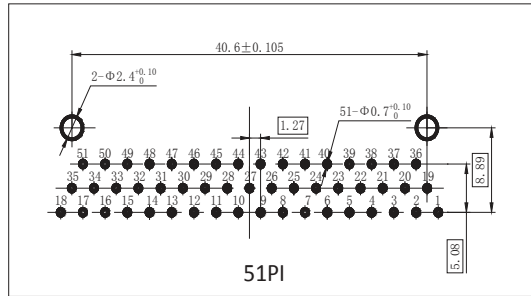
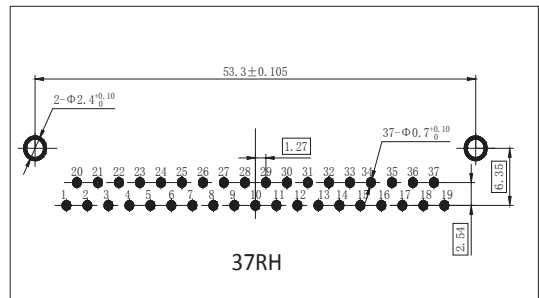
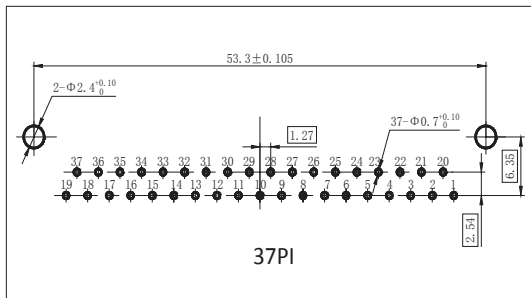
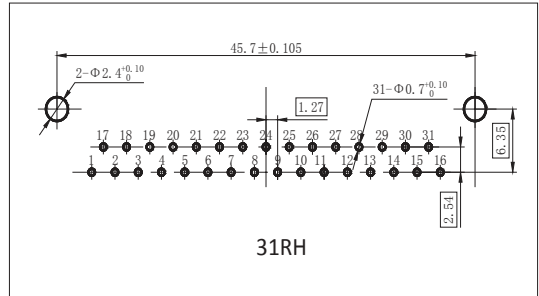
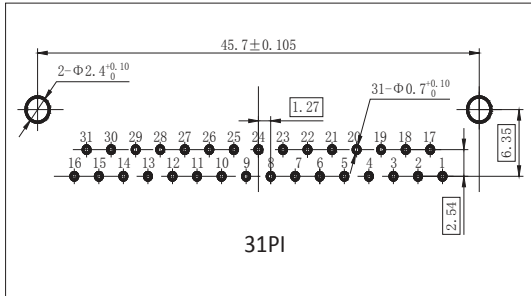


Notes: 1. all dimensions are in mm. 2.View top side of PCB board.

Recommend the PCB layout for FB style

**PCB layout for plug**

**PCB layout for receptacle**



Notes: 1. all dimensions are in mm.    2.View top side of PCB board.



## R04S Series Connectors for Space Applications Space Grade Micro D Connector Straight to PCB Style



SA style

### Brief Introduction

- Micro-D connectors for space applications
- Twist pin contacts, high density interconnection, 1.27mm contact spacing and 1.1mm spacing between rows.
- Contacts:9,15,21,31,37, 51pins.
- SA & SB style.
- Product feature:small and light, antivibration etc. high performance.
- Meet space applications.

### Material and finish

Item	Material	Finish
shell	Aluminum alloy	Electroless nickel plating
insulator	20%GPPS	—
seal ring	Silicone rubber	—
contacts	copper alloy	gold plating
locking hardware	stainless steel	passivation
backshell	Aluminum alloy	Electroless nickel plating

