

**MCX** –micro miniature coaxial connector is a miniature version of SMB Connector with the same elements, such as centre contacts and Insulator, and function.

MCX micro miniature coaxial connector additionally requires 30% less space than the SMB connector. Electrical levels confirm with MIL-C-39012 and it is possible to use a frequency up to 2GHz.

## Series **MCX-50Ω**

Microminiature Coaxial Connector

Technical Data

Material Data

Cable Connector

Solder connector

PCB Connector

Adapter Within-Series

Termination





## Microminiature Coaxial Connector

### Description

MCX -micro miniature coaxial connector is a miniature version of SMB Connector with the same elements, such as centre contacts and Insulator, and function.  
MCX micro miniature coaxial connector additionally requires 30% less space than the SMB connector  
Electrical levels confirm with MIL-C-39012 and it is possible to use a frequency up to 2GHz.

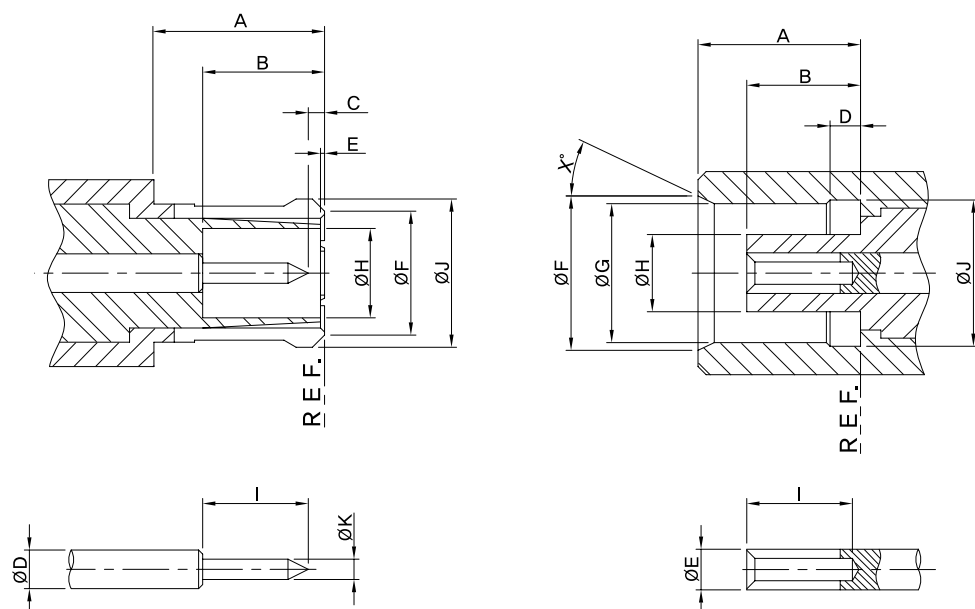
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### Interface Dimensions

#### Plug (Male)

#### Jack (Female)



### Interface Dimensions in mm/inch

	Plug (Male)		Jack (Female)	
	Min.	Max.	Min.	Max.
A	4.15 / 0.163	-	4.00 / 0.157	4.12 / 0.162
B	2.80 / 0.110	3.20 / 0.126	2.60 / 0.102	2.80 / 0.110
C	0.15 / 0.006	-	-	-
D	0.95 / 0.037	-	0.75 / 0.030	0.85 / 0.033
E	-	0.30 / 0.012	0.95 / 0.037	-
F	-	3.60 / 0.142	3.80 / 0.150	-
G	-	-	3.42 / 0.035	3.48 - 0.137
H	2.00 / 0.079	2.07 / 0.081	1.80 / 0.071	1.98 / 0.078
I	2.49 / 0.098	2.59 / 0.102	2.60 / 0.102	-
J	3.72 / 0.146	3.80 / 0.150	3.60 / 0.142	3.70 / 0.146
K	-	0.53 / 0.021	-	-
X	-	-	18	22

## Technical Data

### Requirement

### Specification

#### ELECTRICAL DATA

#### TEST REQUIREMENTS

Impedance	50Ω
Frequency range	DC ..... 6GHz
RF leakage (measured at 1 GHz)	
- Connectors for flexible cables	≥ 60 dB
- Connectors for semi-rigid cables	≥ 70 dB
Dielectric withstanding voltage (at sea level)	750 V rms, 50 Hz
Working voltage (at sea level)	≤ 170 V rms, 50 Hz
Insulation resistance	≥ 10 <sup>4</sup> MΩ
Contact resistance	
- Center contacts	≤ 5.0 mΩ
- Outer contacts	≤ 1.0 mΩ

