



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.



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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

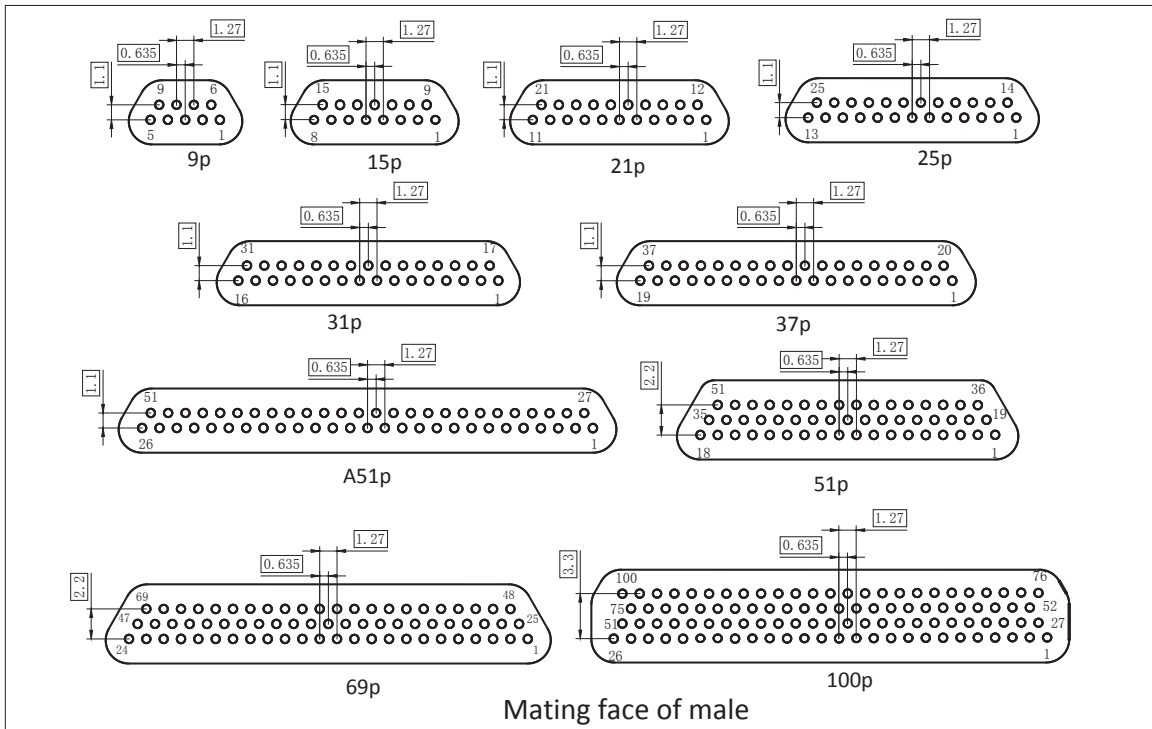
Performance	Marking	Rating value
Current rating(max)	I	3A (24#), 13A (16#)
Dielectric withstanding voltage (sea level)	U	800 Vr.m.x(50Hz)
Contact resistance	R	≤ 10mΩ (24#), ≤ 5 mΩ (16#)
Insulation resistance(500VDS, sea level)	R	≥ 5000MΩ

Environment performance

Performance	Rating value	Test method
Environment temperature range:	-55 ~ +125 °C	/
Durability	500 mating cycles	/
Vibration	10Hz ~ 2000Hz, 294m ² /s	EIA-364-28, test condition IV
Random vibration	Power spectral density 0.6G ² /Hz, root mean square value of total acceleration 28.4G	/
Shock	980m/s ² 、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 ⁵ Gy	/
Thermal vacuum outgassing	TML ≤ 1%, CVM ≤ 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

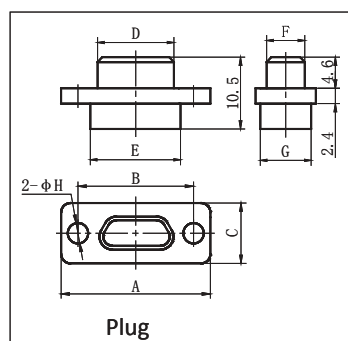
Product stereogram



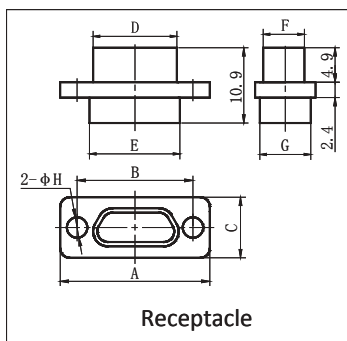
Plug

Receptacle

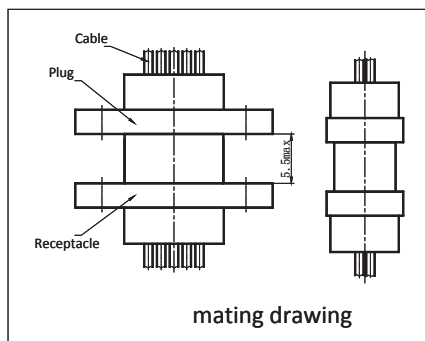
Outline Dimension



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

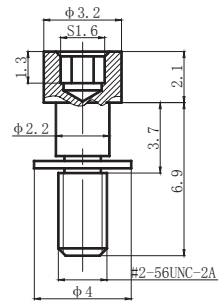
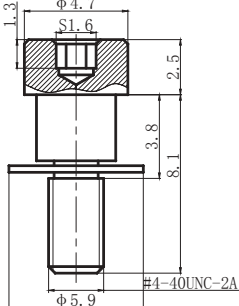
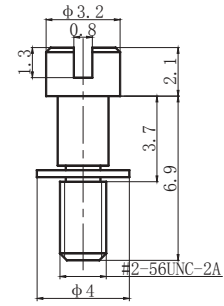
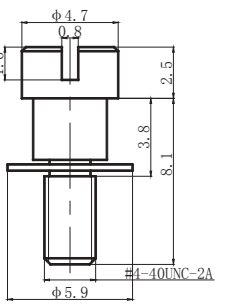
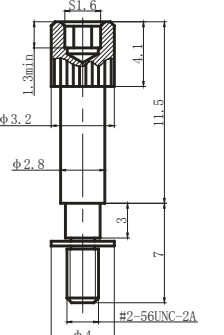
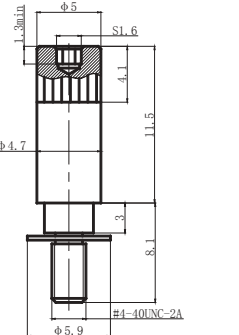
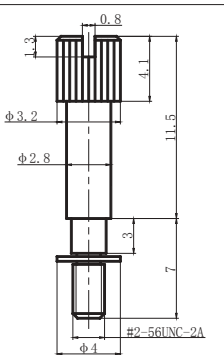
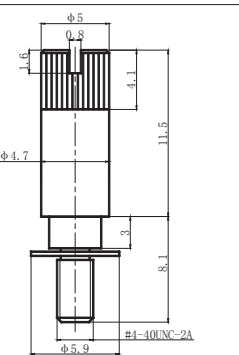


The mating locking hardware

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

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"> 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 		
B06	<ol style="list-style-type: none"> 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 		
B07	<ol style="list-style-type: none"> 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 		
B08	<ol style="list-style-type: none"> 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 		

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"> 1. Removable hardware. 2. Short jackscrew with a retainer ring. 3. Hex socket head 4. Used for connetors with AH, AJ type backshell. 		
B11	<ol style="list-style-type: none"> 1. Removable hardware. 2. Short jackscrew with a retainer ring. 3. Slot head 4. Used for connetors with AH, AJ type backshell. 		
B12	<ol style="list-style-type: none"> 1. Removable hardware. 2. Long jackscrew with a retainer ring. 3. Hex socket head 4. Used for connetors with AH, AJ type backshell. 		
B13	<ol style="list-style-type: none"> 1. Removable hardware. 2. Long jackscrew with a retainer ring. 3. Slot head 4. Used for connetors with AH, AJ type backshell. 		

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"> 1. Non removable hardware. 2. Short jackscrew with a retainer sleeve. 3. Hex socket head 		
S02	<ol style="list-style-type: none"> 1. Non removable hardware. 2. Short jackscrew with a retainer sleeve. 3. Slot socket head 		
S03	<ol style="list-style-type: none"> 1. Non removable hardware. 2. Long jackscrew with a retainer sleeve. 3. Hex socket head 		
S04	<ol style="list-style-type: none"> 1. Non removable hardware. 2. Long jackscrew with a retainer sleeve. 3. Slot socket head 		

Note: all dimensions are in mm.

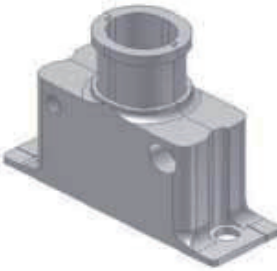
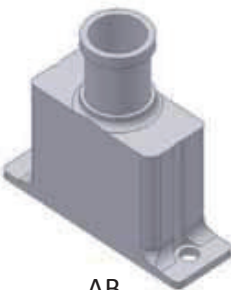
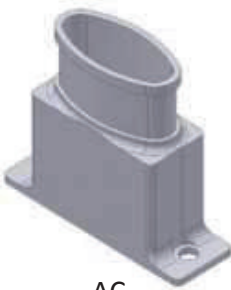
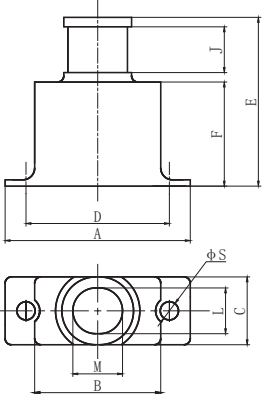
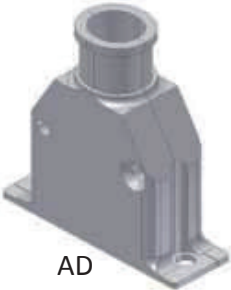
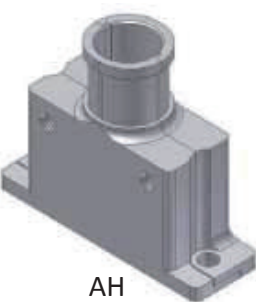
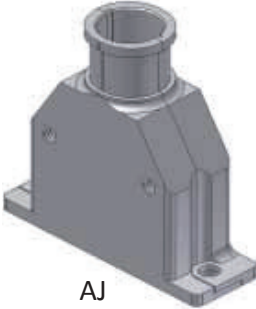
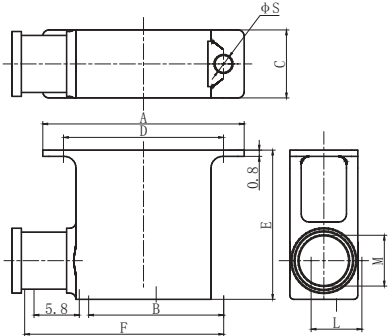
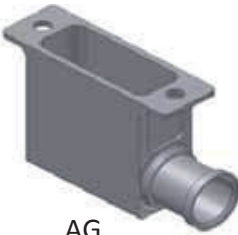


The mating locking hardware

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

Note: all dimensions are in mm.