### Electrical Performance

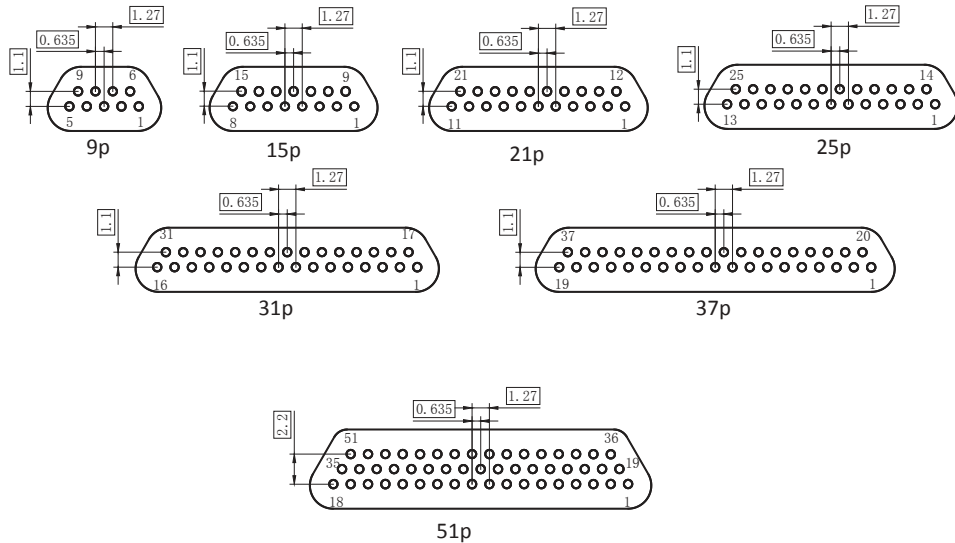
Performance	Marking	Rating value
Current rating(max)	I	3A (24#), 13A (16#)
Dielectric withstanding voltage (sea level)	U	800 Vr.m.x(50Hz)
Contact resistance	R	≤ 10mΩ (24#), ≤ 5 mΩ (16#)
Insulation resistance(500VDS, sea level)	R	≥ 5000MΩ

### Environment performance

Performance	Rating value	Test method
Environment temperature range:	-55 ~ +125 °C	/
Durability	500 mating cycles	/
Vibration	10Hz ~ 2000Hz, 294m <sup>2</sup> /s	EIA-364-28, test condition IV
Random vibration	Power spectral density 0.6G <sup>2</sup> /Hz, root mean square value of total acceleration 28.4G	/
Shock	980m/s <sup>2</sup> 、6ms	EIA-364-27, test condition E
Salt spray	96h	EIA-364-26, test condition B
Humidity	240h	EIA-364-31, test condition IV
Thrmal shock	-55 ~ +125°C	EIA-364-32, test condition IV
Contact engaging and separating force	0.3 ~ 1.5 N (24#) 0.56 ~ 8.35N (16#)	/
Irradiation resistant	Total dose:1X10 <sup>5</sup> Gy	/
Thermal vacuum outgassing	TML ≤ 1%, CVCM ≤ 0.1%	/
Magnetic permeability	200 gamma	/



## Contact arrangements




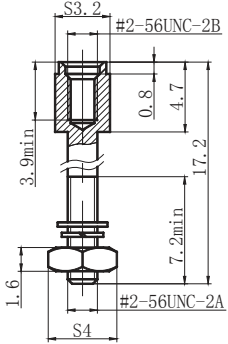
Mating face of male

## How to order

Sample part number:	R04S	-31	PI	SA	3	N04
Series:	R04S-Micro D connectors for space applications.					
Contact number:	9,15,21,25,31,37,51pins					
Contact type:	PI-pin in plug      RH-socket in receptacle					
Termination type:	SA style and the PCB layout is 2.54*1.91mm SB style and the PCB layout is 2.54*2.54mm					
Tail length:	1-2.77mm	2-3.56mm	3-4.37mm			
Locking hardware:	blank-without      N04-locking hardware, please see page3					



### The mating locking hardware

Code	Feature	Stereogram	Outline dimension
N04	1. Jackpost with hex head. 2. Fitted to vertical mounting with pcb.		

Note: all dimensions are in mm.

### Tail length

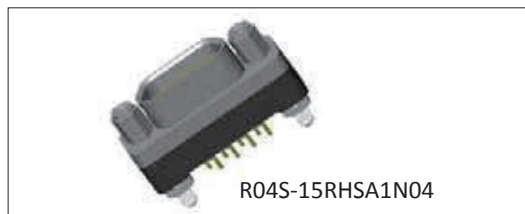
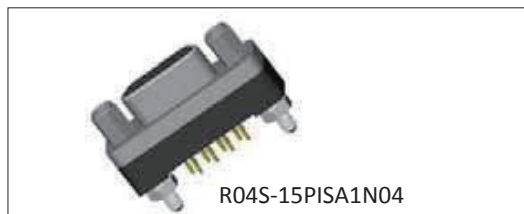
tail code	tail length	Recommend the thickness of PCB(in mm)
1	2.77	1.2~2.2
2	3.56	2.0~3.0
3	4.37	2.8~3.8

Notes: all dimensions are in mm.