#### MECHANICAL DATA

#### TEST REQUIREMENTS

Engagement force	≤ 25 N / 5.6 lbs
Disengagement force	8 N ~ 20 N / 1.8 lbs ~ 4.5 lbs
Contact captivation	≥ 10 N / 2.3 lbs
Durability (matings)	≥ 500

## Material Data

Connector Part	Material		Plating
	Male	Female	
PIN	Brass	Beryllium-Copper	Gold
INSULATOR	PTFE	PTFE	-
BODIES	Brass	Brass	Gold
Jack	-	Beryllium-Copper	Gold

## Cable Connector

### ● Straight Cable Plugs (male)

Center contact soldered

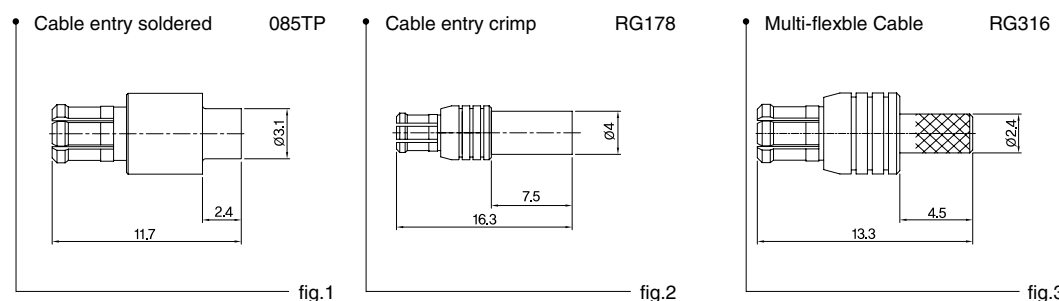


Fig	Type	Code		Cable Goup (example)	Plating			AS-In	Note
		Old Code	New Code		Pin	Body	Pipe		
1	MCX50-PS-085	K313-081-000	CN1211S03-001-1/1	S03 085TP	Gold	Gold	Gold		
2	MCX50-PC-178	K313-082-000	CN1211X01-001-1/1	X01 RG178	Gold	Gold	Gold		
3	MCX50-PC-316	K313-083-000	CN1211X02-001-1/1	X02 RG316	Gold	Gold	Gold		