Backshell

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

Notes: all dimensions are in mm.



Outline dimension of backshell

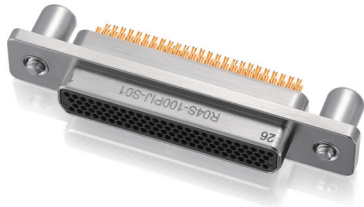
Part No.	Outline dimension(in mm)									
	A	B	C	D	E	F	J	φS	L	M
R04S-9-AA	19.6	12.1	8.7	14.3	21.4	13.2	5.8	2.31	-	4.7
R04S-15-AA	23.5	16	8.7	18.2	21.4	13.2	5.8	2.31	-	5.8
R04S-21-AA	27.3	19.8	8.7	22	21.4	13.2	5.8	2.31	-	6.5
R04S-25-AA	29.8	22.3	8.7	24.5	21.4	13.2	5.8	2.31	6.6	7.9
R04S-31-AA	33.6	26.1	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

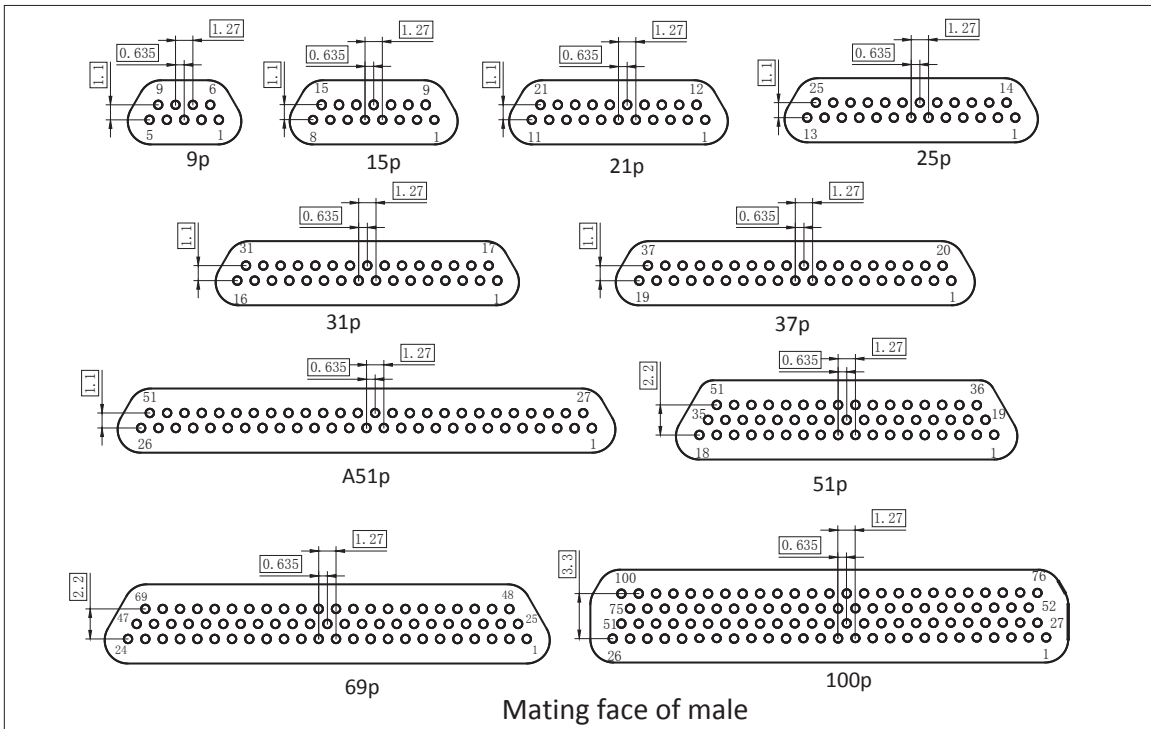
Performance	Marking	Rating value
Current rating(max)	I	3A (24#), 13A (16#)
Dielectric withstanding voltage (sea level)	U	800 Vr.m.x(50Hz)
Contact resistance	R	≤ 10mΩ (24#), ≤ 5 mΩ (16#)
Insulation resistance(500VDS, sea level)	R	≥ 5000MΩ

Environment performance

Performance	Rating value	Test method
Environment temperature range:	-55 ~ +125 °C	/
Durability	500 mating cycles	/
Vibration	10Hz ~ 2000Hz, 294m ² /s	EIA-364-28, test condition IV
Random vibration	Power spectral density 0.6G ² /Hz, root mean square value of total acceleration 28.4G	/
Shock	980m/s ² 、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 ⁵ Gy	/
Thermal vacuum outgassing	TML ≤ 1%, CVCM ≤ 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

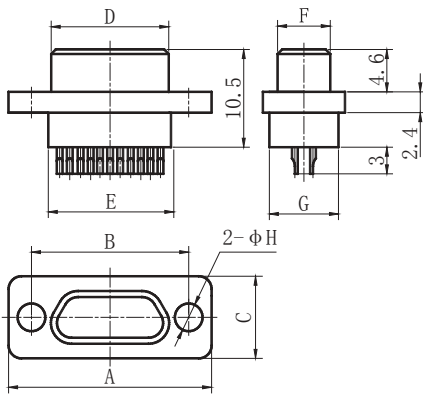


Plug

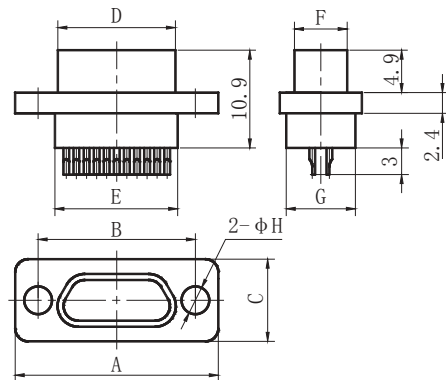


Receptacle

Outline Dimension



Plug for 9~A51pins



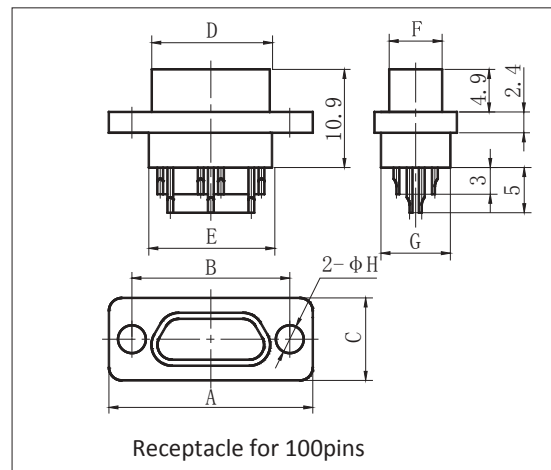
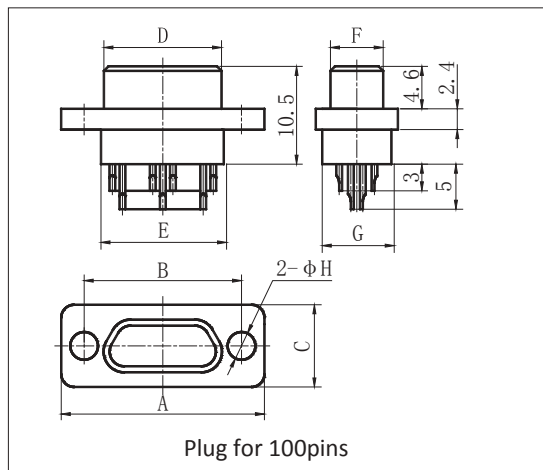
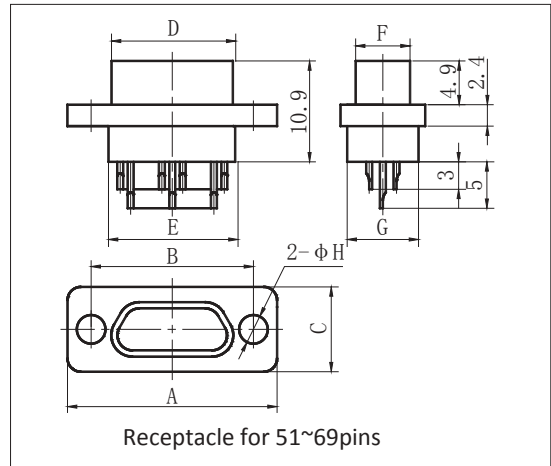
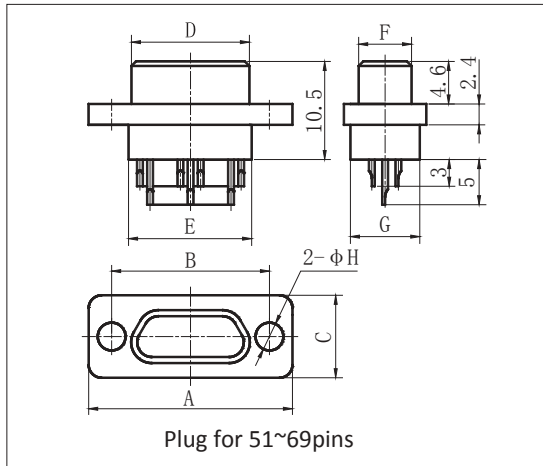
Receptacle for 9~A51pins

