

Description

MCX connectors conform to the European CECC 22220 Spec and was introduced in the 1980's.

While the MCX uses identical inner contact and insulator dimensions as the SMB, the outer diameter of the plug is .140" which is 30% smaller than the SMB. This series provides designers with options where weight and physical space is limited.

MCX provides broadband capability though 6GHz with a snap-on connector design. A range of connectors are available including PC board and cable connectors.

Features/Benefits

- Broadband performance with low reflection DC to 6 GHz. Low cost combined with high quality.
- Quick connect/disconnect snap-on mating reduces installation time.
- Accommodates a wide range of miniature RG flexible coaxial cables including semi-rigid cable provides customer flexibility in their design and manufacturing with a durable connector.

Application

- Antenna
- Automotive
- Base Station
- Components
- GPS
- Head End Equipment
- Instrumentation
- PC/LAN
- Radios
- Telecom
- WLAN



50 Ohm Coaxial Connectors

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75 Ohm Coaxial Connectors

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ELECTRICAL

Impedance	50 ohms
Frequency range	0-6 GHz
Voltage rating	335 VRMS
Dielectric withstanding voltage	1000 Volts
VSWR	1.00 @ 2.5GHz (straight) 1.10 @ 2.5GHz (rt. angle)
Contact resistance	Center contact: 5 milliohms; Outer contact: 1.0 milliohms;
Insulation resistance	5000 megohms min.
Insertion loss:	0.10 dB @ 1 GHz

MECHANICAL

Mating	50 ohm snap-on coupling, per CECC 22220
Engagement forces	engagement 4.5 lbs (20N) max. disengagement 2.3 lbs (10N) min.
Connector affixment to cable	Braid and jacket: hex crimp.
Cable affixment to center contact	Solder
Contact captivation	All types, except as noted
Connector durability	500 mating and unmating cycles min.

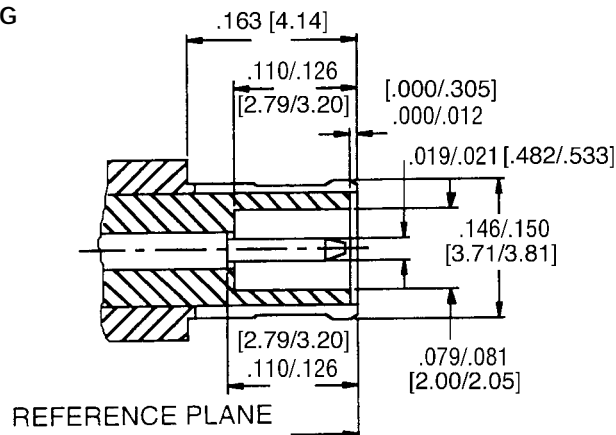
MATERIAL

Body, Metal Parts Finish	Brass per QQB-626 Nickel or Gold
Center contacts gold plated (30 u" gold)	Male: Brass per QQB626 Female: Beryllium copper per QQC 530 heat treated per MIL H 7199
Insulators	PTFE
Gasket	Silicone Rubber
Crimp ferrules	Seamless copper tubing alloy
Finish	Nickel or Gold

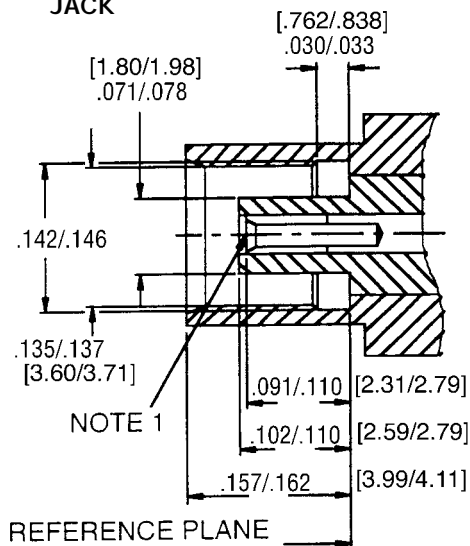
ENVIRONMENTAL

Temperature range	-65°C to + 165°C
Thermal shock	MIL-STD-202 method 107 (test cond. B) except high temperatures @ 200°C
Vibration	MIL-STD-202 method 204, snap-on (test cond. B)
Shock	MIL-STD-202 method 213, snap-on (test cond. B)
Corrosion	MIL-STD-202 method 101 (test cond. B) 5% salt solution.