### ● Right Angle Cable Plugs (male)

Center contact soldered

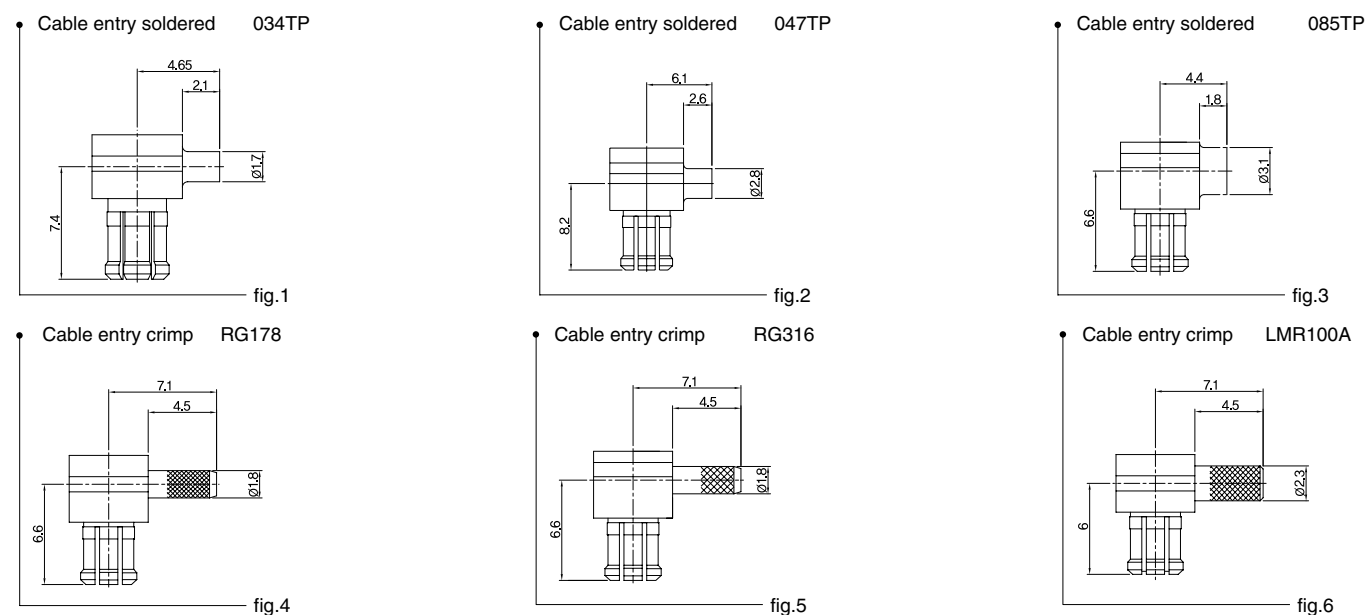


Fig	Type	Code		Cable Goup (example)	Plating			AS-In	Note
		Old Code	New Code		Pin	Body	Pipe		
1	MCX50-LPS-034	K313-111-001	CN1231S01-001-1/1	S01 034TP	Gold	Gold	Gold		
2	MCX50-LPS-047	K313-117-000	CN1231S02-001-1/1	S02 047TP	Gold	Gold	Gold		
3	MCX50-LPS-085	K313-112-000	CN1231S03-001-1/1	S03 085TP	Gold	Gold	Gold		
4	MCX50-LPC-178	K313-111-000	CN1231X01-001-1/1	X01 RG178	Gold	Gold	Gold		
5	MCX50-LPC-316	K313-110-000	CN1231X02-001-1/1	X02 RG316	Gold	Gold	Gold		
6	MCX50-LPC-LMR100A	K313-110-002	CN1231X02-002-1/1	X02 LMR100A	Gold	Gold	Gold		

### ● Straight Cable Jack (female)

Center contact soldered

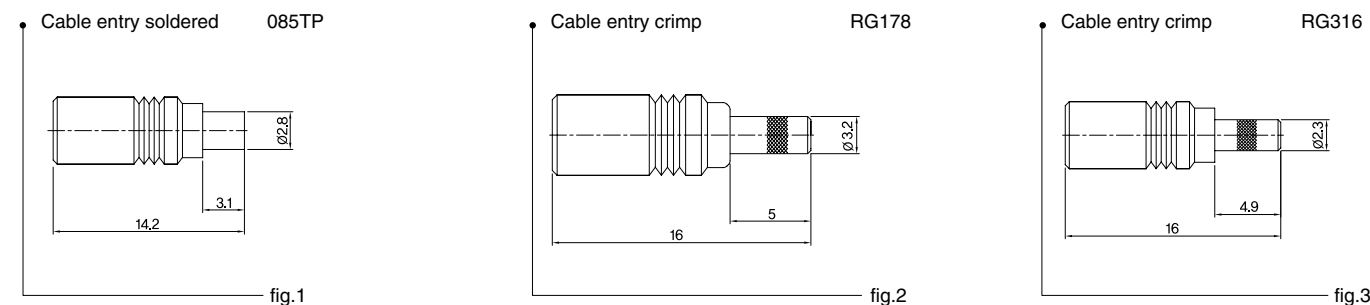


fig	Type	Code		Cable Goup (example)	Plating			AS-In	Note
		Old Code	New Code		Pin	Body	Pipe		
1	MCX50-JS-085	K313-215-000	CN1212S03-001-1/1	S01 085TP	Gold	Gold	Gold		
2	MCX50-JC-178	K313-213-000	CN1212X01-001-1/1	X01 RG178	Gold	Gold	Gold		
3	MCX50-JC316	K313-214-000	CN1212X02-001-1/1	X03 RG316	Gold	Gold	Gold		