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

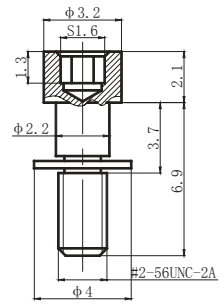
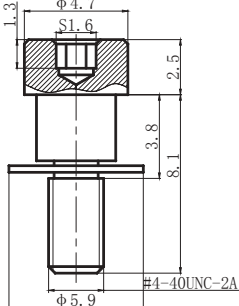
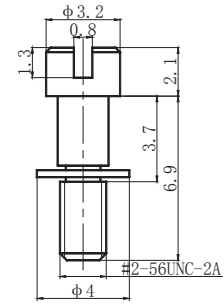
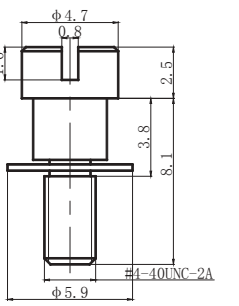
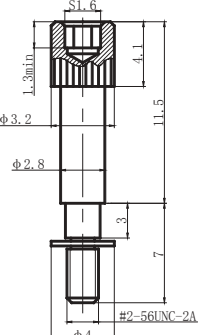
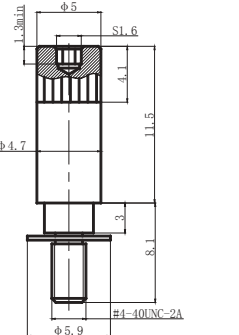
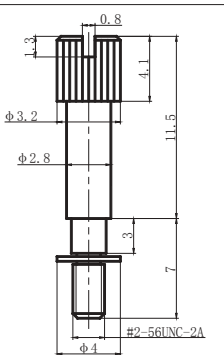
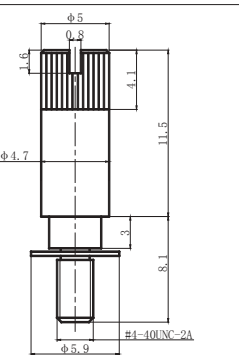


The mating locking hardware

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

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"> 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 		
B06	<ol style="list-style-type: none"> 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 		
B07	<ol style="list-style-type: none"> 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 		
B08	<ol style="list-style-type: none"> 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 		

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"> 1. Removable hardware. 2. Short jackscrew with a retainer ring. 3. Hex socket head 4. Used for connetors with AH, AJ type backshell. 		
B11	<ol style="list-style-type: none"> 1. Removable hardware. 2. Short jackscrew with a retainer ring. 3. Slot head 4. Used for connetors with AH, AJ type backshell. 		
B12	<ol style="list-style-type: none"> 1. Removable hardware. 2. Long jackscrew with a retainer ring. 3. Hex socket head 4. Used for connetors with AH, AJ type backshell. 		
B13	<ol style="list-style-type: none"> 1. Removable hardware. 2. Long jackscrew with a retainer ring. 3. Slot head 4. Used for connetors with AH, AJ type backshell. 		

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"> 1. Non removable hardware. 2. Short jackscrew with a retainer sleeve. 3. Hex socket head 		
S02	<ol style="list-style-type: none"> 1. Non removable hardware. 2. Short jackscrew with a retainer sleeve. 3. Slot socket head 		
S03	<ol style="list-style-type: none"> 1. Non removable hardware. 2. Long jackscrew with a retainer sleeve. 3. Hex socket head 		
S04	<ol style="list-style-type: none"> 1. Non removable hardware. 2. Long jackscrew with a retainer sleeve. 3. Slot socket head 		

Note: all dimensions are in mm.

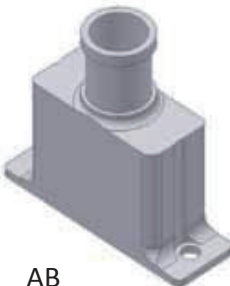
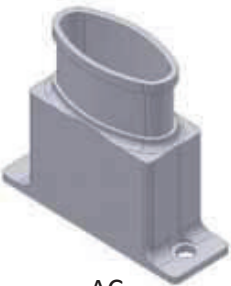
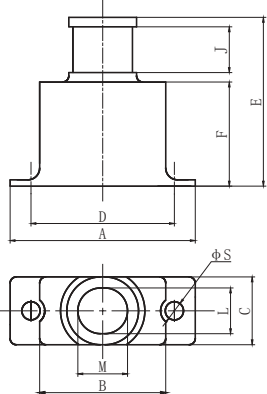
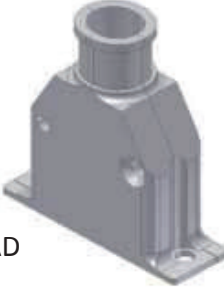
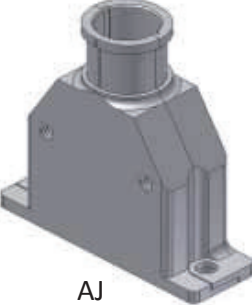
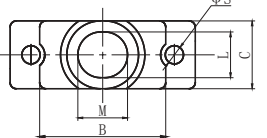
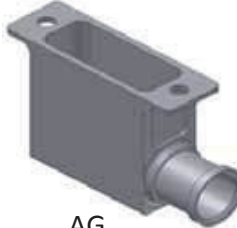
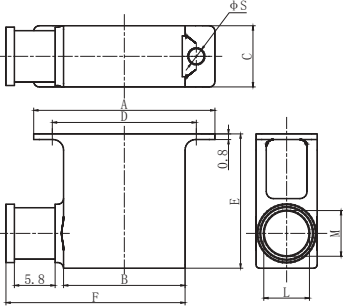


The mating locking hardware

Code	Feature	Outline dimension	
		for 9~69pins	for 100pins
N01	1. Hex head jackpost. 2. Used for front panel mounting. 3. The thickness of panel is not more than 2mm.		
N06	1. Hex head jackpost. 2. Used for connectors with backshell.		
N07	1. Hex head jackpost. 2. Used for front panel mounting. 3. The thickness of panel is not more than 5mm.		

Note: all dimensions are in mm.

Backshell

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

Notes: all dimensions are in mm.



Outline dimension of backshell

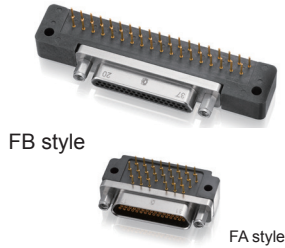
Part No.	Outline dimension(in mm)									
	A	B	C	D	E	F	J	φS	L	M
R04S-9-AB	19.6	11.2	8.7	14.3	21.4	13.2	5.8	2.31	-	4.7
R04S-15-AB	23.5	15	8.7	18.2	21.4	13.2	5.8	2.31	-	5.8
R04S-21-AB	27.3	18.8	8.7	22	21.4	13.2	5.8	2.31	-	6.5
R04S-25-AB	29.8	21.4	8.7	24.5	21.4	13.2	5.8	2.31	6.7	7.8
R04S-31-AB	33.6	25.2	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

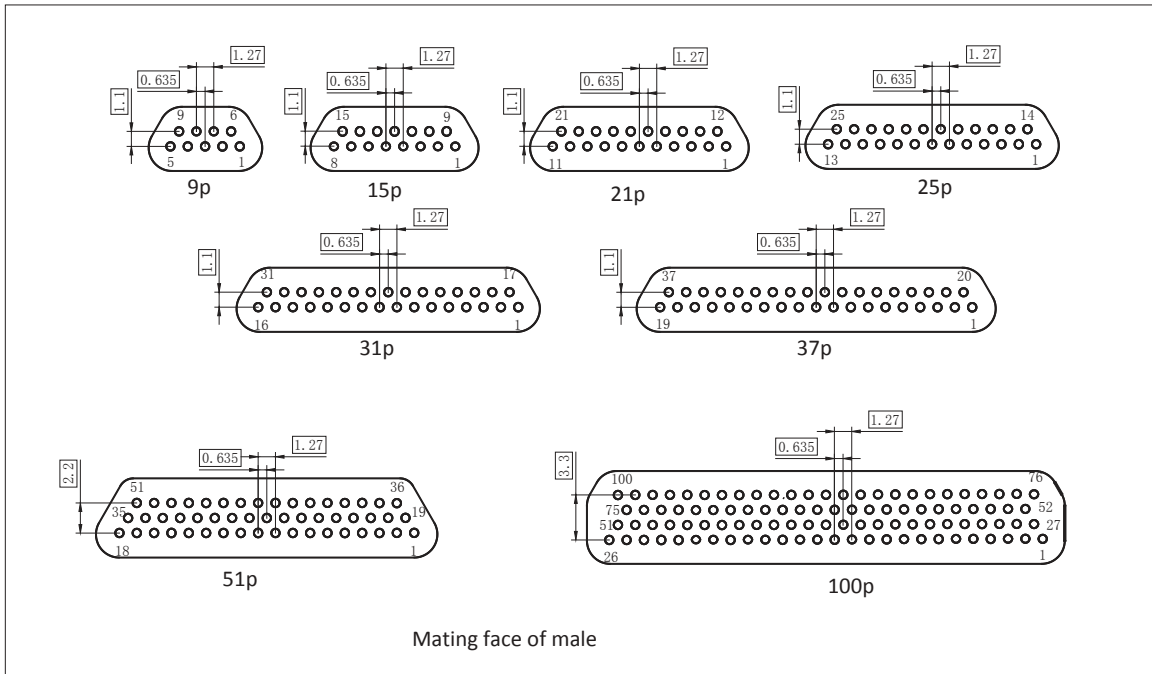
Performance	Marking	Rating value
Current rating(max)	I	3A(24#),13A(16#)
Dielectric withstanding voltage (sea level)	U	800 Vr.m.x(50Hz)
Contact resistance	R	$\leq 10\text{m}\Omega$ (24#), $\leq 5\text{m}\Omega$ (16#)
Insulation resistance(500VDS, sea level)	R	$\geq 5000\text{M}\Omega$

Environment performance

Performance	Rating value	Test method
Environment temperature range:	-55 ~ +125 °C	/
Durability	500 mating cycles	/
Vibration	10Hz ~ 2000Hz, 294m ² /s	EIA-364-28, test condition IV
Random vibration	Power spectral density 0.6G ² /Hz, root mean square value of total acceleration 28.4G	/
Shock	980m/s ² 、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 ³ Gy	/
Thermal vacuum outgassing	TML $\leq 1\%$, CVCM $\leq 0.1\%$	/
Magnetic permeability	200 gamma	/



