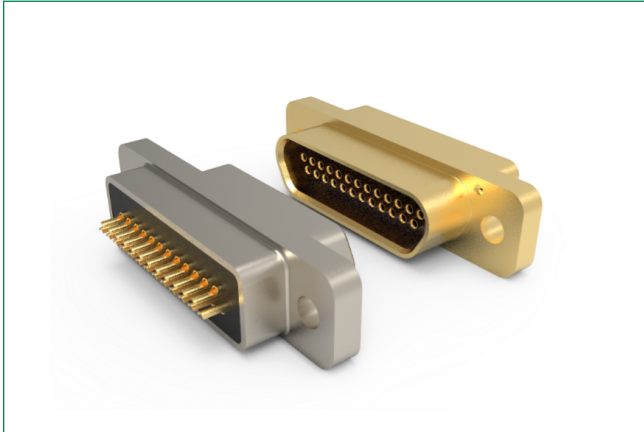


MDM Series

Micro D Connectors

Solder Bucket Termination, NXTMC - CS FR022



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 for space applications.

Meet the performance and dimensional requirements of the ESCC 3401 specifications.

Compliant to ESCC specification 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

- Enhanced grade
- Compliant with commercial space grade quality level
- 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

Enhanced grade according to specification FR022.

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.

Each MDM connector is sold with a dust cap.

Each MDM socket connector is sold with an interfacial seal.

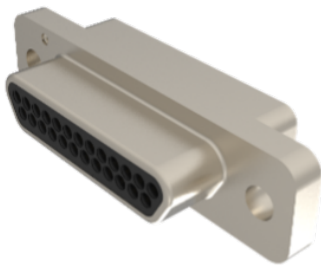
MDM Series

Micro D Connectors

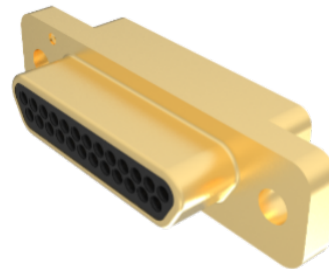
Solder Bucket Termination, NXTMC - CS FR022

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.

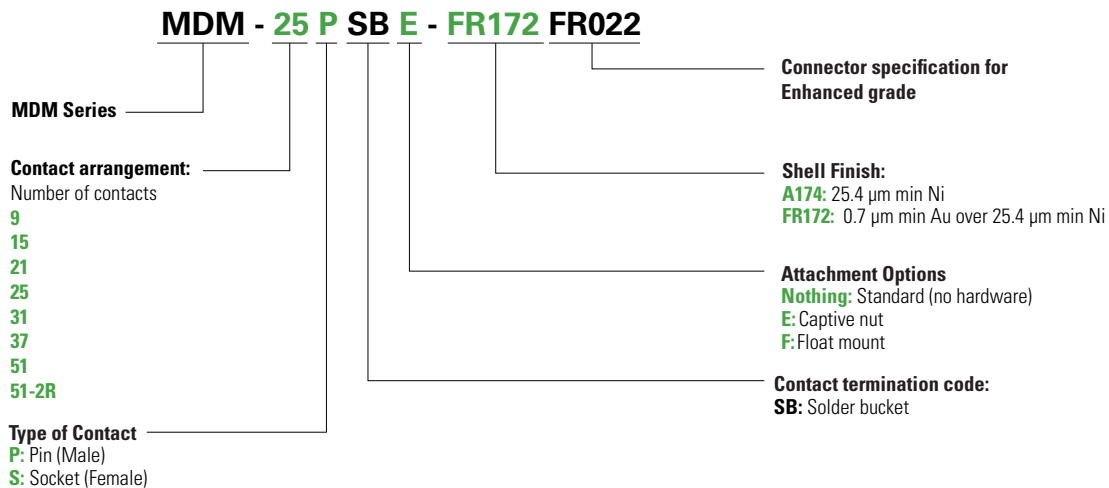


Pin Connector with shell Nickel Plating



Pin Connector with shell Gold plated

FR022 specification:



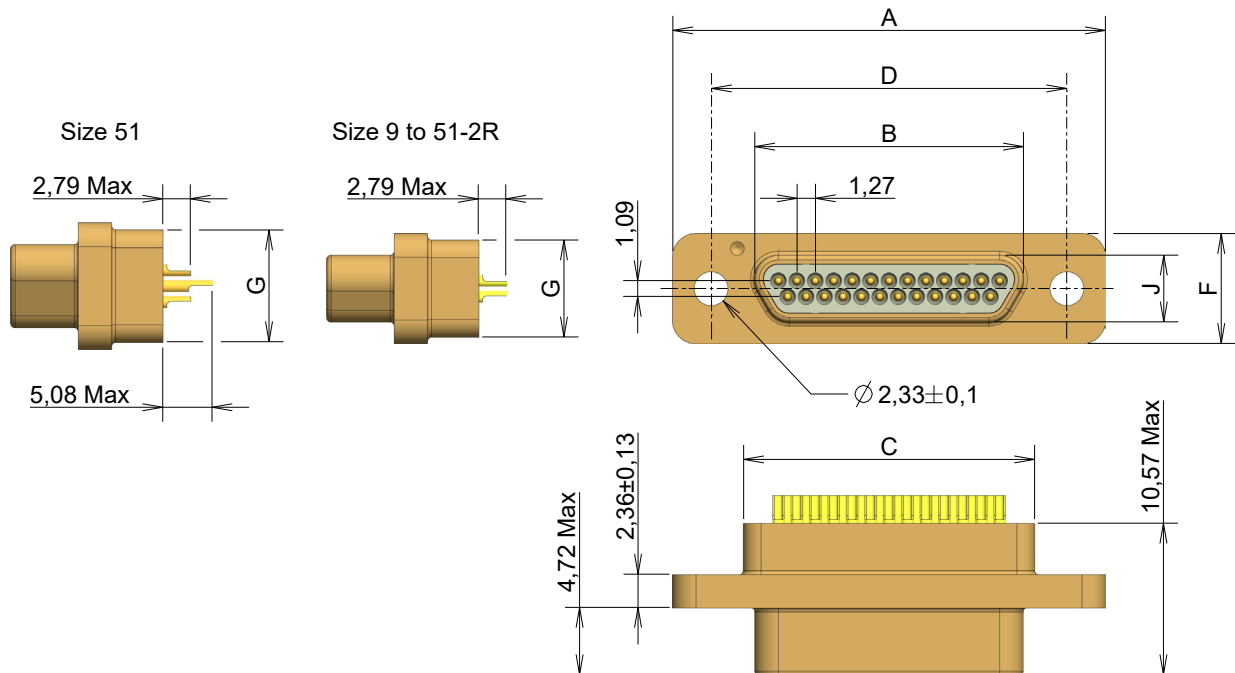
Materials & Finishes

Components	Materials	Finishes
Shell	Aluminum 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, NXTMC - CS FR022

