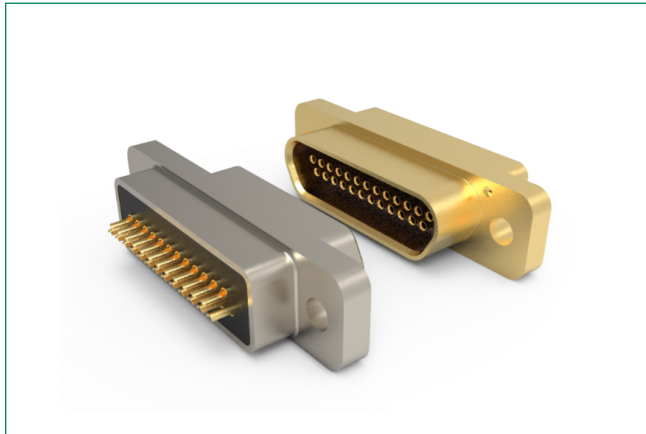


MDM Series

Micro D Connectors solder bucket termination
ESAQ - ESCC 3401/029 Certified



Type	Mating/ Unmating Force (N max)	Unmating Force (N min)	Max weight with contacts and without accessories nor wire (g)
Size 9	25	1.3	2.4
Size 15	42	2	3.3
Size 21	58	2.9	4.2
Size 25	70	3.5	4.8
Size 31	86	4.3	5.7
Size 37	103	5.1	6.7
Size 51	142	7.1	8.2
Size 51-2R	142	7.1	8.2

Add: 0,4 g for float mount (code F)

Add: 1 g for captive nut (code E)

Electrical & Mechanical Characteristics

Characteristics	Specifications	
Working voltage	150	Vrms max (at sea level)
	100	Vrms max (33000 m of altitude)
Rated current AWG 26	2.5	A max
Rated current AWG 28	1.5	A max
Contact resistance (Low level current)	6	mΩ max (10mA / 20 mV DC)
Contact resistance	5	mΩ max (Rated current)
Insulation resistance	5000	MΩ min (500 V DC)
Voltage proof	600	Vrms / 2mA (leakage current)
Contact retention in insert	22.25	N min (no axial move allowed)
Engagement force	1.667	N max per contact
Separation force	0.137	N min per contact
Mechanical endurance	500	Cycles (mating / unmating)
Temperature range	-55/+125	°C
Storage temperature	-55/+125	°C

*: For size 51 with 3 rows

Description

High performance microminiature connectors, ESA qualified for space applications. Meet performance and dimensional requirements of the ESCC 3401 specifications.

Compliant to ESCC specifications 3401/029.

Suitable for use in space applications:
Board to Board, Board to Cable, Cable to Cable.

Twist Pin contacts technology.

Sizes available : 9, 15, 21, 25, 31, 37, 51 ways and 51-2R

Accepted wires size : Insulated wire AWG 26 or AWG 28

Pitch between two contacts rows: 1.09 mm (.043")

Pitch between two horizontally adjacent contacts: 1.27 mm (.050")

Features & Benefits

- Compliant with ESA specifications
- High performance Micropin™ contact system: "Twist pin" spring male contact and tubular socket contact
- Solderable contacts
- Harnesses length flexibility
- Non-outgassing
- Low size connectors
- Low weight connectors

Applications

- Space equipment
- Satellites harnesses and payloads

Quality Level

ESA : ESCC 3401 (Flying model).

Qualification reviewed every two years.

Process to use it

- Wire stripping.
- Wire soldering onto contacts.
- Wire cable installed by the end user.

Connector options

Optional captive nuts or float mounting.

Packaging

Individual ESD plastic bag.

Traceability and documentation according to ESA/ESCC specifications.

Each MDM connector is sold with a dust cap.

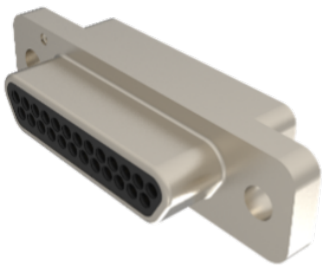
Each MDM socket connector is sold with an interfacial seal.