Contact arrangements




How to order

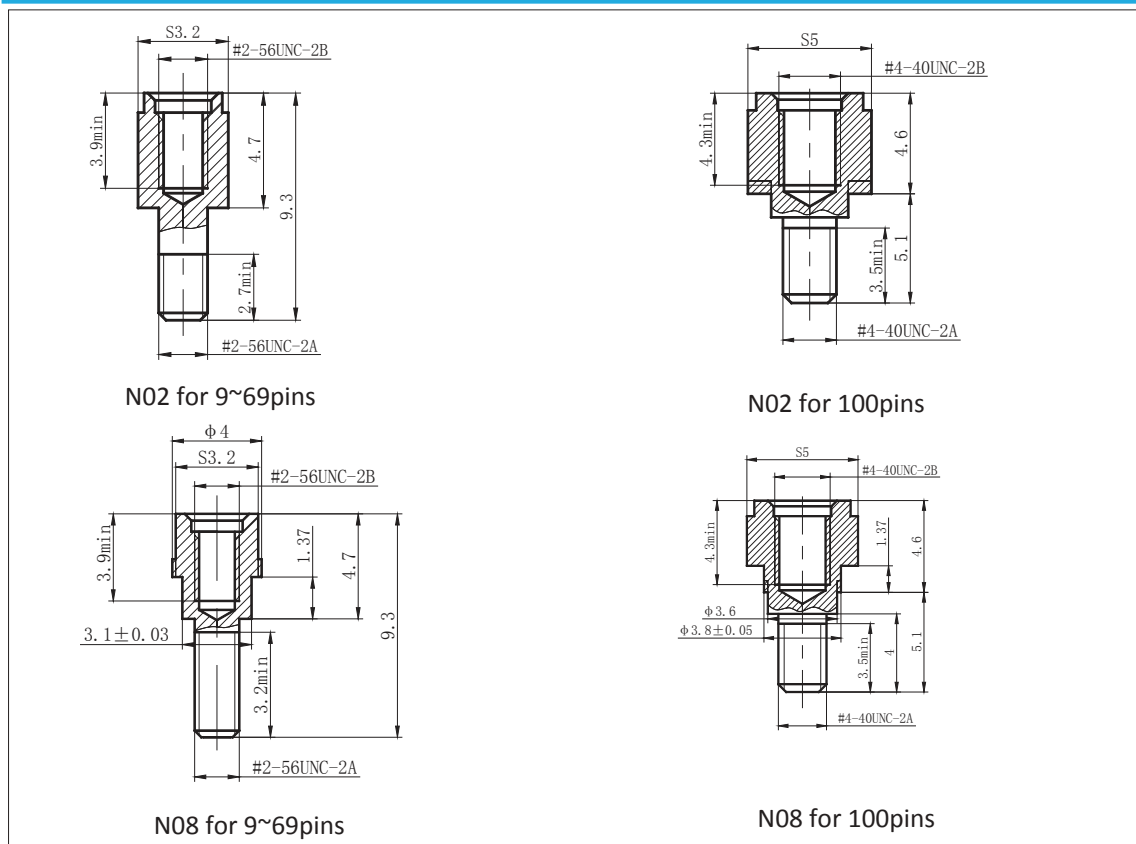
Sample part number:	R04S	-31	PI	FB	3	N02
Series:	R04S-Micro D connectors for space applications.					
Contact number:	9,15,21,25,31,37,51,100pins					
Contact type:	PI-pin in plug RH-socket in receptacle					
Right angle to PCB type:	FA style and the PCB layout is 2.54*2.54mm FB style and the PCB layout 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 ⁰ _{-0.10} 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.

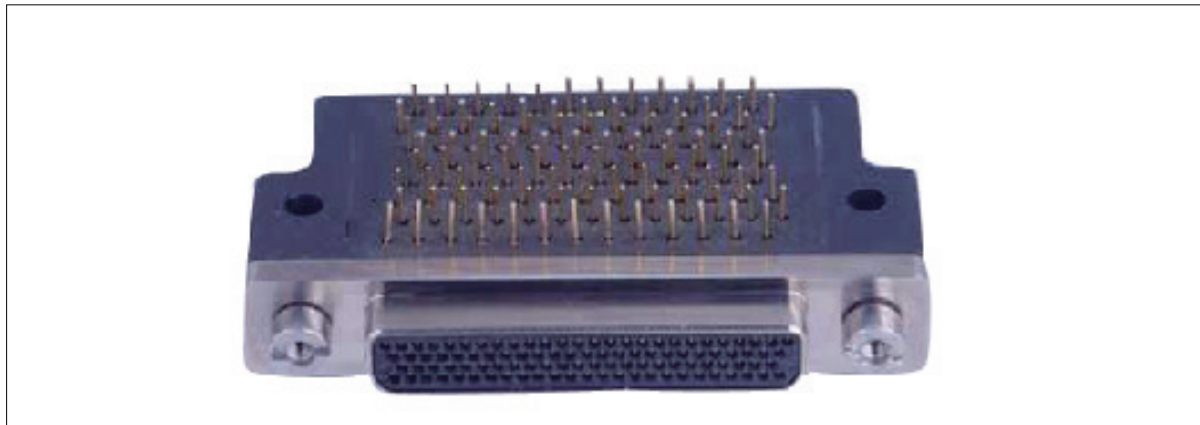


Space grade micro D connector

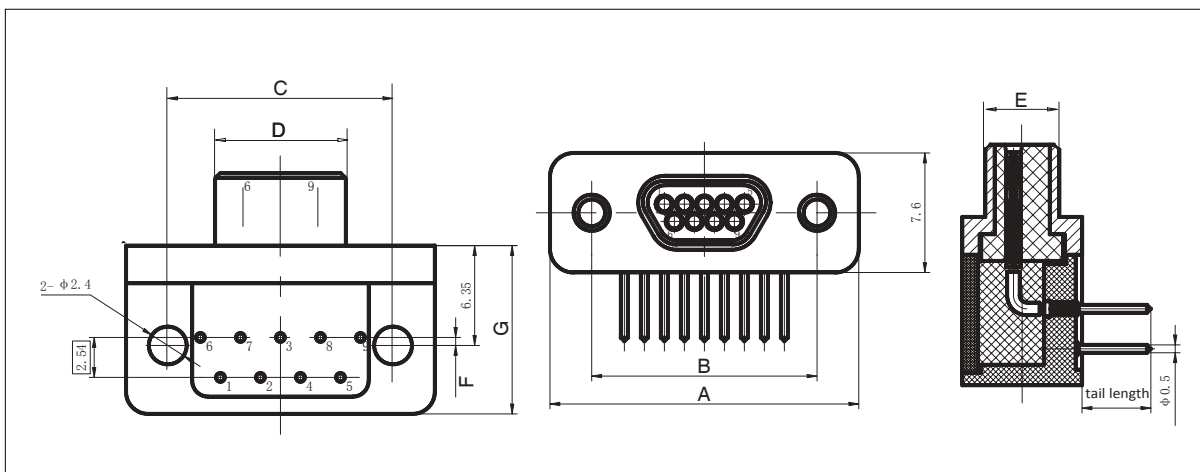
SUNKYE
www.sunkye.com

R04S series right angle to PCB connectors for FA style

Product stereogram



Outline dimension



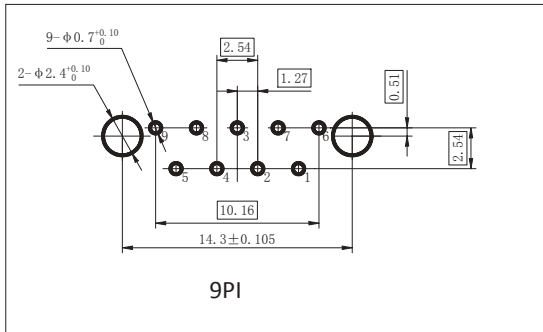
Contact Nos	A	B	C	D		E		F		G	
				PI	RH	PI	RH	PI	RH	PI	RH
9	19.6	14.3	14.3	8.4	10.16	4.7	6.1	0.51	0.51	10.7	10.7
15	23.5	18.2	18.2	12.3	14	4.7	6.1	3.05	3.05	10.7	10.7
21	27.3	22	22	16.1	17.8	4.7	6.1	3.05	3.05	10.7	10.7
25	29.8	24.5	24.5	18.6	20.3	4.7	6.1	3.05	3.05	10.7	10.7
31	33.6	28.3	28.3	22.4	24.12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

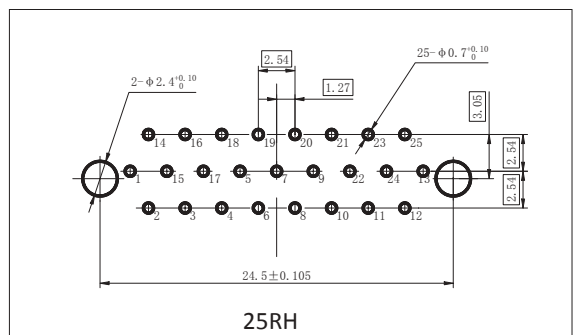
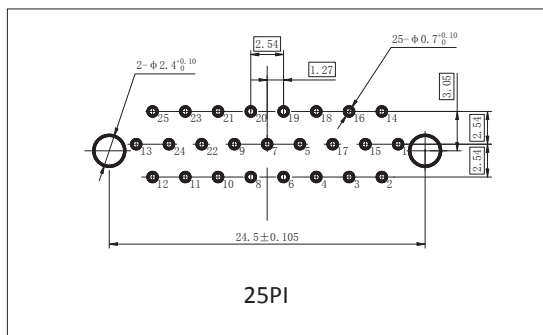
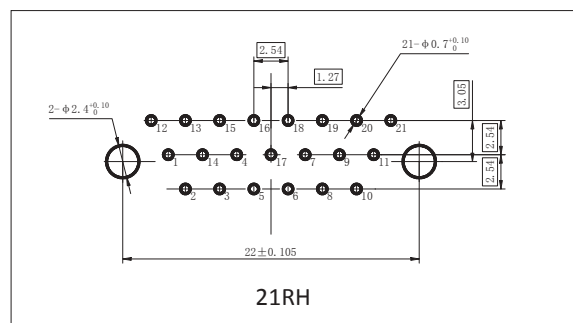
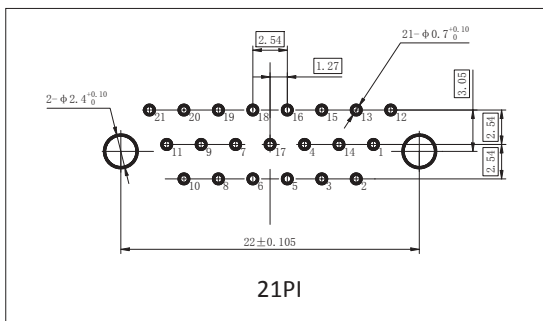
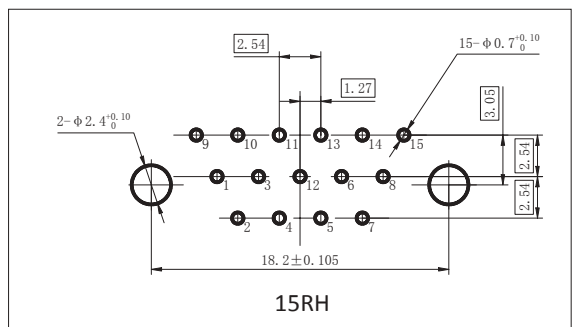
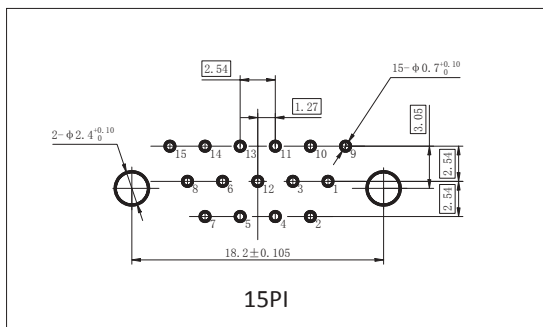
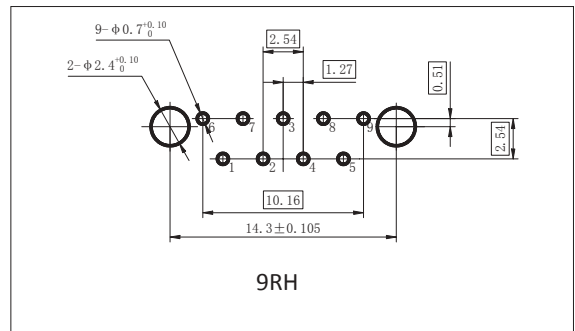


