

MCX Series

Description

MCX provides broadband capability through 6 GHz. A range of connector configurations is available including printed circuit board and cable connectors. This series gives design engineers options in applications where weight and physical space are limited.

Applications

- Telecommunications
- Instrumentation
- Wireless
- Process Controls
- PC/LAN

Features

- Low cost combined with high quality.
- Broadband performance with low reflection DC to 6 GHz.
- Quick connector/disconnect snap-on mating.
- 50 ohm impedance.
- Interface according to IEC 169-36, CECC 22220

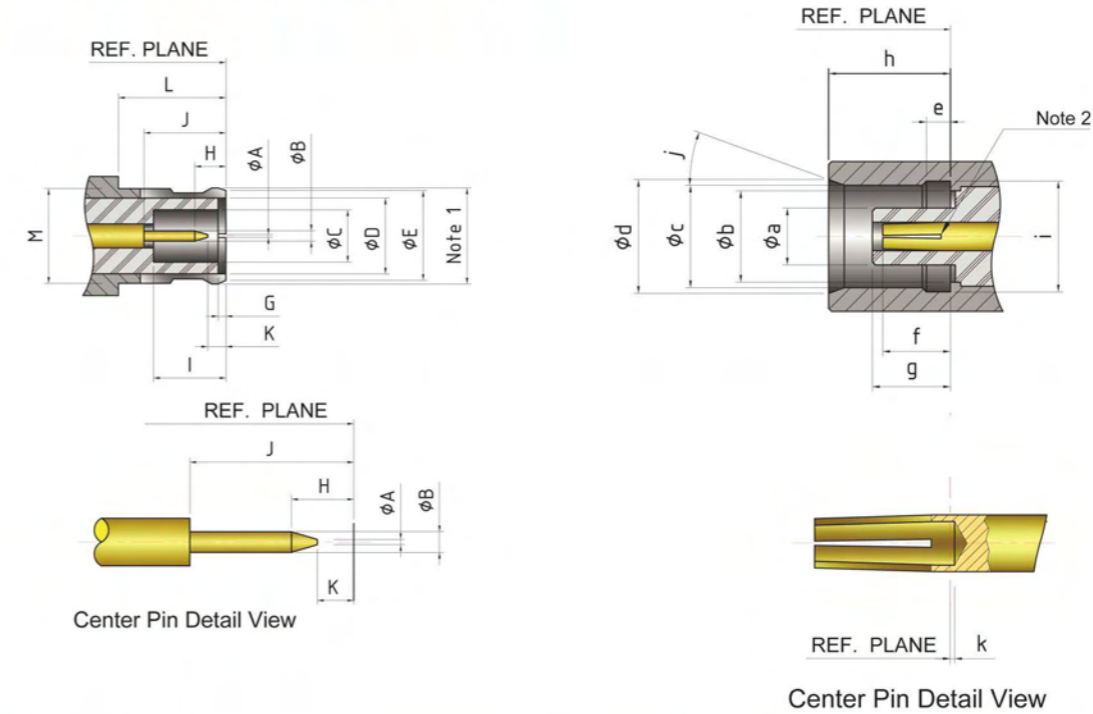


Specification

MCX 50 ohm 0-6 GHZ

MCX microminiature connectors provide repeatable performance from DC to 6 GHz. The design of these devices have taken into consideration the need for size reduction, low weight, durability and reliable performance. The MCX devices enable a 30% space reduction over similar SMB/SMC types. The MCX is available for affixment to industry standard cable and as a printed circuit board device. The snap-on connection feature between devices offer the user ease of assembly in dense packaging layouts. Applications for the MCX are those where size, weight, performance and ease of assembly are the driving considerations to the final design decision. Typically, these include GPS, wireless communications (WLAN and mobile) and automotive.

Interface Mating Dimensions



Note :
1. Must meet the force to engage and disengage when mated with mating part.

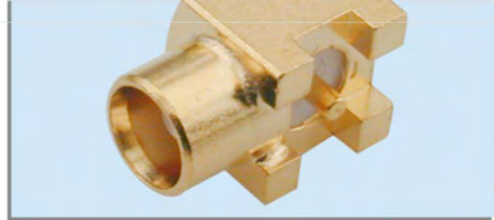
Note :
2. ID of contact to meet VSWR mating characteristics and connector durability when mated with a dia. .019-.021 (0.48-0.653) male contact.