MDM Series

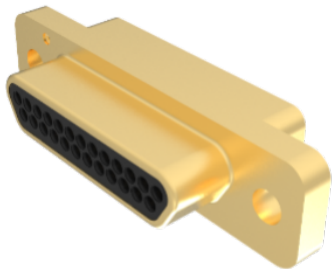
Micro D Connectors solder bucket termination
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How to order connector

Our easy build-a-connector concept allows you to mix and match options to create the MDM, solder type, you need. To order, select desired option from each category and place it in the appropriate box.

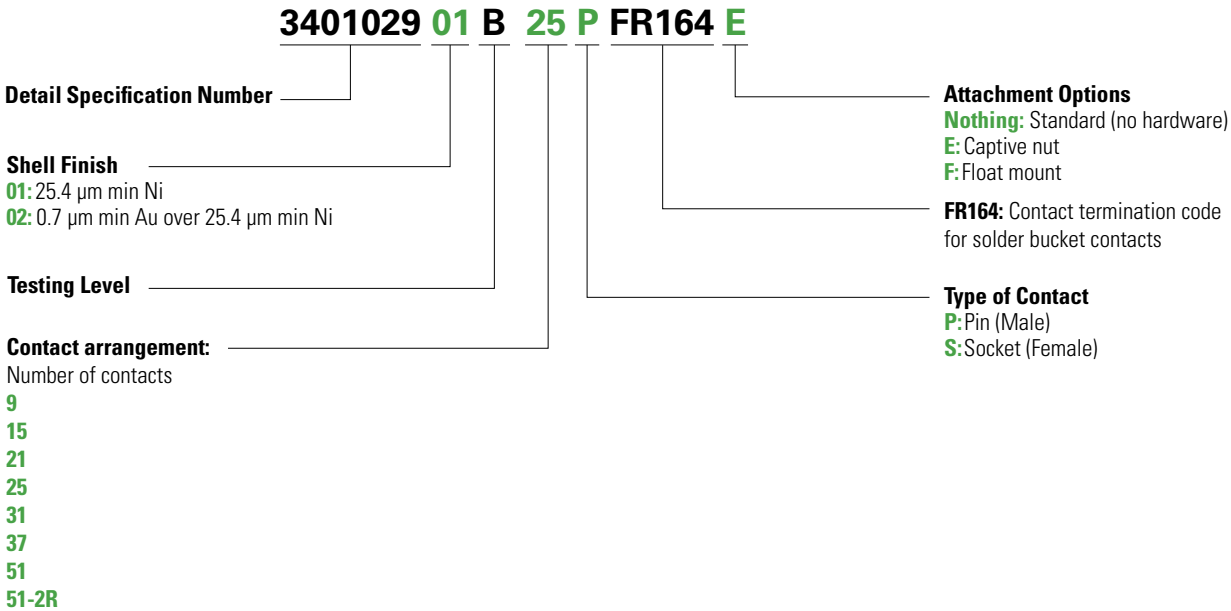


Pin Connector with shell Nickel Plating



Pin Connector with shell Gold plated

ESCC specification:



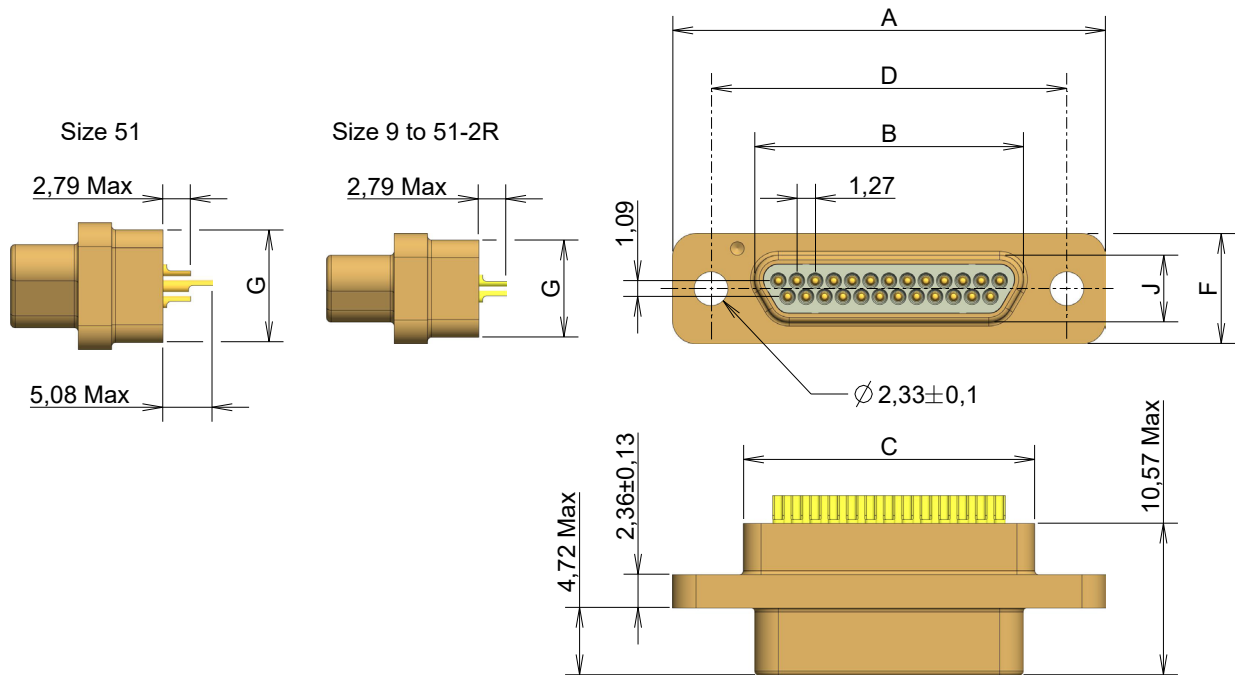
Materials & Finishes

Components	Materials	Finishes
Shell	Alluminum alloy	01: 25.4 µm min Electroless Nickel 02: 0.7 µm min Gold over 25.4 µm min Electroless Nickel
Insulator	LCP	UL 94-V0, Glass-filled, Black color
Female contacts	Copper alloy	1.27 µm min Gold over Copper
Male contacts	Copper alloy	1.27 µm min Gold over Copper
Accessories (E & F)	Stainless steel	Passivated
Interfacial Seal	Fluorosilicone elastomer	Pink color
Dust cap	Polyethylene	Black color, antistatic
Encapsulant	Epoxy	Black color
Screwlocks	Stainless steel	Passivated

MDM Series

Micro D Connectors solder bucket termination
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Pin connector dimensions