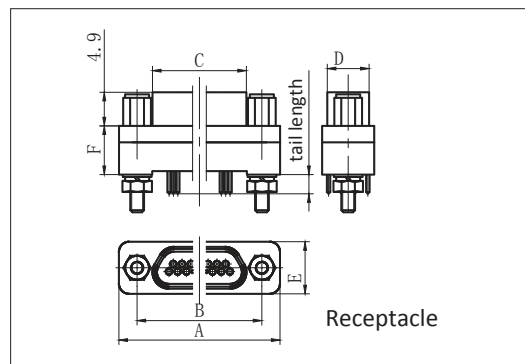
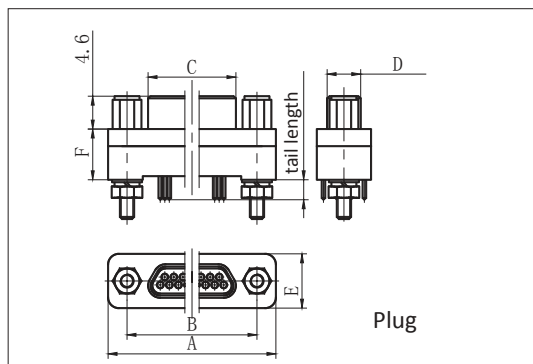


## R04S series straight to PCB connectors for SA style

### Product stereogram



### Outline Dimension



Contacts Nos	Outline dimension(in mm)					
	A	B	C	D	E	F
9PI	19.6	14.3	8.4	4.7	7.6	7.1
15PI	23.8	18.2	12.3	4.7	7.6	7.1
21PI	27.3	22	16.1	4.7	7.6	7.1
25PI	29.8	24.5	18.6	4.7	7.6	7.1
31PI	33.6	28.3	22.4	4.7	7.6	7.1
37PI	37.4	32.1	26.2	4.7	7.6	7.1
51PI	36.5	30.9	25	5.8	8.7	8.2
9RH	19.6	14.3	9.9	6.1	7.6	7.1
15RH	23.5	18.2	13.7	6.1	7.6	7.1
21RH	27.3	22	17.5	6.1	7.6	7.1
25RH	29.8	24.5	20.1	6.1	7.6	7.1
31RH	33.6	28.3	23.9	6.1	7.6	7.1
37RH	37.4	32.1	27.7	6.1	7.6	7.1
51RH	36.5	30.9	26.7	7.2	8.7	8.2

Notes: all dimensions are in mm.