PLUG



JACK



NOTE:

1. I.D. to meet VSWR and contact resistance when mated with .48/.53mm diameter pin

50 Ohm Crimp Attachments for Flexible Cable

<p>Fig. 1</p> <p>MCX Crimp Plug, Crimp 919-101P-51SX Gold Plated for RG-174, 188, 316 919-101P-51S1X Nickel Plated for RG-174, 188, 316 919-121P-51SX Gold Plated for RG-178-196 919-130P-51SX Gold Plated for RD-316</p>	<p>Fig. 2</p> <p>MCX Crimp Jack, Crimp 919-107J-51SX Gold Plated for RG-174, 188, 316 919-107J-51S1X Nickel Plated for RG-174, 188, 316 919-131J-51SX Gold Plated for RG-178, 196</p>
<p>Fig. 3</p> <p>MCX Straight Bulkhead Jack 919-129J-51SX Gold Plated for RD 316 919-128J-51SX Gold Plated for RG-174, 188, 316</p>	<p>Fig. 4</p> <p>MCX Angle Plug, Crimp 919-104P-51AX Gold Plated for RG-174, 188, 316 919-104P-51A1X Nickel Plated for RG-174, 188, 316 919-122P-51AX Nickel Plated for RG-178-196</p>

MCX

50 OHM MCX CABLE CONNECTORS

Cable RG-/U	Cable Attachment		CAI	Plt.	Ins.	Construction Notes	Amphenol Number	Fig.
	Outer	Inner						
RG-174, 188, 316	Crimp	Solder	C74	P11	D1	Gold Plated	919-101P-51SX	1
RG-174, 188, 316	Crimp	Solder	C74	P11	D1	Nickel Plated	919-101P-51S1X	1
RG-174, 188, 316	Crimp	Solder	C74	P11	D1	Gold Plated	919-107J-51SX	2
RG-174, 188, 316	Crimp	Solder	C74	P11	D1	Nickel Plated	919-107J-51S1X	2
RD-174, 188, 316	Crimp	Solder	C77	P11	D1	Gold Plated	919-128J-51SX	3
RG-174, 188, 316	Crimp	Solder	C77	P11	D1	Gold Plated	919-104P-51AX	4
RG-174, 188, 316	Crimp	Solder	C77	P11	D1	Nickel Plated	919-104P-51A1X	4
RG-178, 196	Crimp	Solder	C74	P11	D1	Gold Plated	919-121P-51SX	1
RG-178, 196	Crimp	Solder	C74	P11	D1	Gold Plated	919-131J-51SX	2
RG-178, 196	Crimp	Solder	C77	P11	D1	Gold Plated	919-122P-51AX	4
RD-316	Crimp	Solder	C77	P11	D1	Gold Plated	919-129J-51SX	3
RD-316	Crimp	Solder	C74	P11	D1	Gold Plated	919-130P-51SX	1

MCX 50 Ohm For Semi-Rigid Cable and PCB

Fig. 1

MCX Angle Plug, Solder to Body
919-102P-51AX
 for .085 S/R (2.2mm)
919-103P-51AX
 for .141 S/R (3.6mm)