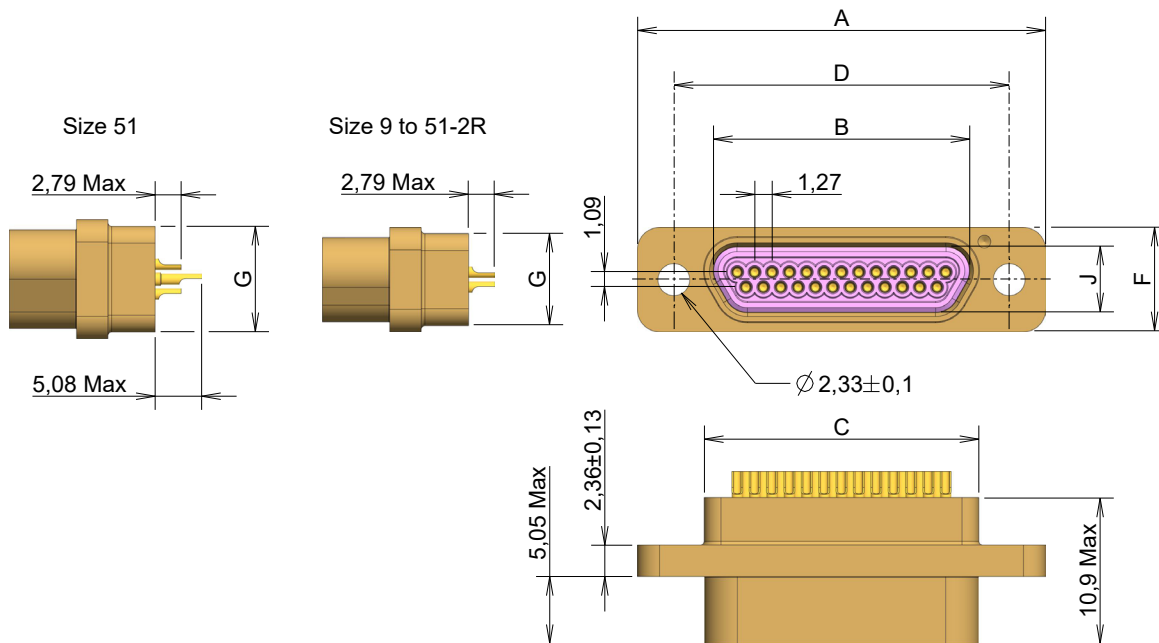


Shell Size	A ± 0.25	B ± 0.1	C ± 0.24	D ± 0.13	F ± 0.22	G ± 0.17	J max
9P	19.69	8.38	9.92	14.35	7.60	6.69	4.69
15P	23.50	12.19	13.73	18.16	7.60	6.69	4.69
21P	27.31	16.00	17.54	21.97	7.60	6.69	4.69
25P	29.85	18.54	20.08	24.51	7.60	6.69	4.69
31P	33.66	22.35	23.89	28.32	7.60	6.69	4.69
37P	37.47	26.16	27.70	32.13	7.60	6.69	4.69
51P	36.20	24.89	26.43	30.86	8.70	7.70	5.79
51P-2R	46.36	35.05	36.59	41.02	7.60	6.69	4.69

MDM Series

Micro D Connectors solder bucket termination
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Socket connector dimensions

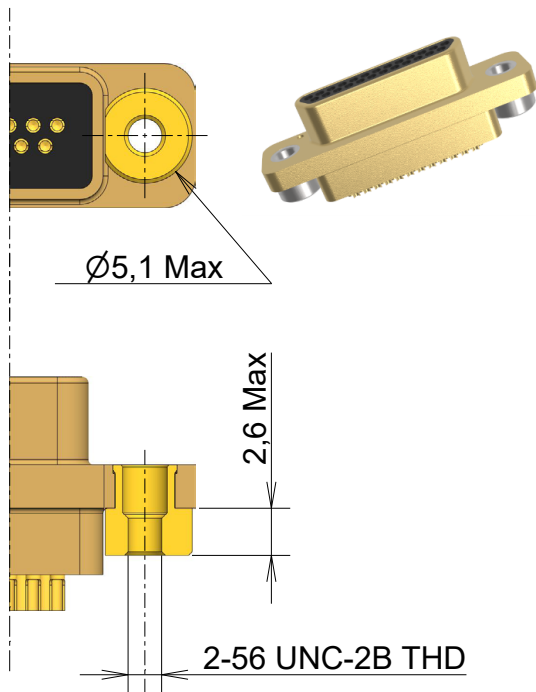


Shell Size	A ±0.25	B min	C ±0.24	D ±0.13	F ±0.22	G ±0.17	J min
9S	19.69	8.49	9.92	14.35	7.60	6.69	4.70
15S	23.50	12.30	13.73	18.16	7.60	6.69	4.70
21S	27.31	16.11	17.54	21.97	7.60	6.69	4.70
25S	29.85	18.65	20.08	24.51	7.60	6.69	4.70
31S	33.66	22.46	23.89	28.32	7.60	6.69	4.70
37S	37.47	26.27	27.70	32.13	7.60	6.69	4.70
51S	36.20	25.00	26.43	30.86	8.70	7.70	5.80
51S-2R	46.36	35.16	36.59	41.02	7.60	6.69	4.70

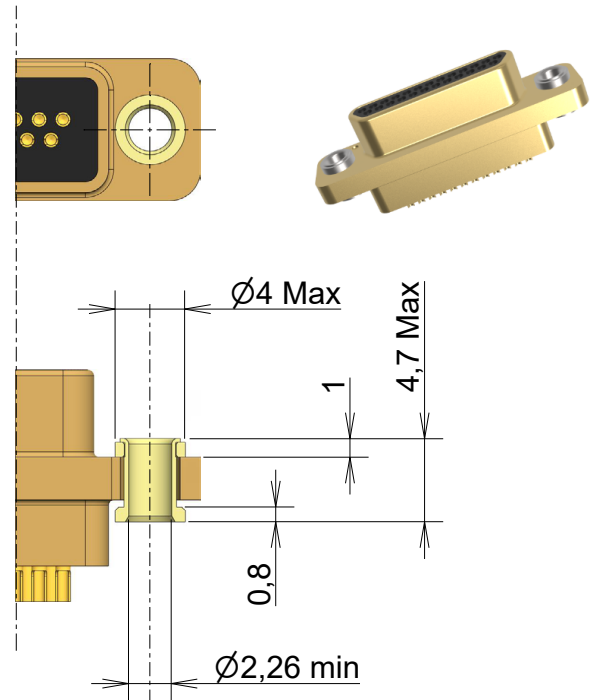
MDM Series

Micro D Connectors solder bucket termination
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Captive nut (Option E)