PLUG

Letter	Millimeters (inches)	
	Minimum	Maximum
A	—	0.25(.010)
B	0.48(.019)	0.53(.021)
C	2.00(.079)	—
D	—	3.00(.118)
E	—	3.60(.142)
G	0.00(.000)	0.30(.012)
H	—	1.20(.047)
I	2.80(.110)	—
J	2.80(.110)	3.20(.126)
K	0.15(.006)	—
L	4.15(.163)	—
M	—	3.40(.134)

JACK

Letter	Millimeters (inches)	
	Minimum	Maximum
a	1.80(.071)	1.98(.078)
b	3.05 NOM	
c	3.42(.135)	3.48(.137)
d	3.80(.150)	—
e	0.75(.029)	0.85(.033)
f	2.30(.091)	2.80(.110)
g	2.60(.102)	2.80(.110)
h	4.00(.157)	4.12(.162)
i	3.60(.142)	3.75(.148)
j	18°	22°
k	0.00(.000)	—
m	—	3.00(.118)



Electrical

Impedance	50Ω / 75Ω
Frequency Range	0 to 6 GHz
VSWR	≅ 1.2
RF Leakage	≧ 60 dB (flexible cable) ≧ 70 dB (semi-rigid cable)
Dielectric Withstanding Voltage	750 V rms
Voltage Rating	≧ 335 V rms (depending on cable)
Center Contact Resistance	≅ 5 mΩ
Outer Contact Resistance	≅ 2.5 mΩ
Insulation Resistance	≧ 1 GΩ

Mechanical

Mating	Snap-on Coupling
Connector Durability	≧ 500 Cycles (for beryllium copper female contact only)
Engagement Force	≅ 3.4 lbs
Disengagement Force	1.4 lbs ~ 3.4 lbs
Cable Retention Force	≧ 7.3 lbs (for RG178) ≧ 12.1 lbs (for RG316)

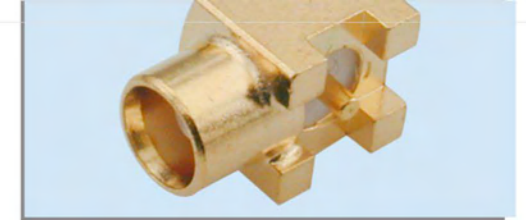
Environmental

Temperature Range	-55° C to 155° C
Corrosion (Salt Spray)	MIL-STD-202, Method 101, Cond. B
Vibration	MIL-STD-202, Method 204, Cond. C
Thermal Shock	MIL-STD-202, Method 107, Cond. F
Mechanical Shock	MIL-STD-202, Method 213, Cond. B

Material

Parts Name	Material	Plating
Body	Brass	Gold or Nickel
Outer Contact	Beryllium Copper	Gold or Nickel
Center Contact	Male : Brass Female : Phosphor Bronze Beryllium Copper	Gold
Insulator	PTFE	None
Gasket	Silicone Rubber	None
Crimp Ferrule	Annealed Copper	Same as Body

Note: Other Material/Finish is Available on Request.



Crimp Termination for Flexible Cable

MCX Straight Crimp Plug

<p>MX101</p>		Hand Tool	See Appendix B
		Cable	RG174/U, 178/U, 179/U, 316/U
		Cable Assembly Instruction	See Appendix A Code E

MCX R/A Crimp Plug

<p>MX102</p>		Hand Tool	See Appendix B
		Cable	RG174/U, 178/U, 179/U, 316/U
		Cable Assembly Instruction	See Appendix A Code C

MCX Straight Crimp Jack

<p>MX201</p>		Hand Tool	See Appendix B
		Cable	RG174/U, 178/U, 316/U
		Cable Assembly Instruction	See Appendix A Code E

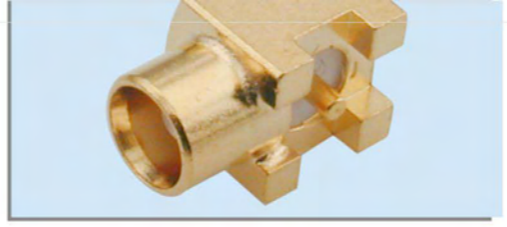
MCX Bulkhead Crimp Jack

<p>MX204</p>		Hand Tool	See Appendix B
		Cable	RG174/U, 178/U, 316/U
		Cable Assembly Instruction	See Appendix A Code E

Direct Solder for Semi-Rigid Cable

MMCX R/A Plug

<p>MX121</p>		Hand Tool	Nil
		Cable	RG402/U, 405/U
		Cable Assembly Instruction	See Appendix A



Direct Solder for Semi-Rigid Cable

MCX Straight Plug

		Hand Tool	Nil
		Cable	RG402/U, 405/U
		Cable Assembly Instruction	See Appendix A Code M

Printed Circuit Board, Straight or R/A Terminal

MCX R/A Jack

		Hand Tool	Nil
		Cable	Nil
		PCB Layout	Refer to S-CONN's Drawing

MCX R/A Jack, SMT Type

		Hand Tool	Nil
		Cable	Nil
		PCB Soldering Pattern	Refer to S-CONN's Drawing

MCX Straight Jack

		Hand Tool	Nil
		Cable	Nil
		PCB Layout	Refer to S-CONN's Drawing

MCX Straight Jack, SMT Type

		Hand Tool	Nil
		Cable	Nil
		PCB Soldering Pattern	Refer to S-CONN's Drawing