Recommend PCB layout for FA style

PCB layout for plug



PCB layout for receptacle



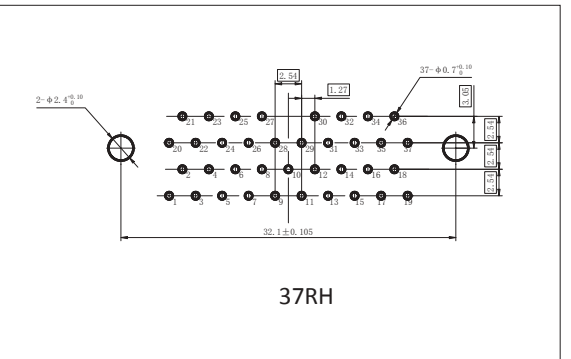
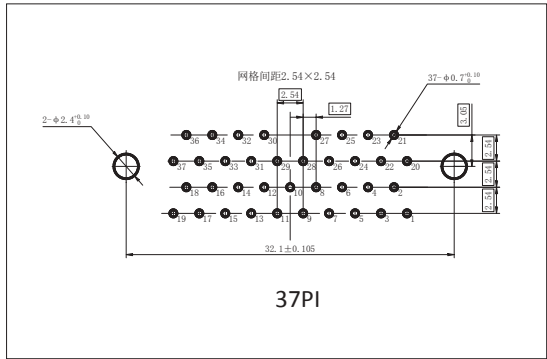
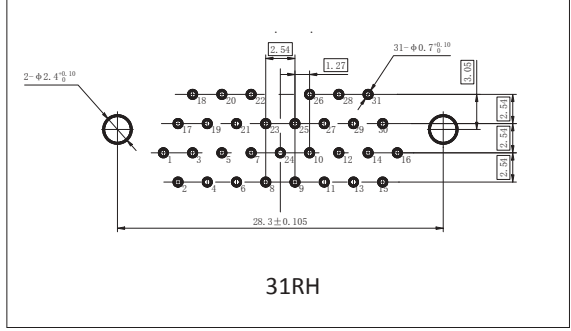
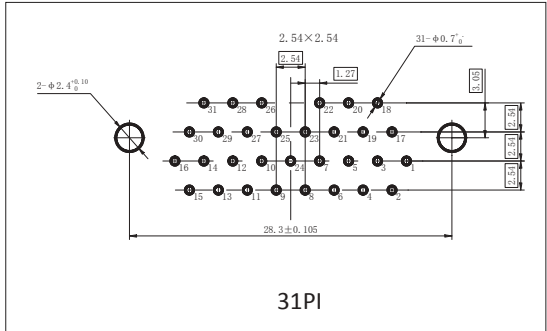
Notes: 1. all dimensions are in mm. 2.View top side of PCB board.



Recommend PCB layout for FA style

PCB layout for plug

PCB layout for receptacle

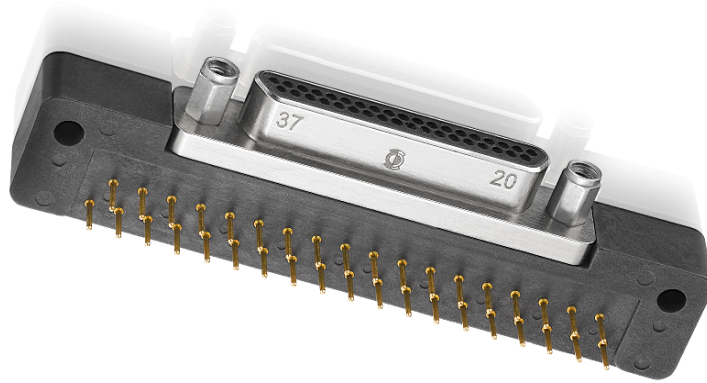


Notes: 1. all dimensions are in mm. 2.View top side of PCB board.

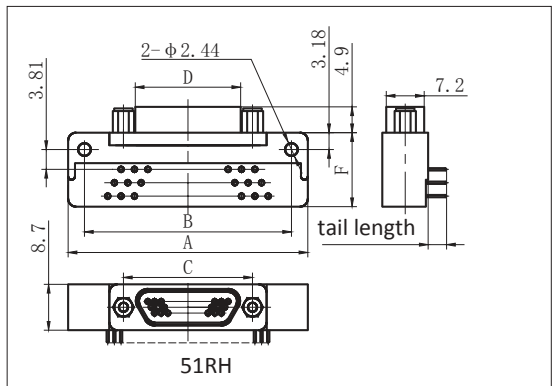
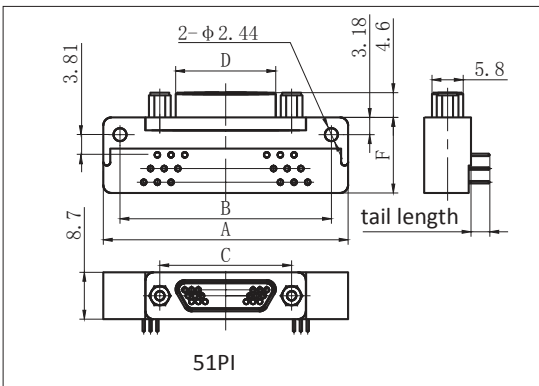
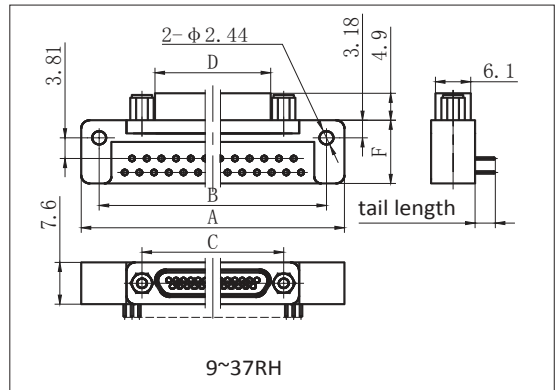
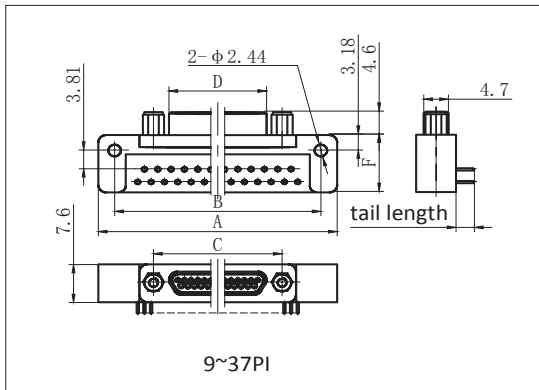


R04S series right angle to PCB connectors for FB style

Product stereogram



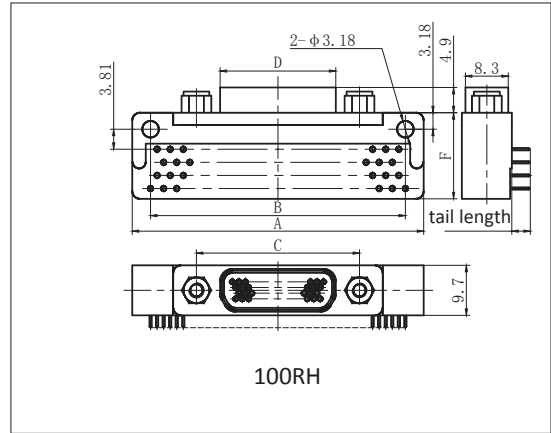
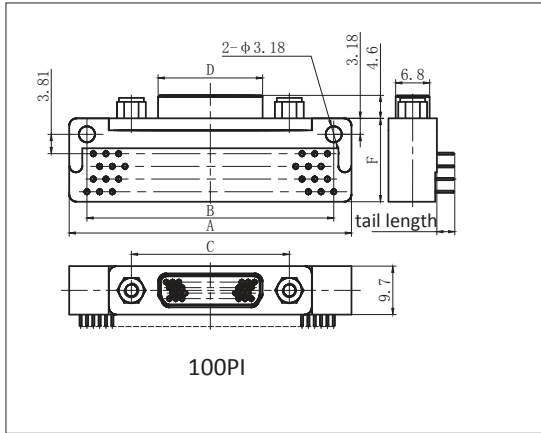
Outline Dimension



Notes: 1. all dimensions are in mm.