Floating mount (Option F)



Allowable float	(mm)
Lateral	0.40
Axial	0.40

Recommended instructions

■ Recommended wires:

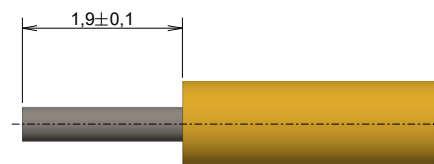
- 3901 013 01 B : PTFE insulated wire AWG 28
- 3901 013 02 B : PTFE insulated wire AWG 26
- 3901 002 61 B : Polyimide insulated wire AWG 28
- 3901 002 56 B : Polyimide Insulated wire AWG 26

■ Wire weight:

- 3901/013 01B : 1.80 g / m
- 3901/013 02B : 2.30 g / m
- 3901/002 61B : 1.23 g / m
- 3901/002 56B : 1.93 g / m

■ Wire stripping process:

- Cut the wires to the desired length.
- Strip wire insulation as beside illustration.
- Reject the broken or frayed wires.



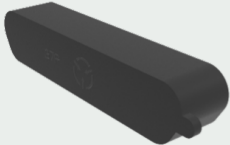


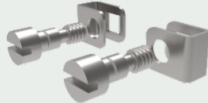
■ Wire soldering process:

- Insert the stripped wire into the solder bucket of the contact.
- Solder without excess or lack of tin.

MDM Series

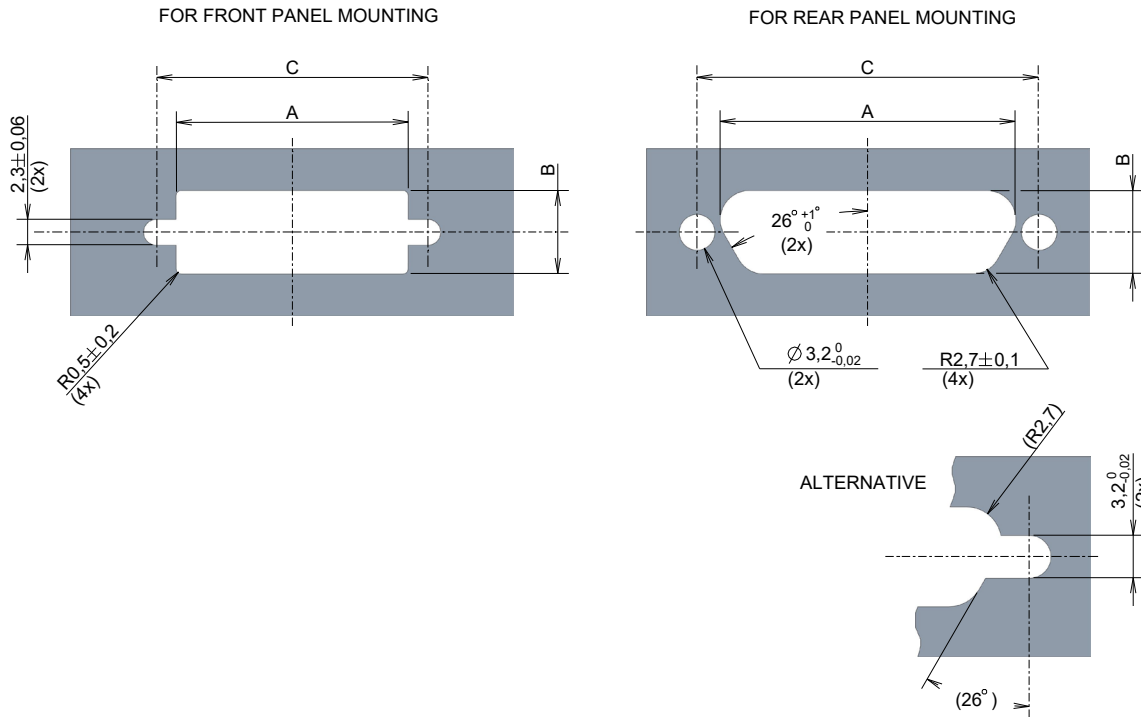
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Accessories