Pin connector dimensions



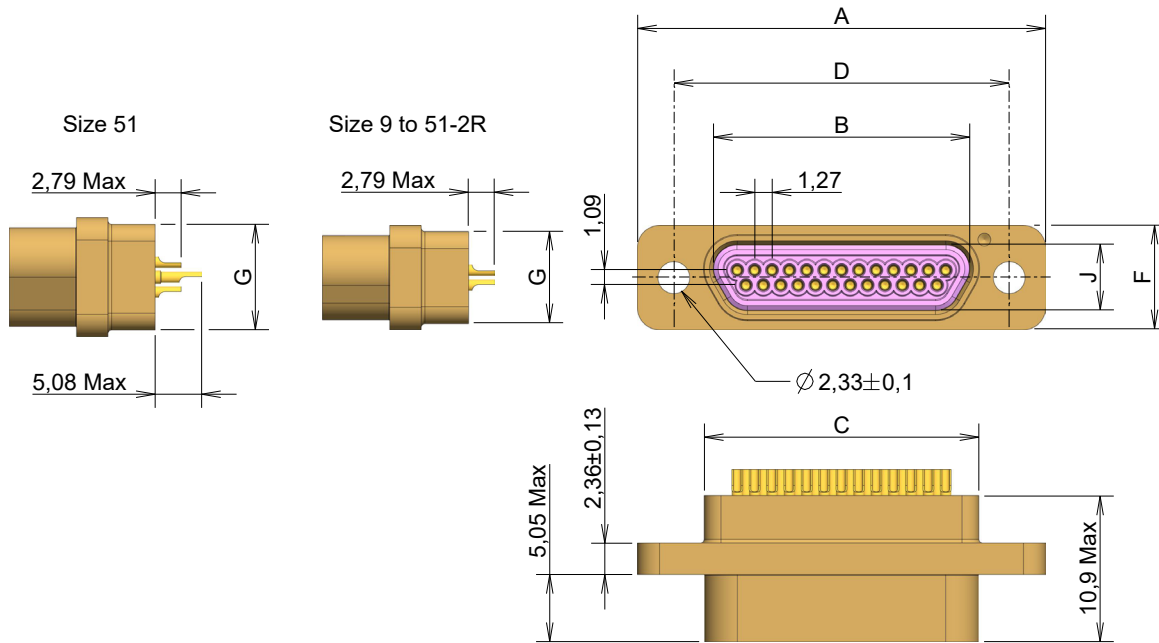
Shell Size	A ± 0.25	B ± 0.1	C ± 0.24	D ± 0.13	F ± 0.22	G ± 0.17	J max
9P	19.69	8.38	9.92	14.35	7.60	6.69	4.69
15P	23.50	12.19	13.73	18.16	7.60	6.69	4.69
21P	27.31	16.00	17.54	21.97	7.60	6.69	4.69
25P	29.85	18.54	20.08	24.51	7.60	6.69	4.69
31P	33.66	22.35	23.89	28.32	7.60	6.69	4.69
37P	37.47	26.16	27.70	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, NXTMC - CS FR022

Socket connector dimensions



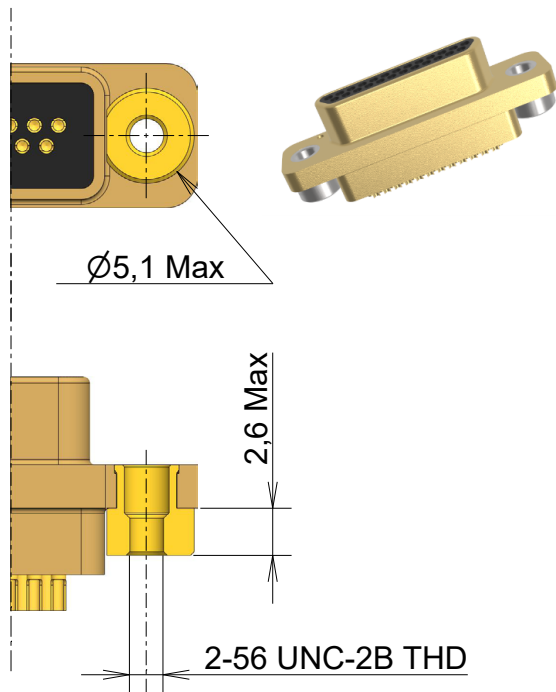
Shell Size	A ±0.25	B min	C ±0.24	D ±0.13	F ±0.22	G ±0.17	J min
9S	19.69	8.49	9.92	14.35	7.60	6.69	4.70
15S	23.50	12.30	13.73	18.16	7.60	6.69	4.70
21S	27.31	16.11	17.54	21.97	7.60	6.69	4.70
25S	29.85	18.65	20.08	24.51	7.60	6.69	4.70
31S	33.66	22.46	23.89	28.32	7.60	6.69	4.70
37S	37.47	26.27	27.70	32.13	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