Outline Dimension

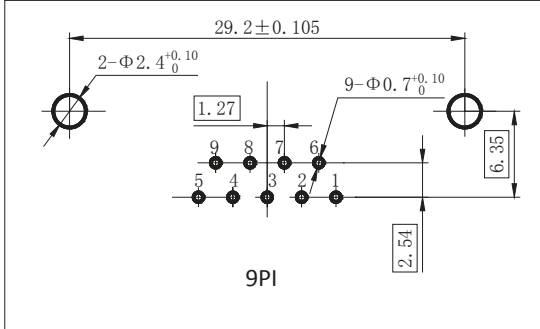


Contact Nos	Outline dimension(in mm)				
	A	B	C	D	F
9PI	35.2	29.2	14.3	8.4	11.5
15PI	39	33	18.2	12.3	11.5
21PI	42.8	36.8	22	16.1	11.5
25PI	45.4	39.4	24.5	18.6	11.5
31PI	51.7	45.7	28.3	22.4	11.5
37PI	59.3	53.3	32.1	26.2	11.5
51PI	47.6	40.6	30.9	25	14.3
100PI	70.5	63.5	45.7	35.1	16.8
9RH	35.2	29.2	14.3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

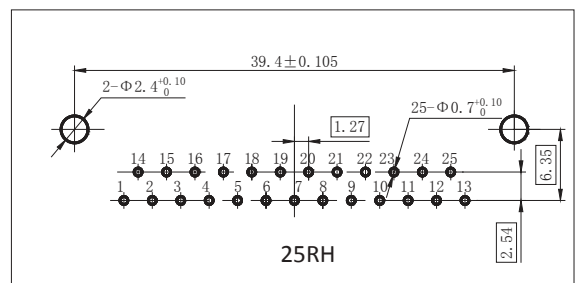
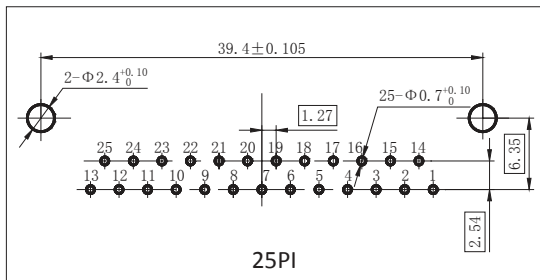
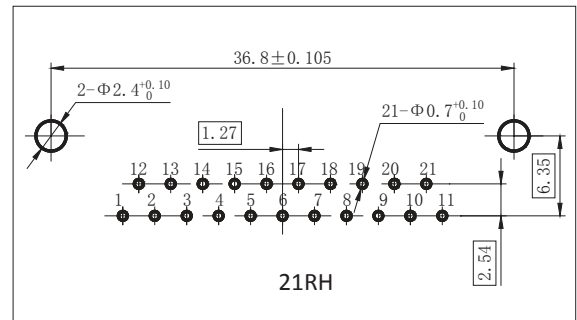
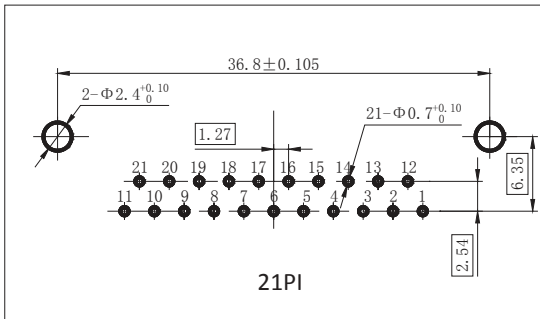
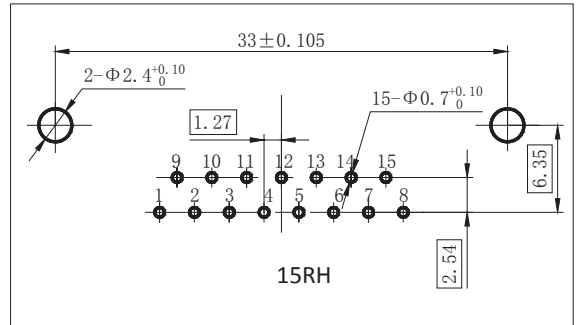
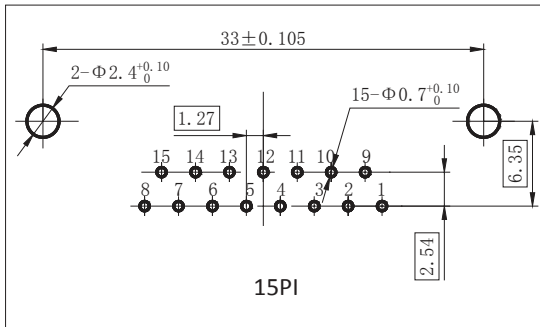
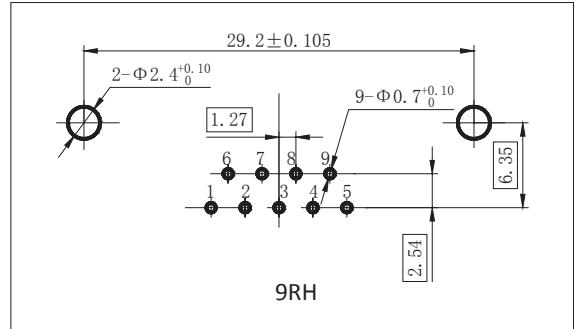


Recommend the PCB layout for FB style

PCB layout for plug



PCB layout for receptacle

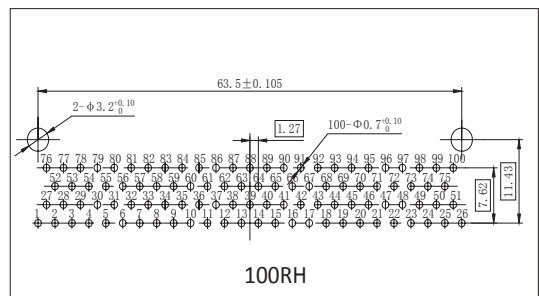
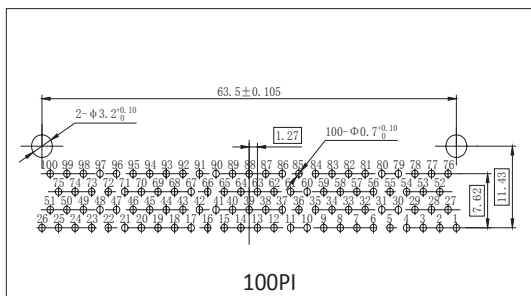
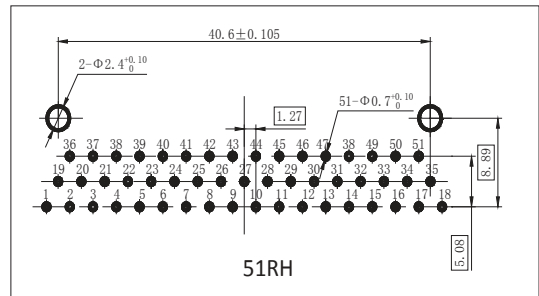
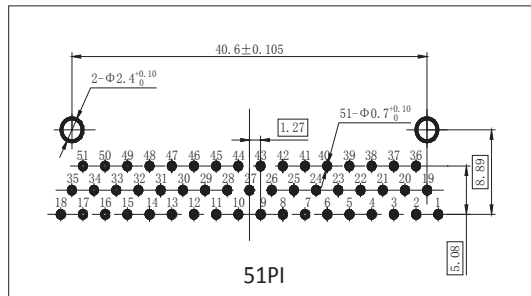
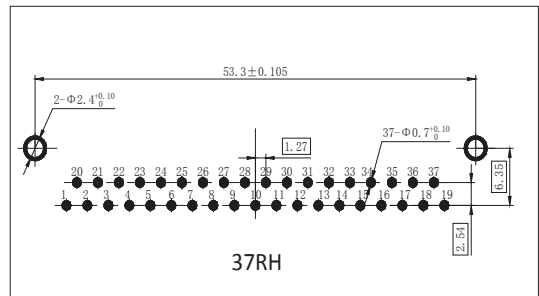
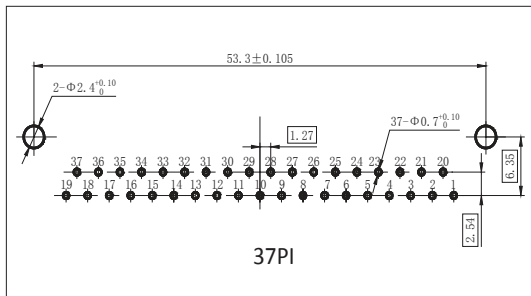
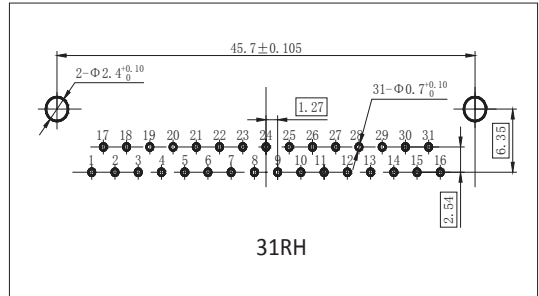
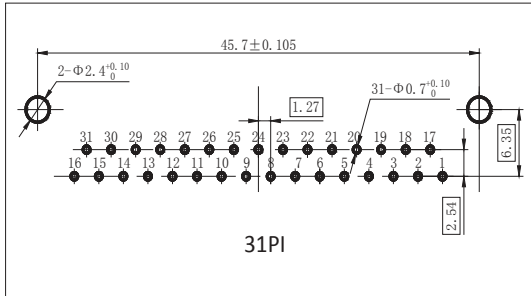


Notes: 1. all dimensions are in mm. 2.View top side of PCB board.

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

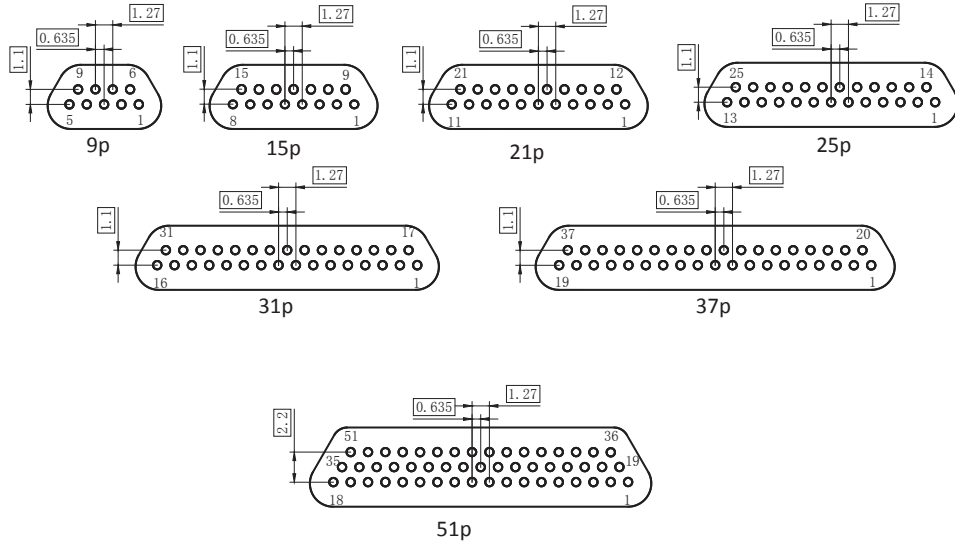
Performance	Marking	Rating value
Current rating(max)	I	3A (24#), 13A (16#)
Dielectric withstanding voltage (sea level)	U	800 Vr.m.x(50Hz)
Contact resistance	R	≤ 10mΩ (24#), ≤ 5 mΩ (16#)
Insulation resistance(500VDS, sea level)	R	≥ 5000MΩ

Environment performance

Performance	Rating value	Test method
Environment temperature range:	-55 ~ +125 °C	/
Durability	500 mating cycles	/
Vibration	10Hz ~ 2000Hz, 294m ² /s	EIA-364-28, test condition IV
Random vibration	Power spectral density 0.6G ² /Hz, root mean square value of total acceleration 28.4G	/
Shock	980m/s ² 、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 ⁵ 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.