Dust cap (if additional need)	Size	Description	P/N
	9 P	MDM-DUSTCAP-9P-FR022	C115288-6927
	9 S	MDM-DUSTCAP-9S-FR022	C115288-6928
	15 P	MDM-DUSTCAP-15P-FR022	C115288-6929
	15 S	MDM-DUSTCAP-15S-FR022	C115288-6930
	21 P	MDM-DUSTCAP-21P-FR022	C115288-6931
	21 S	MDM-DUSTCAP-21S-FR022	C115288-6932
	25 P	MDM-DUSTCAP-25P-FR022	C115288-6933
	25 S	MDM-DUSTCAP-25S-FR022	C115288-6934
	31 P	MDM-DUSTCAP-31P-FR022	C115288-6935
	31 S	MDM-DUSTCAP-31S-FR022	C115288-6936
	37 P	MDM-DUSTCAP-37P-FR022	C115288-6937
	37 S	MDM-DUSTCAP-37S-FR022	C115288-6938
	51 P	MDM-DUSTCAP-51P-FR022	C115288-6939
	51 S	MDM-DUSTCAP-51S-FR022	C115288-6940
	51-2R P	MDM-DUSTCAP-51-2R-P-FR022	C115288-6947
	51-2R S	MDM-DUSTCAP-51-2R-S-FR022	C115288-6948
Female screwlocks for front panel mounting (To be ordered separately)		ESCC description	P/N
	Weight for one pair: 1.32 g max	340103208B	C115366-9219C
Female screwlocks for rear panel mounting (To be ordered separately)		Panel thickness	ESCC description
	Weight for one pair: 1.20 g max	0.7 < Thickness < 1.1	340103223B
		1.1 < Thickness < 1.5	340103224B
		1.5 < Thickness < 2.0	340103209B
		2.0 < Thickness < 2.4	340103225B
		2.4 < Thickness < 2.8	340103226B
Male screwlocks (To be ordered separately)		ESCC description	P/N
	Weight for one pair: 0.88 g max	340103207B	C115366-9218C

MDM Series
 Micro D Connectors solder bucket termination
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Panel cutouts



Front panel mounting			
Shell Size	A ±0.05	B ±0.05	C ±0.1
9	10.56	7.33	14.35
15	14.37	7.33	18.16
21	18.18	7.33	21.97
25	20.72	7.33	24.51
31	24.53	7.33	28.32
37	28.34	7.33	32.13
51	27.07	8.35	30.86
51-2R	37.23	7.33	41.02

Rear panel mounting			
Shell Size	A ±0.05	B ±0.05	C ±0.1
9	10.56	6.77	14.35
15	14.37	6.77	18.16
21	18.18	6.77	21.97
25	20.72	6.77	24.51
31	24.53	6.77	28.32
37	28.34	6.77	32.13
51	27.07	7.86	30.86
51-2R	37.23	6.77	41.02

MDM Series

Micro D Connectors solder bucket termination
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Connectors Description and Part Numbers