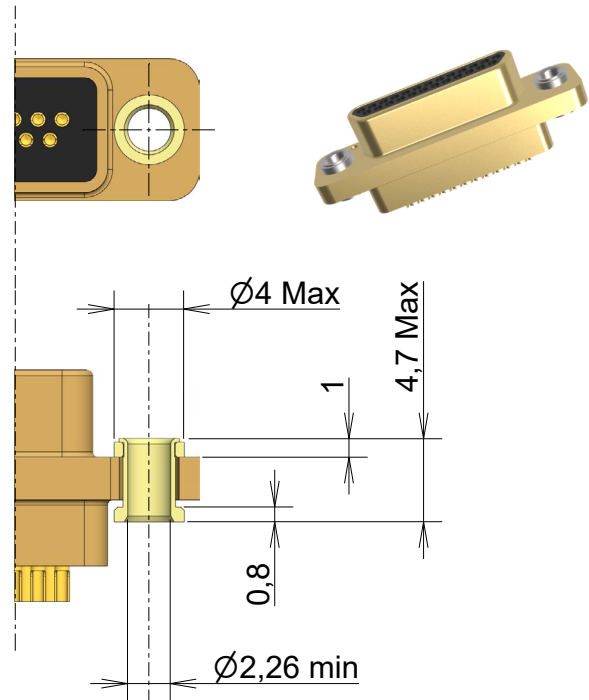
Micro D Connectors

Solder Bucket Termination, NXTMC - CS FR022

Captive nut (Option E)



Floating mount (Option F)



Allowable float	(mm)
Lateral	0.40
Axial	0.40

Recommended instructions

■ Recommended wires:

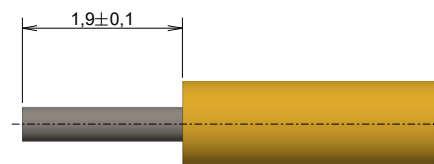
- 3901 013 01 B : PTFE insulated wire AWG 28
- 3901 013 02 B : PTFE insulated wire AWG 26
- 3901 002 61 B : Polyimide insulated wire AWG 28
- 3901 002 56 B : Polyimide Insulated wire AWG 26

■ 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 per beside illustration.
- Reject the broken or frayed wires.



■ Wire soldering process:

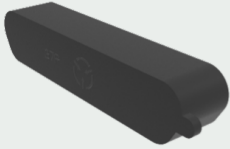


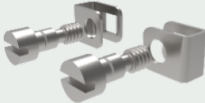
- Insert the stripped wire into the solder bucket of the contact.
- Solder without excess or lack of tin.

MDM Series

Micro D Connectors

Solder Bucket Termination, NXTMC - CS FR022

Accessories

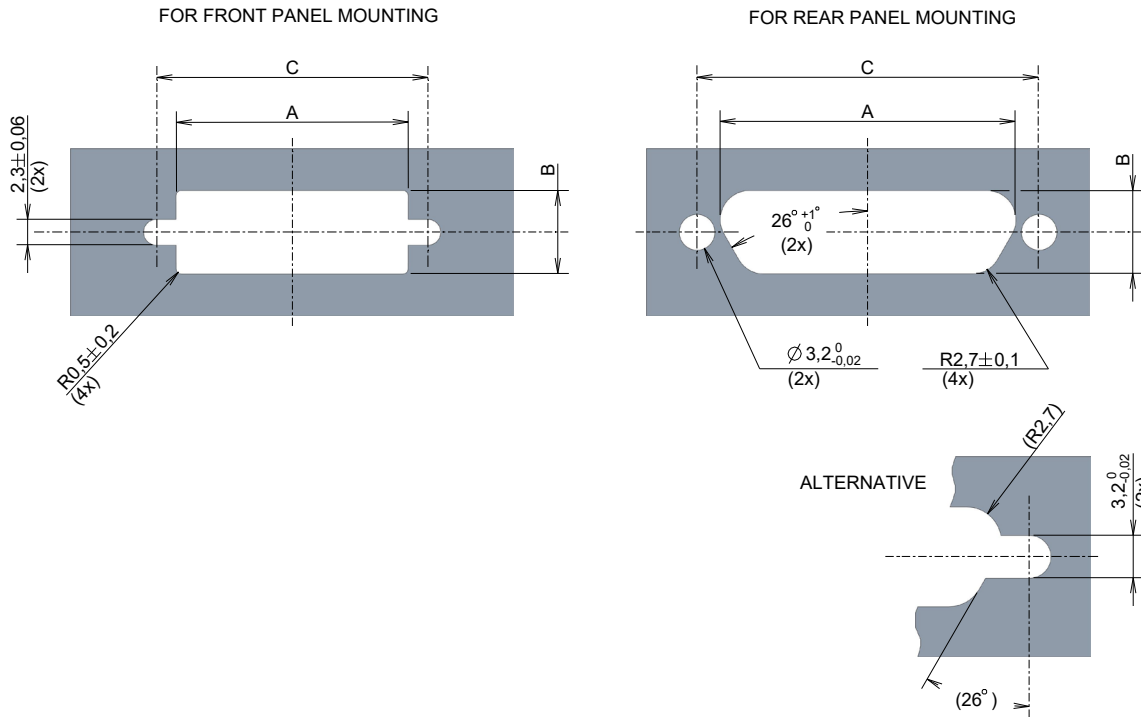