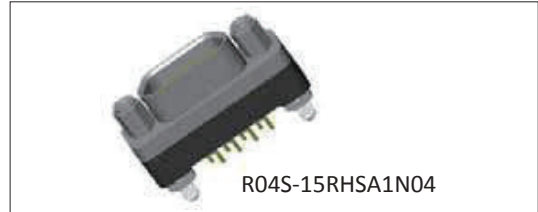
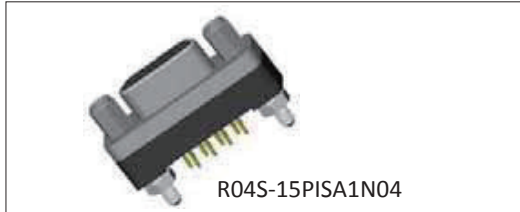
Tail length

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

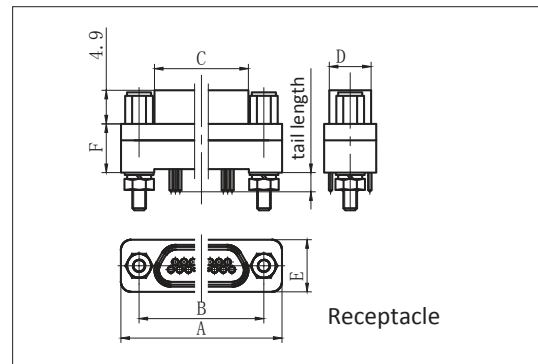
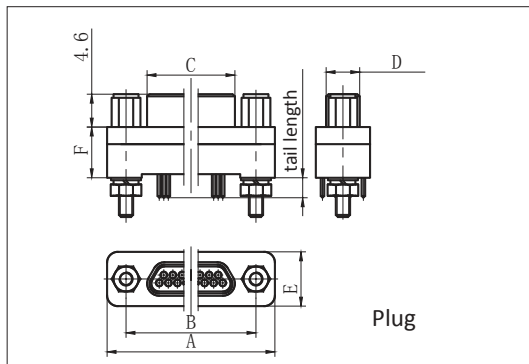
Notes: all dimensions are in mm.

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

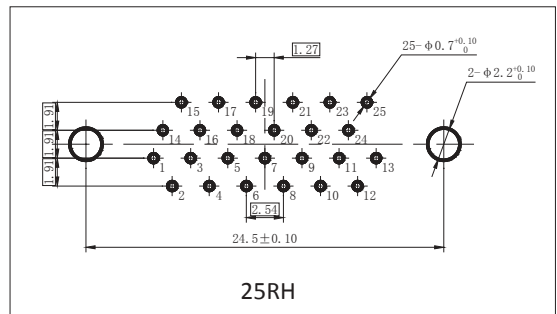
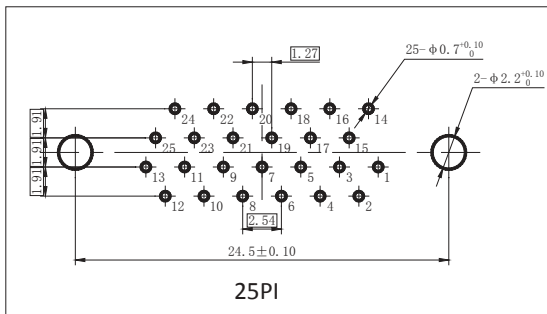
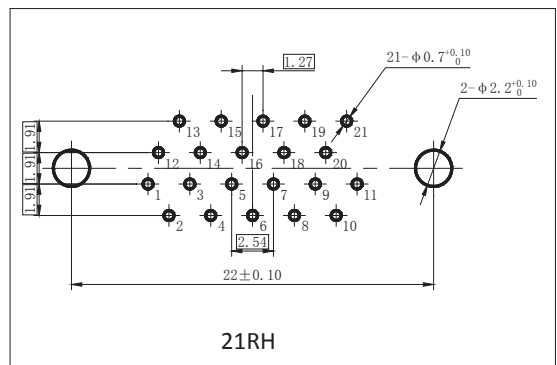
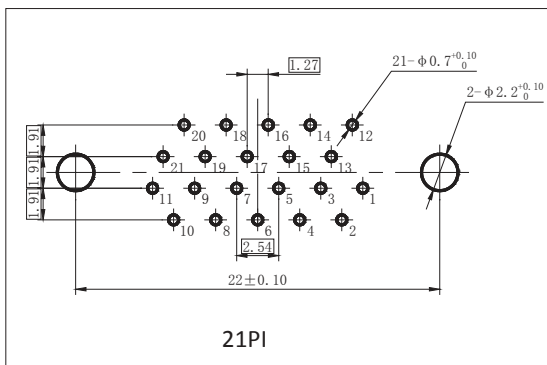
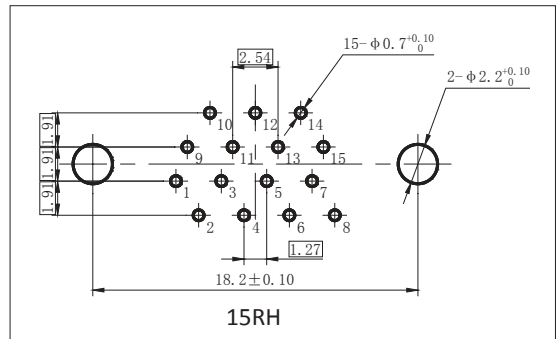
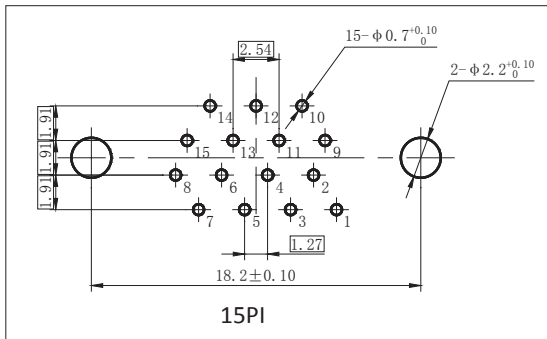
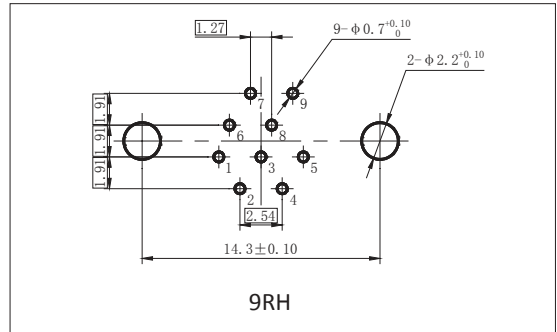
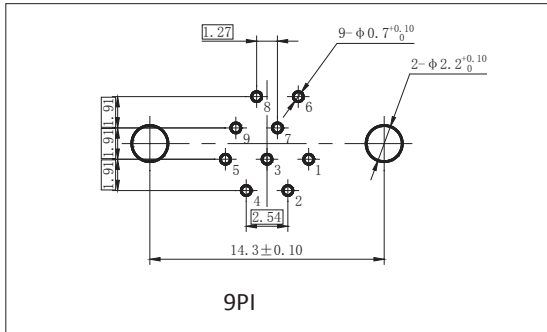
Notes: all dimensions are in mm.



Recommend the PCB layout

PCB layout for plug

PCB layout for receptacle

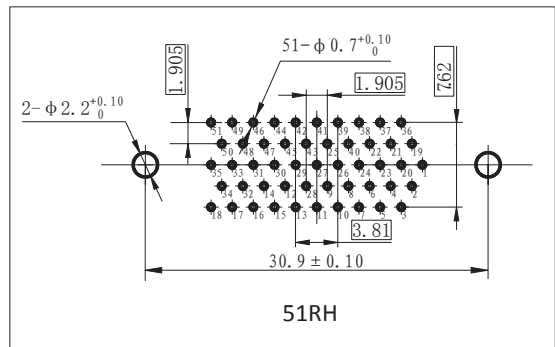
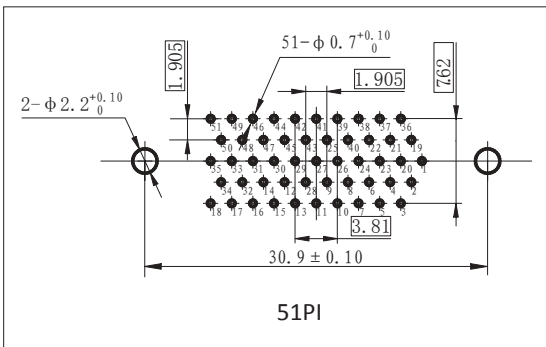
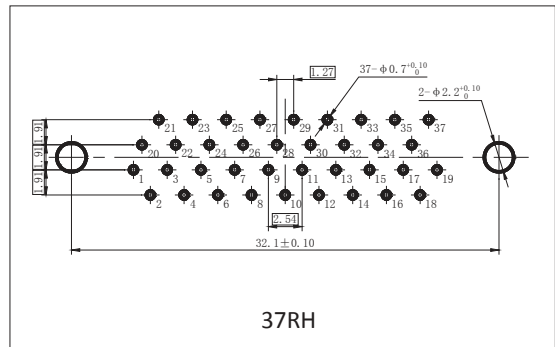
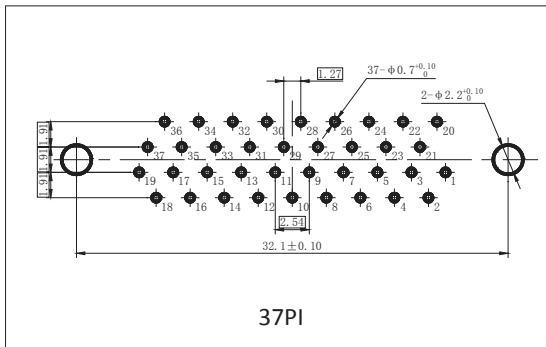
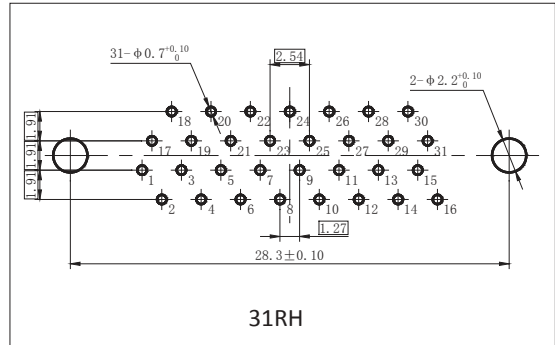
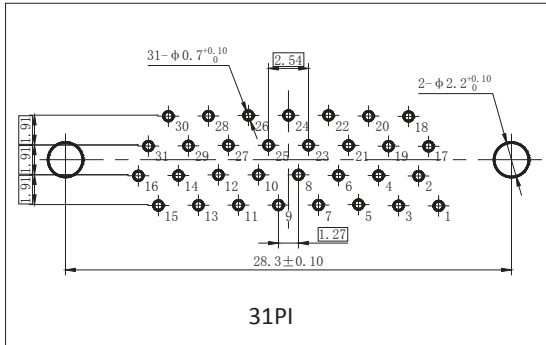


Notes: 1. all dimensions are in mm. 2. View top side of PCB board.