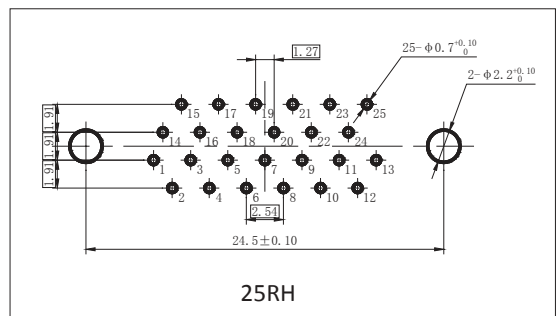
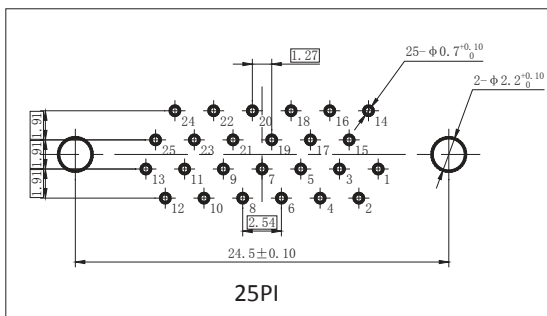
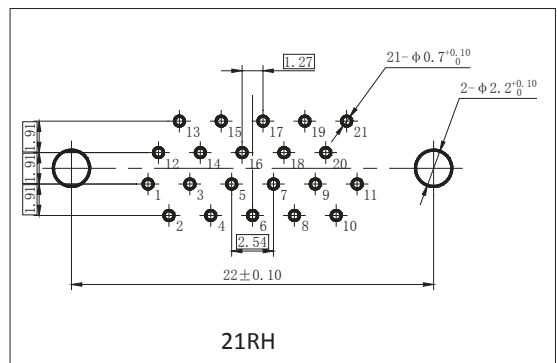
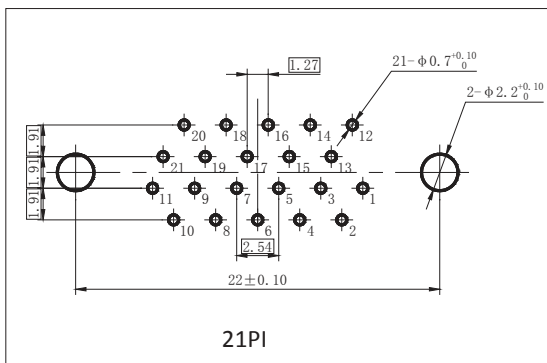
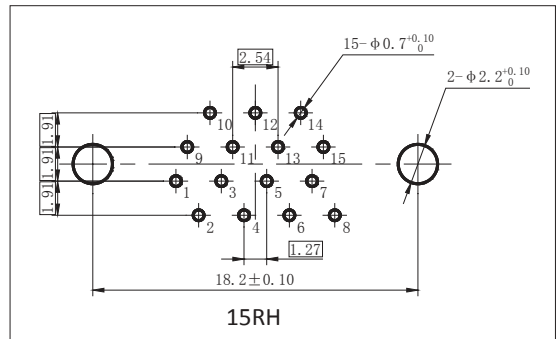
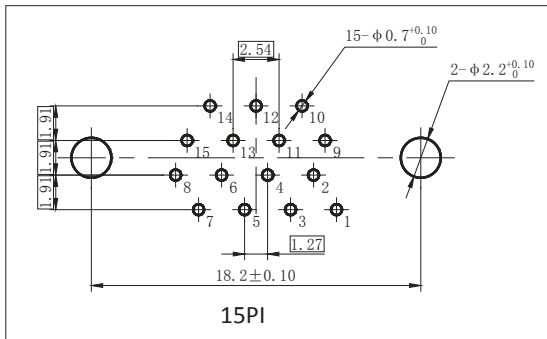
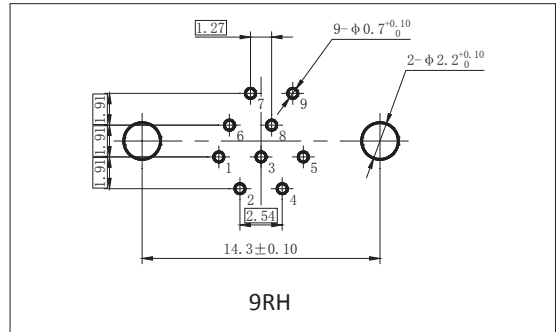
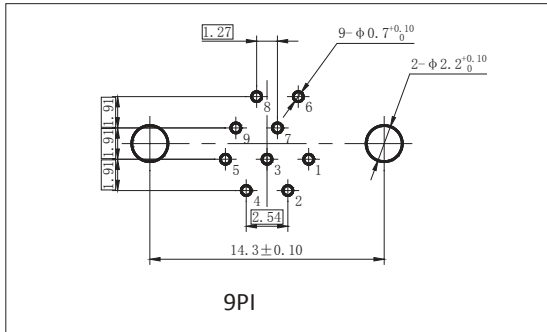