Dust cap (if additional need)	Size	Description	P/N
	9 P	MDM-DUSTCAP-9P-FR022	C115288-6927
	9 S	MDM-DUSTCAP-9S-FR022	C115288-6928
	15 P	MDM-DUSTCAP-15P-FR022	C115288-6929
	15 S	MDM-DUSTCAP-15S-FR022	C115288-6930
	21 P	MDM-DUSTCAP-21P-FR022	C115288-6931
	21 S	MDM-DUSTCAP-21S-FR022	C115288-6932
	25 P	MDM-DUSTCAP-25P-FR022	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)		NXTMC description	P/N
	Weight for one pair: 1.32 g max	MDM-115288-6917-FR022	C115288-6917
Female screwlocks for rear panel mounting (To be ordered separately)		Panel thickness (mm)	NXTMC description
	Weight for one pair: 1.20 g max	0.7 < Thickness < 1.1	MDM-115288-6918-FR022
		1.1 < Thickness < 1.5	MDM-115288-6919-FR022
		1.5 < Thickness < 2.0	MDM-115288-6920-FR022
		2.0 < Thickness < 2.4	MDM-115288-6945-FR022
		2.4 < Thickness < 2.8	MDM-115288-6946-FR022
Male screwlocks (To be ordered separately)		NXTMC description	P/N
	Weight for one pair: 0.88 g max	MDM-115288-6916-FR022	C115288-6916