Fig. 2

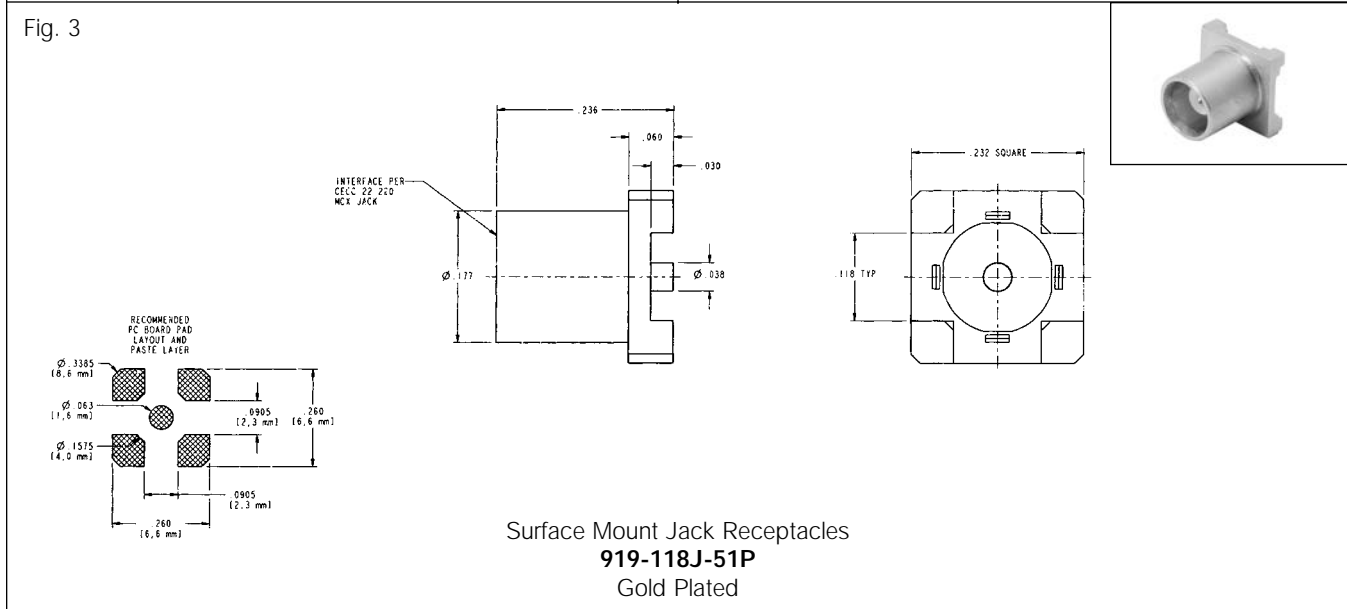
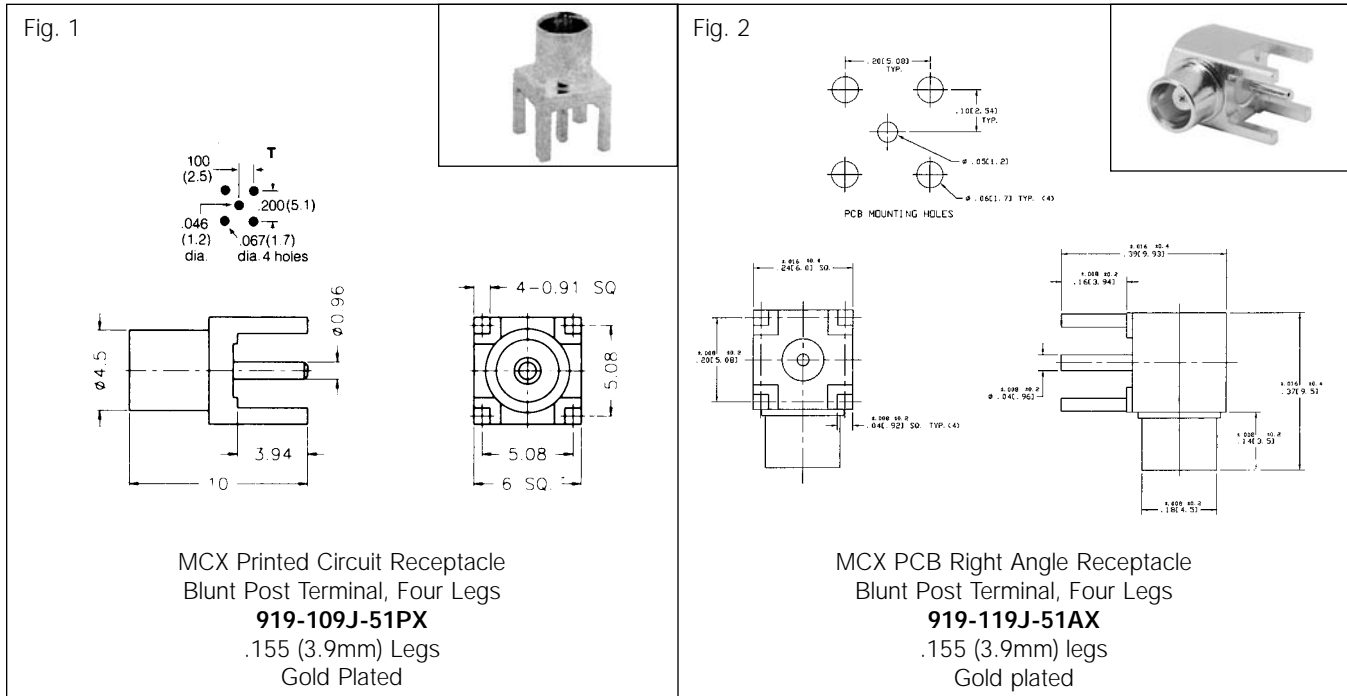
MCX Jack, Solder to Body
919-114J-51SX
 for .085 S/R (2.2mm)