Shell plating	Contact type	Number of contacts	Attachment options					
			Standard connector		Connector with captive nut (E)		Connector with floating mount (Y)	
			ESCC description	P/N	ESCC description	P/N	ESCC description	P/N
Nickel plated	Pin	9	340102901B 9PFR164	C115366-9124C	340102901B 9PFR164E	C115366-9984C	340102901B 9PFR164F	C115366-9272C
		15	340102901B 15PFR164	C115366-9126C	340102901B 15PFR164E	C115366-9986C	340102901B 15PFR164F	C115366-9274C
		21	340102901B 21PFR164	C115366-9128C	340102901B 21PFR164E	C115366-9988C	340102901B 21PFR164F	C115366-9276C
		25	340102901B 25PFR164	C115366-9130C	340102901B 25PFR164E	C115366-9990C	340102901B 25PFR164F	C115366-9278C
		31	340102901B 31PFR164	C115366-9132C	340102901B 31PFR164E	C115366-9992C	340102901B 31PFR164F	C115366-9280C
		37	340102901B 37PFR164	C115366-9134C	340102901B 37PFR164E	C115366-9994C	340102901B 37PFR164F	C115366-9282C
		51	340102901B 51PFR164	C115366-9136C	340102901B 51PFR164E	C115366-9996C	340102901B 51PFR164F	C115366-9284C
		51-2R	340102901B 51P-2RFR164	C115366-1610C	340102901B 51P-2RFR164E	C115366-1612C	340102901B 51P-2RFR164F	C115366-1614C
	Socket	9	340102901B 9SFR164	C115366-9125C	340102901B 9SFR164E	C115366-9985C	340102901B 9SFR164F	C115366-9273C
		15	340102901B 15SFR164	C115366-9127C	340102901B 15SFR164E	C115366-9987C	340102901B 15SFR164F	C115366-9275C
		21	340102901B 21SFR164	C115366-9129C	340102901B 21SFR164E	C115366-9989C	340102901B 21SFR164F	C115366-9277C
		25	340102901B 25SFR164	C115366-9131C	340102901B 25SFR164E	C115366-9991C	340102901B 25SFR164F	C115366-9279C
		31	340102901B 31SFR164	C115366-9133C	340102901B 31SFR164E	C115366-9993C	340102901B 31SFR164F	C115366-9281C
		37	340102901B 37SFR164	C115366-9135C	340102901B 37SFR164E	C115366-9995C	340102901B 37SFR164F	C115366-9283C
		51	340102901B 51SFR164	C115366-9137C	340102901B 51SFR164E	C115366-9997C	340102901B 51SFR164F	C115366-9285C
		51-2R	340102901B 51S-2RFR164	C115366-1611C	340102901B 51S-2RFR164E	C115366-1613C	340102901B 51S-2RFR164F	C115366-1615C
Gold plated	Pin	9	340102902B 9PFR164	C115366-8568C	340102902B 9PFR164E	C115366-9271C	340102902B 9PFR164F	C115366-9286C
		15	340102902B 15PFR164	C115366-8566C	340102902B 15PFR164E	C115366-9230C	340102902B 15PFR164F	C115366-9288C
		21	340102902B 21PFR164	C115366-8568C	340102902B 21PFR164E	C115366-9232C	340102902B 21PFR164F	C115366-9290C
		25	340102902B 25PFR164	C115366-8560C	340102902B 25PFR164E	C115366-9234C	340102902B 25PFR164F	C115366-9292C
		31	340102902B 31PFR164	C115366-8562C	340102902B 31PFR164E	C115366-9236C	340102902B 31PFR164F	C115366-9294C
		37	340102902B 37PFR164	C115366-8564C	340102902B 37PFR164E	C115366-9238C	340102902B 37PFR164F	C115366-9296C
		51	340102902B 51PFR164	C115366-8566C	340102902B 51PFR164E	C115366-9240C	340102902B 51PFR164F	C115366-9298C
		51-2R	340102902B 51P-2RFR164	C115366-1616C	340102902B 51P-2RFR164E	C115366-1618C	340102902B 51P-2RFR164F	C115366-1620C
	Socket	9	340102902B 9SFR164	C115366-8569C	340102902B 9SFR164E	C115366-9229C	340102902B 9SFR164F	C115366-9287C
		15	340102902B 15SFR164	C115366-8557C	340102902B 15SFR164E	C115366-9231C	340102902B 15SFR164F	C115366-9289C
		21	340102902B 21SFR164	C115366-8559C	340102902B 21SFR164E	C115366-9233C	340102902B 21SFR164F	C115366-9291C
		25	340102902B 25SFR164	C115366-8561C	340102902B 25SFR164E	C115366-9235C	340102902B 25SFR164F	C115366-9293C
		31	340102902B 31SFR164	C115366-8563C	340102902B 31SFR164E	C115366-9237C	340102902B 31SFR164F	C115366-9295C
		37	340102902B 37SFR164	C115366-8565C	340102902B 37SFR164E	C115366-9239C	340102902B 37SFR164F	C115366-9297C
		51	340102902B 51SFR164	C115366-8567C	340102902B 51SFR164E	C115366-9241C	340102902B 51SFR164F	C115366-9299C
		51-2R	340102902B 51S-2RFR164	C115366-1617C	340102902B 51S-2RFR164E	C115366-1619C	340102902B 51S-2RFR164F	C115366-1621C