**Recommend the PCB layout**

**PCB layout for plug**

**PCB layout for receptacle**

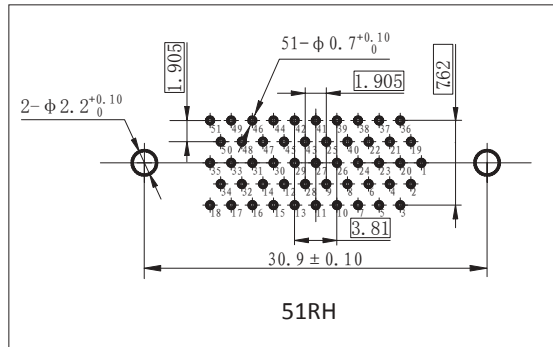
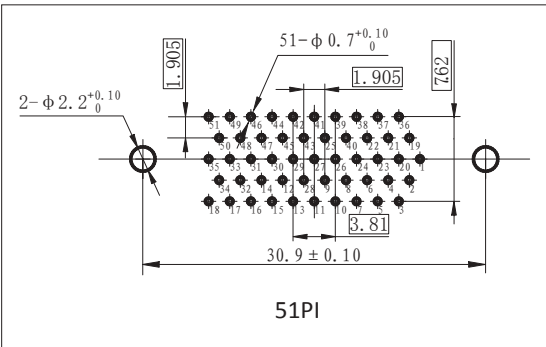
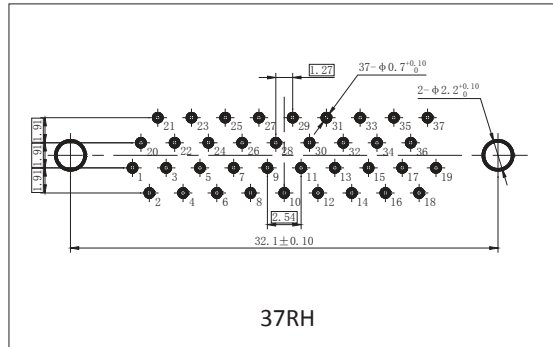
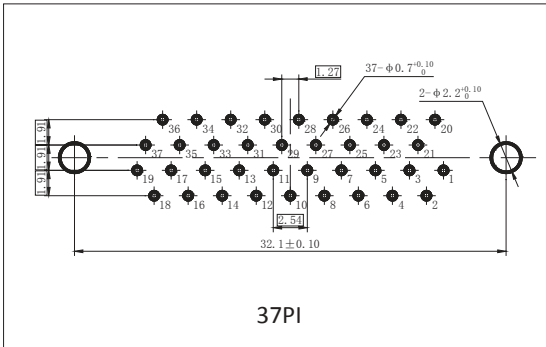
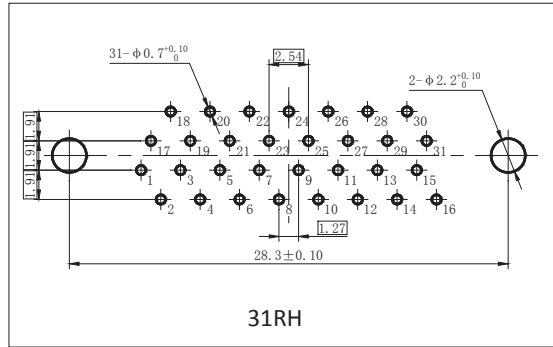
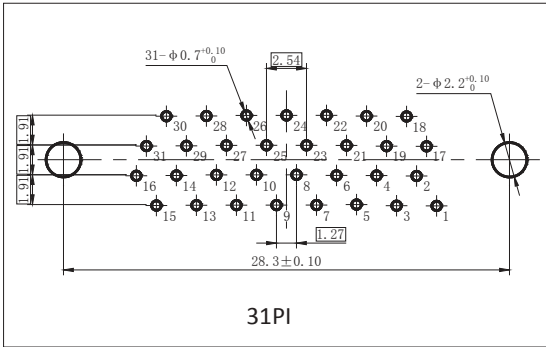


Notes: 1. all dimensions are in mm. 2. View top side of PCB board.

Recommend the PCB layout

**■ PCB layout for plug**

**■ PCB layout for receptacle**

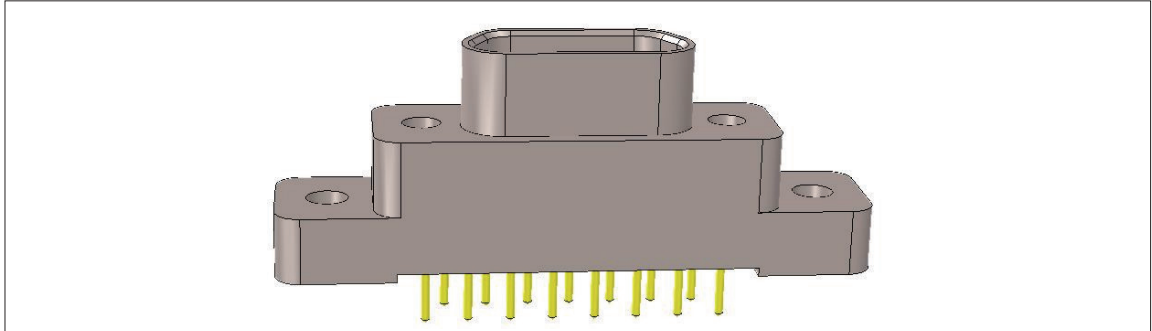


Notes: 1. all dimensions are in mm.      2. View top side of PCB board.