### ● Straight Bulkhead Cable Jacks (female)

Center contact soldered

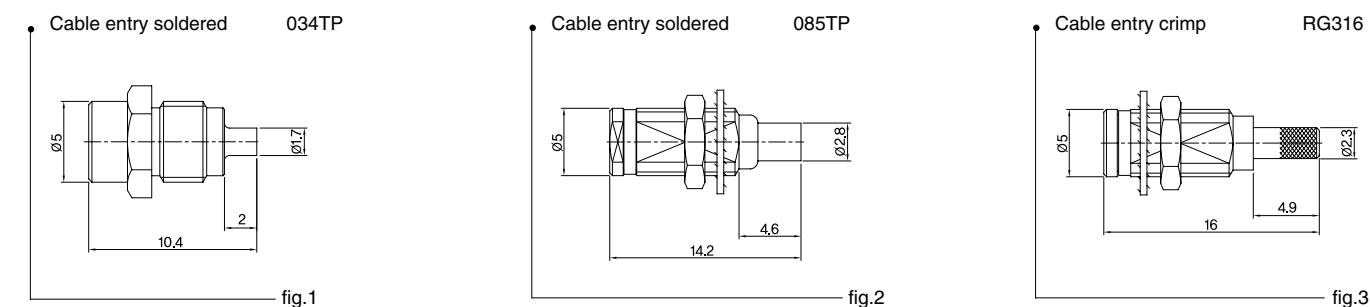


fig	Type	Code		Cable Goup (example)	Plating			AS-In	Note
		Old Code	New Code		Pin	Body	Pipe		
1	MCX50-J-BS-034	K313-302-000	CN1226S01-001-1/1	S03 034TP	Gold	Gold	Gold		
2	MCX50-BJ-S-085	K313-301-001	CN1222S03-001-1/1	S03 085TP	Gold	Gold	Gold		
3	MCX50-BJ-C-316	K313-301-000	CN1222X02-001-1/1	X02 RG316	Gold	Gold	Gold		

### ● Special Cable Jacks (female)

Semi-rigid cable  
Center entry soldered  
Center contact soldered

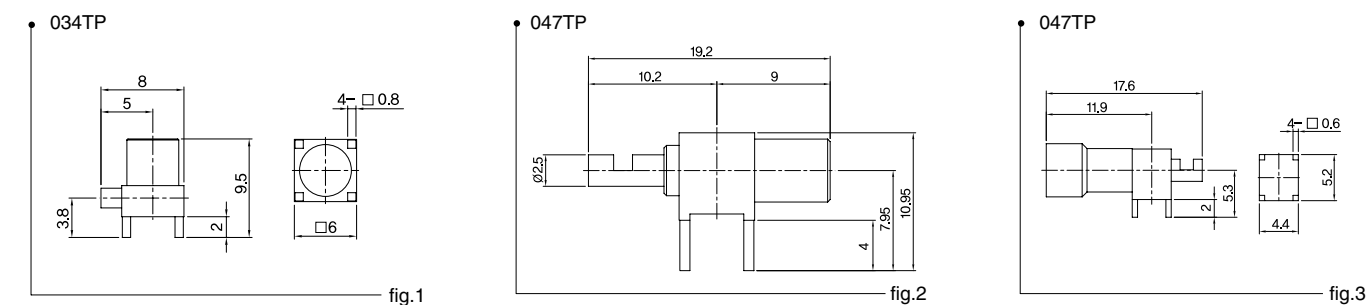


fig	Type	Code		Cable Goup (example)	Plating			AS-In	Note
		Old Code	New Code		Pin	Body	Pipe		
1	MCX50-J-4R-R-034	K313-476-000	CN1251S01-001-1/1	S01 034TP	Gold	Gold	Gold		
2	MCX50-LJ-4R-S-047	K313-120-000	CN1253S02-001-1/1	S02 047TP	Nickel	Gold	Gold		
3	MCX50-LJ-4R-S-047	K313-672-000	CN1253S02-002-1/1	S02 047TP	Nickel	Gold	Gold		