MDM Series

Micro D Connectors

Solder Bucket Termination, NXTMC - CS FR022

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, NXTMC - CS FR022

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 (F)	
			NXTMC description	P/N	NXTMC description	P/N	NXTMC description	P/N
Nickel plated	Pin	9	MDM-9PSB-A174-FR022	C115288-6005	MDM-9PSBE-A174-FR022	C115288-6555	MDM-9PSBF-A174-FR022	C115288-6521
		15	MDM-15PSB-A174-FR022	C115288-6097	MDM-15PSBE-A174-FR022	C115288-6558	MDM-15PSBF-A174-FR022	C115288-6560
		21	MDM-21PSB-A174-FR022	C115288-6043	MDM-21PSBE-A174-FR022	C115288-6562	MDM-21PSBF-A174-FR022	C115288-6564
		25	MDM-25PSB-A174-FR022	C115288-6098	MDM-25PSBE-A174-FR022	C115288-6566	MDM-25PSBF-A174-FR022	C115288-6568
		31	MDM-31PSB-A174-FR022	C115288-6079	MDM-31PSBE-A174-FR022	C115288-6570	MDM-31PSBF-A174-FR022	C115288-6572
		37	MDM-37PSB-A174-FR022	C115288-6069	MDM-37PSBE-A174-FR022	C115288-6574	MDM-37PSBF-A174-FR022	C115288-6576
		51	MDM-51PSB-A174-FR022	C115288-6219	MDM-51PSBE-A174-FR022	C115288-6578	MDM-51PSBF-A174-FR022	C115288-6580
		51-2R	MDM-51P-2RSB-A174-FR022	C115288-5748	MDM-51P-2RSBE-A174-FR022	C115288-5750	MDM-51P-2RSBF-A174-FR022	C115288-5752
	Socket	9	MDM-9SSB-A174-FR022	C115288-6042	MDM-9SSBE-A174-FR022	C115288-6582	MDM-9SSBF-A174-FR022	C115288-6522
		15	MDM-15SSB-A174-FR022	C115288-6076	MDM-15SSBE-A174-FR022	C115288-6585	MDM-15SSBF-A174-FR022	C115288-6587
		21	MDM-21SSB-A174-FR022	C115288-6008	MDM-21SSBE-A174-FR022	C115288-6589	MDM-21SSBF-A174-FR022	C115288-6416
		25	MDM-25SSB-A174-FR022	C115288-6077	MDM-25SSBE-A174-FR022	C115288-6592	MDM-25SSBF-A174-FR022	C115288-6593
		31	MDM-31SSB-A174-FR022	C115288-6078	MDM-31SSBE-A174-FR022	C115288-6595	MDM-31SSBF-A174-FR022	C115288-6597
		37	MDM-37SSB-A174-FR022	C115288-6070	MDM-37SSBE-A174-FR022	C115288-6599	MDM-37SSBF-A174-FR022	C115288-6601
		51	MDM-51SSB-A174-FR022	C115288-6099	MDM-51SSBE-A174-FR022	C115288-6603	MDM-51SSBF-A174-FR022	C115288-6605
		51-2R	MDM-51S-2RSB-A174-FR022	C115288-5749	MDM-51S-2RSBE-A174-FR022	C115288-5751	MDM-51S-2RSBF-A174-FR022	C115288-5753
Gold plated	Pin	9	MDM-9PSB-FR172-FR022	C115288-6119	MDM-9PSBE-FR172-FR022	C115288-6556	MDM-9PSBF-FR172-FR022	C115288-6557
		15	MDM-15PSB-FR172-FR022	C115288-6121	MDM-15PSBE-FR172-FR022	C115288-6559	MDM-15PSBF-FR172-FR022	C115288-6561
		21	MDM-21PSB-FR172-FR022	C115288-6355	MDM-21PSBE-FR172-FR022	C115288-6563	MDM-21PSBF-FR172-FR022	C115288-6565
		25	MDM-25PSB-FR172-FR022	C115288-6123	MDM-25PSBE-FR172-FR022	C115288-6567	MDM-25PSBF-FR172-FR022	C115288-6569
		31	MDM-31PSB-FR172-FR022	C115288-6356	MDM-31PSBE-FR172-FR022	C115288-6571	MDM-31PSBF-FR172-FR022	C115288-6573
		37	MDM-37PSB-FR172-FR022	C115288-6124	MDM-37PSBE-FR172-FR022	C115288-6575	MDM-37PSBF-FR172-FR022	C115288-6577
		51	MDM-51PSB-FR172-FR022	C115288-6357	MDM-51PSBE-FR172-FR022	C115288-6579	MDM-51PSBF-FR172-FR022	C115288-6581
		51-2R	MDM-51P-2RSB-FR172-FR022	C115288-5754	MDM-51P-2RSBE-FR172-FR022	C115288-5756	MDM-51P-2RSBF-FR172-FR022	C115288-5758
	Socket	9	MDM-9SSB-FR172-FR022	C115288-6118	MDM-9SSBE-FR172-FR022	C115288-6583	MDM-9SSBF-FR172-FR022	C115288-6584
		15	MDM-15SSB-FR172-FR022	C115288-6120	MDM-15SSBE-FR172-FR022	C115288-6586	MDM-15SSBF-FR172-FR022	C115288-6588
		21	MDM-21SSB-FR172-FR022	C115288-6358	MDM-21SSBE-FR172-FR022	C115288-6590	MDM-21SSBF-FR172-FR022	C115288-6591
		25	MDM-25SSB-FR172-FR022	C115288-6122	MDM-25SSBE-FR172-FR022	C115288-6411	MDM-25SSBF-FR172-FR022	C115288-6594
		31	MDM-31SSB-FR172-FR022	C115288-6359	MDM-31SSBE-FR172-FR022	C115288-6596	MDM-31SSBF-FR172-FR022	C115288-6598
		37	MDM-37SSB-FR172-FR022	C115288-6125	MDM-37SSBE-FR172-FR022	C115288-6600	MDM-37SSBF-FR172-FR022	C115288-6602
		51	MDM-51SSB-FR172-FR022	C115288-6360	MDM-51SSBE-FR172-FR022	C115288-6604	MDM-51SSBF-FR172-FR022	C115288-6606
		51-2R	MDM-51S-2RSB-FR172-FR022	C115288-5755	MDM-51S-2RSBE-FR172-FR022	C115288-5757	MDM-51S-2RSBF-FR172-FR022	C115288-5759