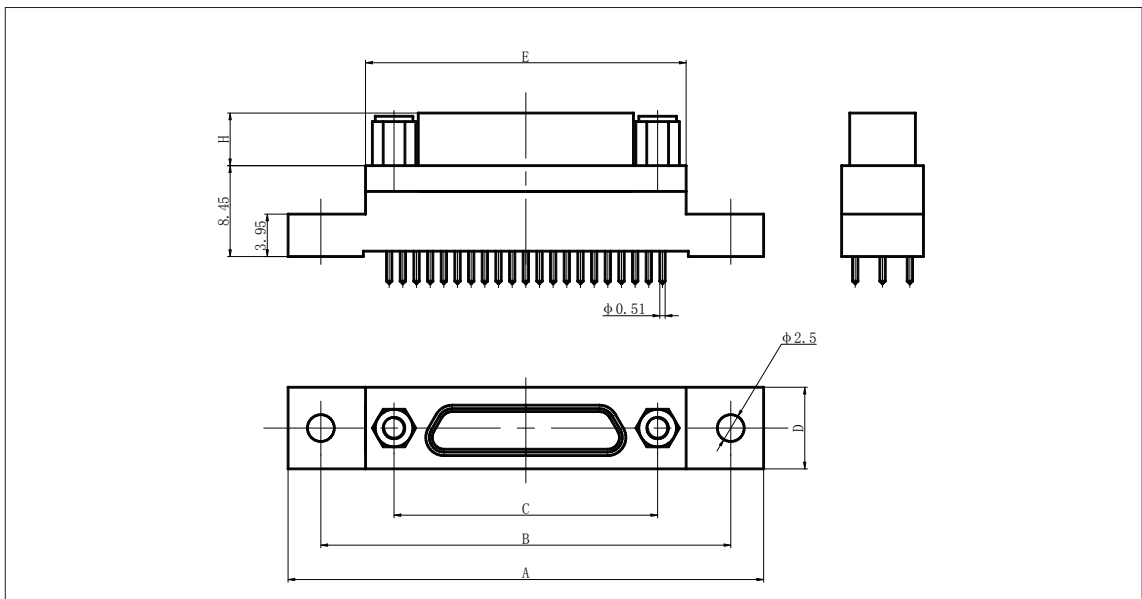


## R04S series straight to PCB connectors for SB style

### Product stereogram



### Outline Dimension



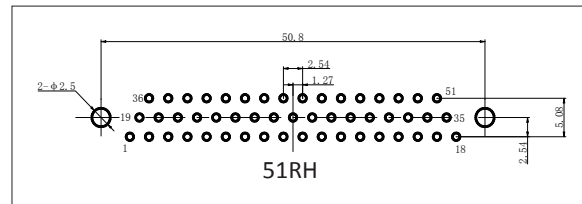
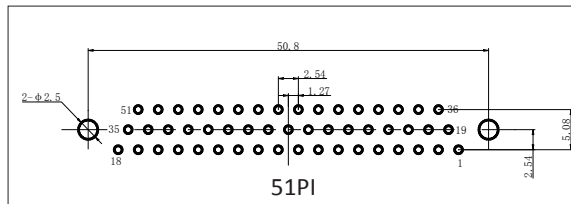
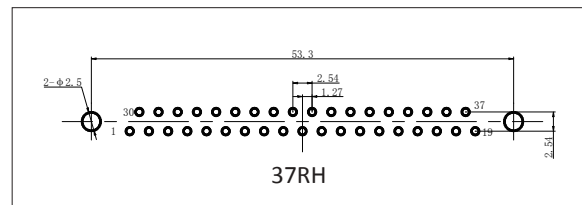
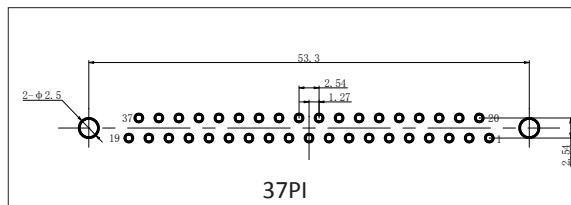
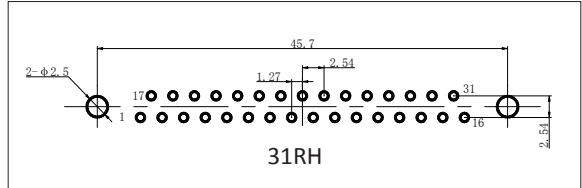
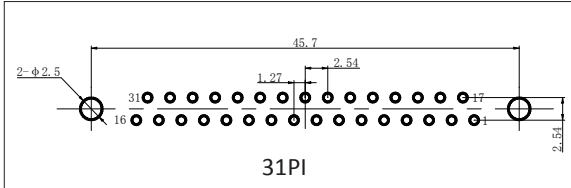
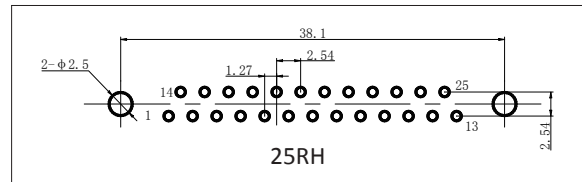
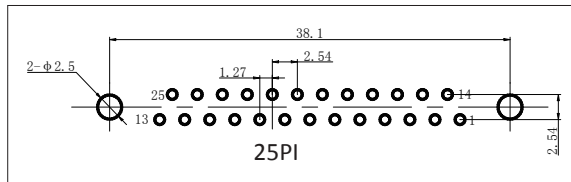
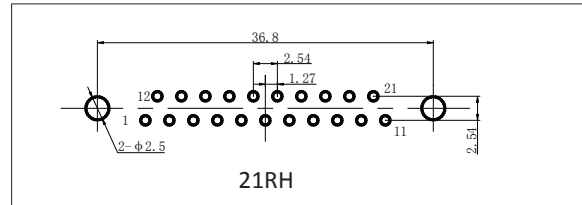
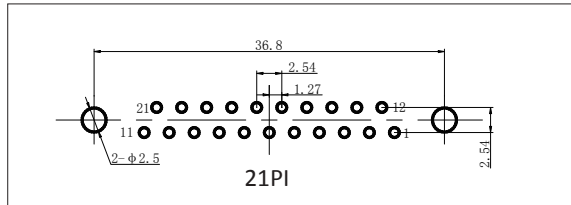
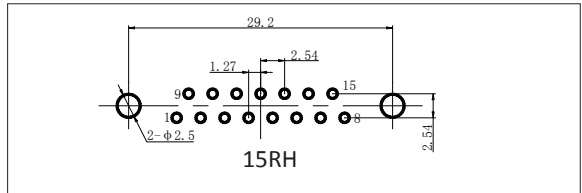