MCX-50Ω

## Solder connector

### ● Receptacle Plugs(male) and Jack(female)

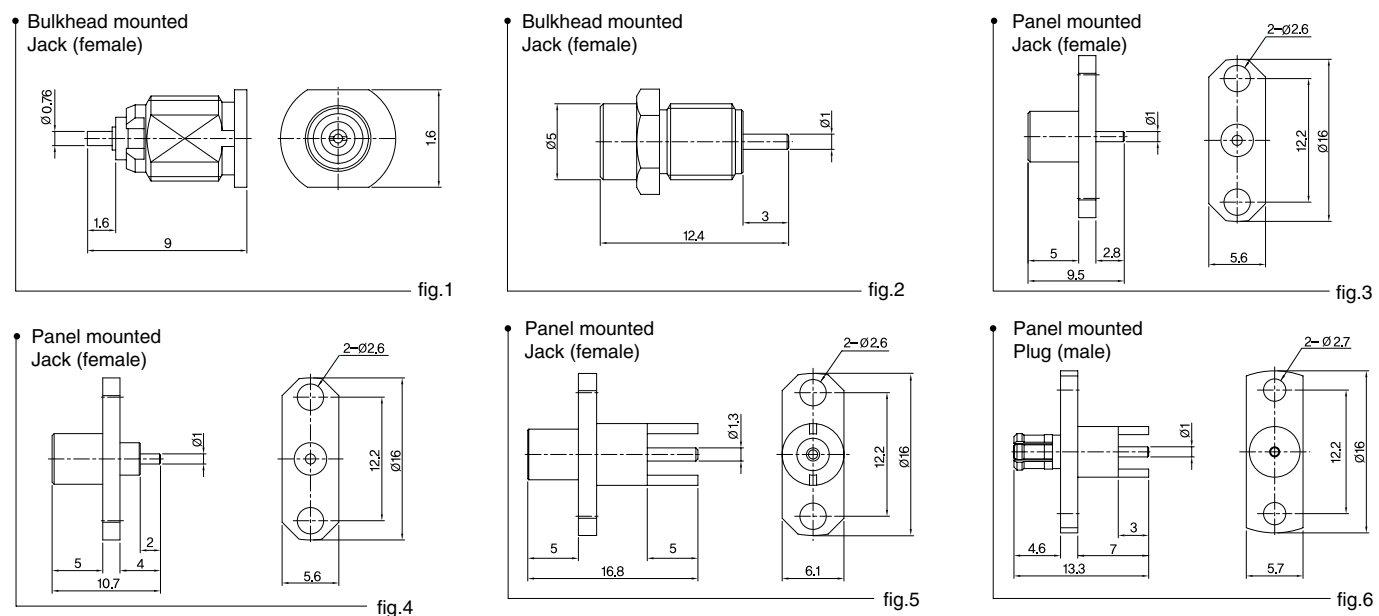


Fig	Type	Code		Plating			Mounting Hole	AS-In	Note
		Old Code	New Code	Pin	Body	Coupling			
1	MCX50-J-BR	K313-566-000	CN1226000-002-1/1	Gold	Gold	Gold	ML2		
2	MCX50-J-BR	K313-311-005	CN1226000-001-1/1	Gold	Gold	Gold	ML3		
3	MCX50-J-H2-R	K313-480-001	CN1242000-002-1/1	Gold	Gold	Gold	ML4		
4	MCX50-J-H2-R	K313-480-000	CN1242000-001-1/1	Gold	Gold	Gold	ML5		
5	MCX50-J-H2-2R-R	K313-482-000	CN1245000-001-1/1	Gold	Gold	Gold	ML6		
6	MCX50-P-H2-2R-R	K313-490-001	CN1246000-001-1/1	Gold	Gold	Gold	ML7		