Recommend the PCB layout

■ PCB layout for plug

■ PCB layout for receptacle

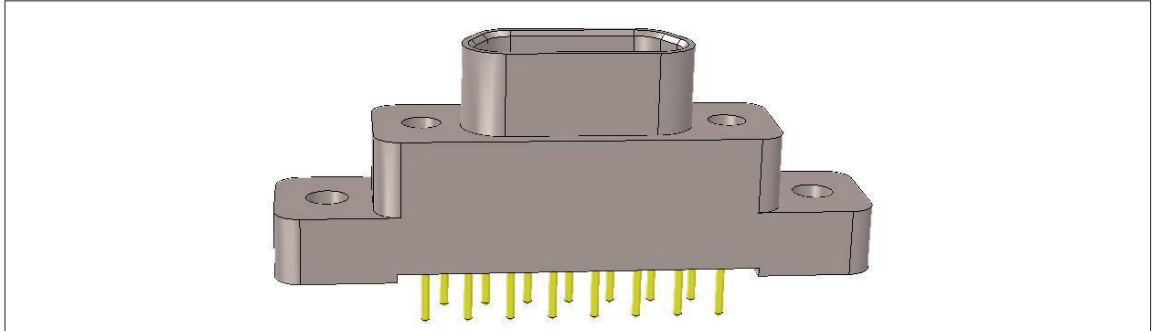


Notes: 1. all dimensions are in mm. 2. View top side of PCB board.

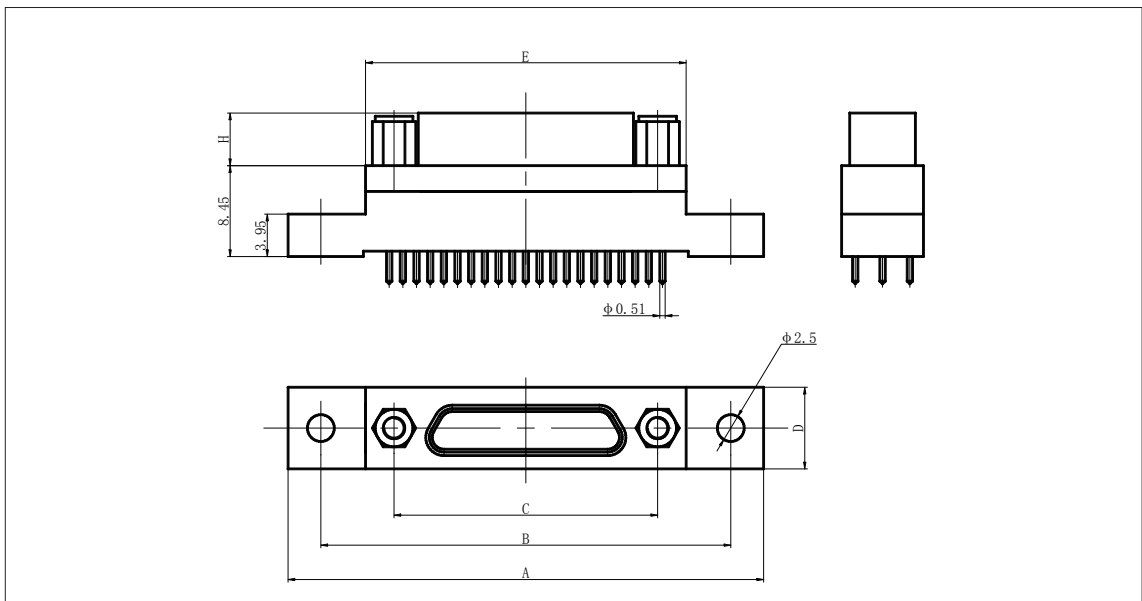


R04S series straight to PCB connectors for SB style

Product stereogram



Outline Dimension



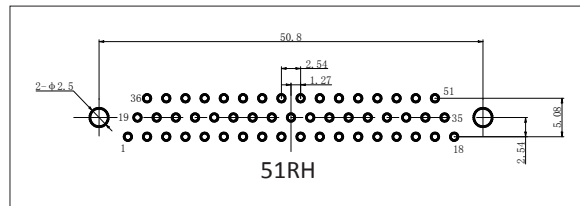
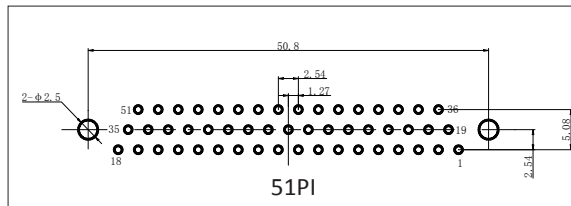
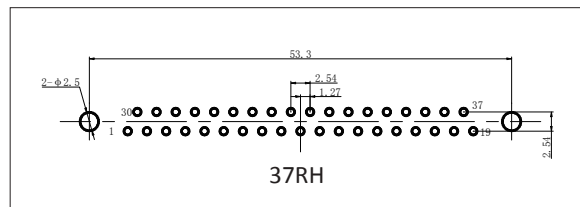
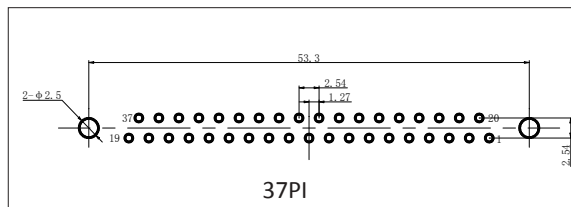
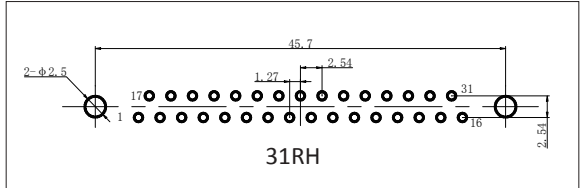
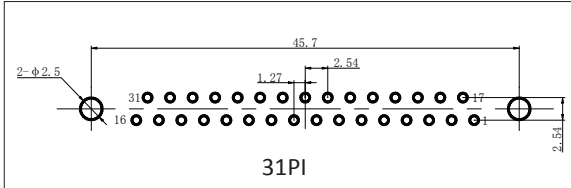
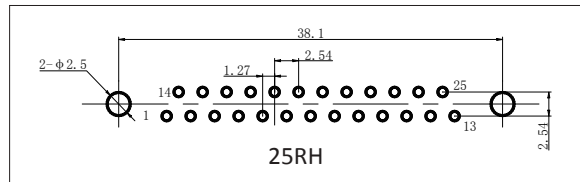
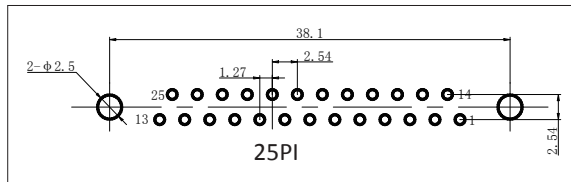
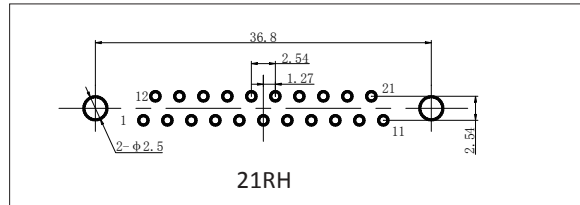
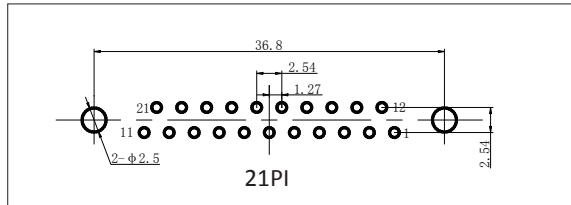
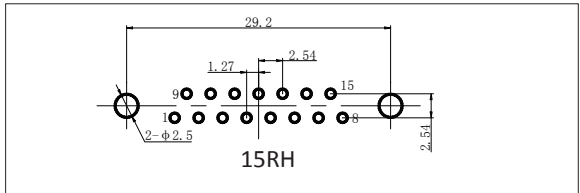
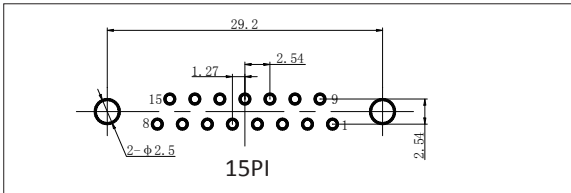
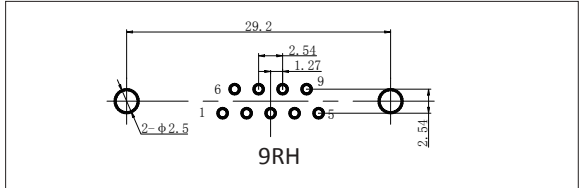
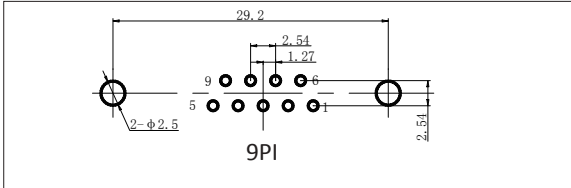
Contacts Nos	Outline dimension(in mm)						
	A	B	C	D	E	H	
						PI	RH
9	35.31	29.21	14.35	7.9	20.1	4.6	4.9
15	35.31	29.21	18.16	7.9	23.9	4.6	4.9
21	42.93	36.83	21.97	7.9	30.0	4.6	4.9
25	44.2	38.1	24.51	7.9	32.4	4.6	4.9
31	51.82	45.72	28.32	7.9	40.0	4.6	4.9
37	59.44	53.34	32.13	7.9	47.6	4.6	4.9
51	57.64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