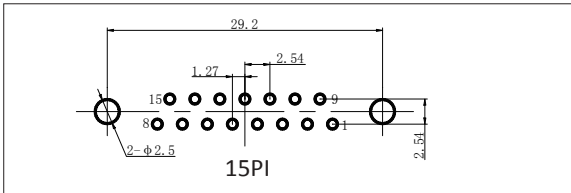
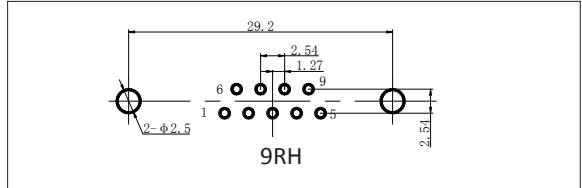
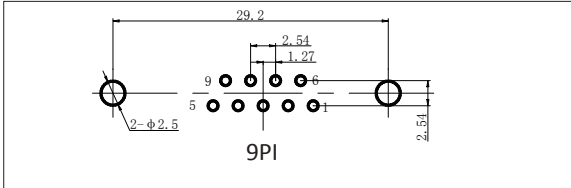
Contacts Nos	Outline dimension(in mm)						
	A	B	C	D	E	H	
						PI	RH
9	35.31	29.21	14.35	7.9	20.1	4.6	4.9
15	35.31	29.21	18.16	7.9	23.9	4.6	4.9
21	42.93	36.83	21.97	7.9	30.0	4.6	4.9
25	44.2	38.1	24.51	7.9	32.4	4.6	4.9
31	51.82	45.72	28.32	7.9	40.0	4.6	4.9
37	59.44	53.34	32.13	7.9	47.6	4.6	4.9
51	57.64	50.8	30.86	8.9	45.1	4.6	4.9



## Recommend the PCB layout

### PCB layout for plug

### PCB layout for receptacle



Notes: 1. all dimensions are in mm. 2. View top side of PCB board.