## PCB Connector

### ● Straight PCB Jacks (female)

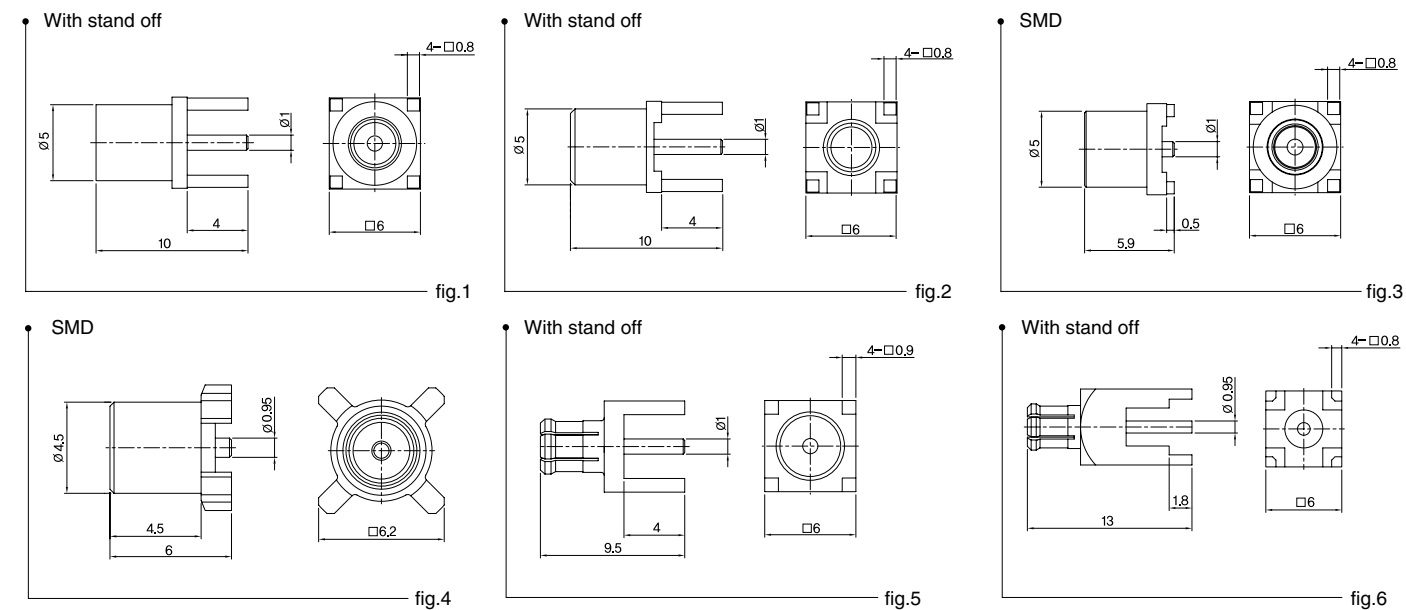


Fig	Type	Code		Plating			Mounting Hole	AS-In	Note
		Old Code	New Code	Pin	Body	Coupling			
1	MCX50-J-4R-R	K313-426-000	CN1251000-001-1/1	Gold	Gold	Gold	ML8		
2	MCX50-J-4R-R	K313-426-002	CN1251000-002-1/1	Gold	Gold	Gold	ML8		
3	MCX50-J-4R-R	K313-426-007	CN1251000-003-1/1	Gold	Gold	Gold	ML8		SMT
4	MCX50-J-4R-R	K313-429-000	CN1251000-004-1/1	Gold	Gold	Gold	ML101		Flower Type
5	MCX50-P-4R-R	K313-456-000	CN1250000-001-1/1	Gold	Gold	Gold	ML9		
6	MCX50-P-4R-R	K313-457-000	CN1250000-002-1/1	Nickel	Nickel	Nickel	ML8		

### ● Right Angle PCB Jacks (female)

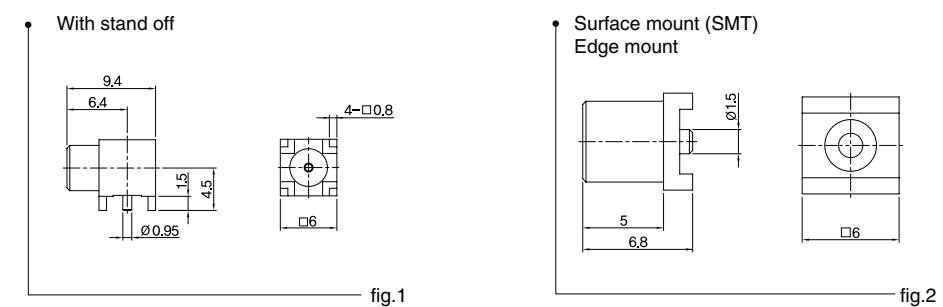


Fig	Type	Code		Plating		Mounting Hole	AS-In	Note
		Old Code	New Code	Pin	Body			
1	MCX50-LJ-4R-R	K313-666-003	CN1253000-001-1/1	Gold	Gold	ML8		
2	MCX50-J-2R-R	K313-412-000	CN125D000-001-1/1	Gold	Gold	ML102		SMT

**Abaptor Within-Series**

● **Straight Abaptors**

• Jack to Jack (female)

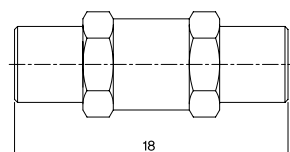


fig.1

Fig	Type	Code		V.S.W.R DC~1GHz	Plating		AS-In	Note
		Old Code	New Code		Pin	Body		
1	MCX50-A-JJ	K313-702-000	AD1212-001-1/1	≤1.05	Gold	Gold		

**Termination**

• Plug (male)

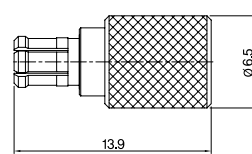


fig.1

Fig	Type	Code		V.S.W.R DC~1GHz	Plating		AS-In	Note
		Old Code	New Code		Pin	Body		
1	MCX50-P-DUMMY	K313-950-000	CN1291000-001-1/1	≤1.2	Gold	Gold		



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