Fig. 3

MCX Plug Solder to Body
919-120P-51SX
 for .085 S/R 2.2mm

50 OHM MCX SEMI-RIGID CABLE CONNECTORS

Cable RG-/U	Cable Attachment		CAI	Plt.	Ins.	Construction Notes	Amphenol Number	Fig.
	Outer	Inner						
.085 Semi-Rigid	Solder	Solder	C76	P11	D1	Gold Plated	919-102P-51AX	1
.085 Semi-Rigid	Solder	Solder	C75	P11	D1	Gold Plated	919-114J-51SX	2
.085 Semi-Rigid	Solder	Solder	C75	P11	D1	Gold Plated	919-120P-51SX	3
.141 Semi-Rigid	Solder	Solder	C76	P11	D1	Gold Plated	919-103P-51AX	1



50 OHM MCX PCB RECEPTACLES

Description	Terminal Type	Plt.	Ins.	MTG Hole	Construction Notes	Amphenol Numbers	Fig.
PCB Panel Jack Receptacles	Blunt Post	P11	D1	T	Stand Off Pads	919-109J-51PX	1
PCB Panel Jack Receptacles	Blunt Post	P11	D1	T	Stand Off Pads	919-119J-51AX	2

50 OHM MCX SURFACE MOUNT

Description	Terminal Type	Plt.	Ins.	MTG Hole	Construction Notes	Amphenol Numbers	Fig.
Surface Mount Jack Receptacles	Blunt Post	P11	D1	—	Surface Mount	919-118J-51P	3

ELECTRICAL

Impedance	75 ohms
Frequency range	0-6 GHz
Voltage rating	170 Volts
Dielectric withstanding voltage	500 Volts
VSWR	1.06 @ 2.5 GHz (straight) 1.08 @ 2.5GHz (rt. angle)
Contact resistance	Center contact: 5 milliohms; Outer contact: 2.5 milliohms;
Insulation resistance	10,000 megohms min.
Insertion loss:	0.10 dB @ 1 GHz

MECHANICAL

Mating	75 ohm snap-on coupling, per CECC 22220
Engagement forces	engagement 4.5 lbs (20N) max. disengagement 2.3 lbs (10N) min.
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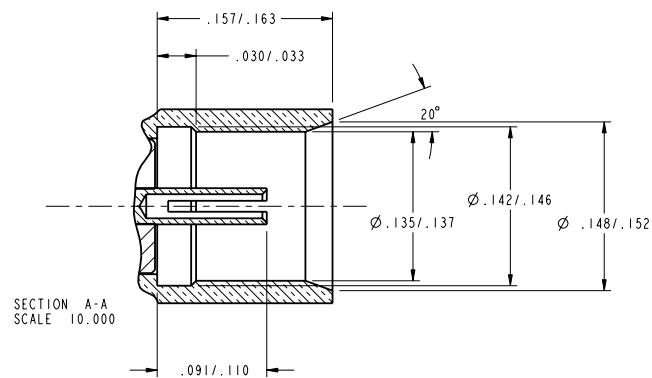
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Gasket	Silicone Rubber
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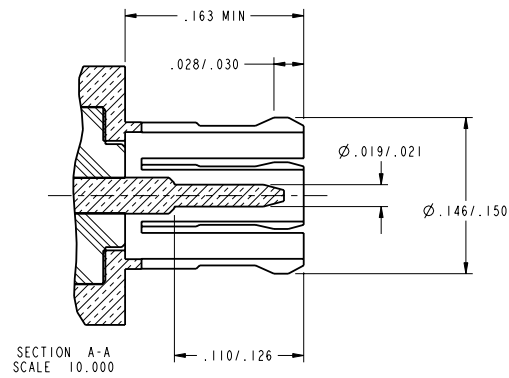
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PLUG



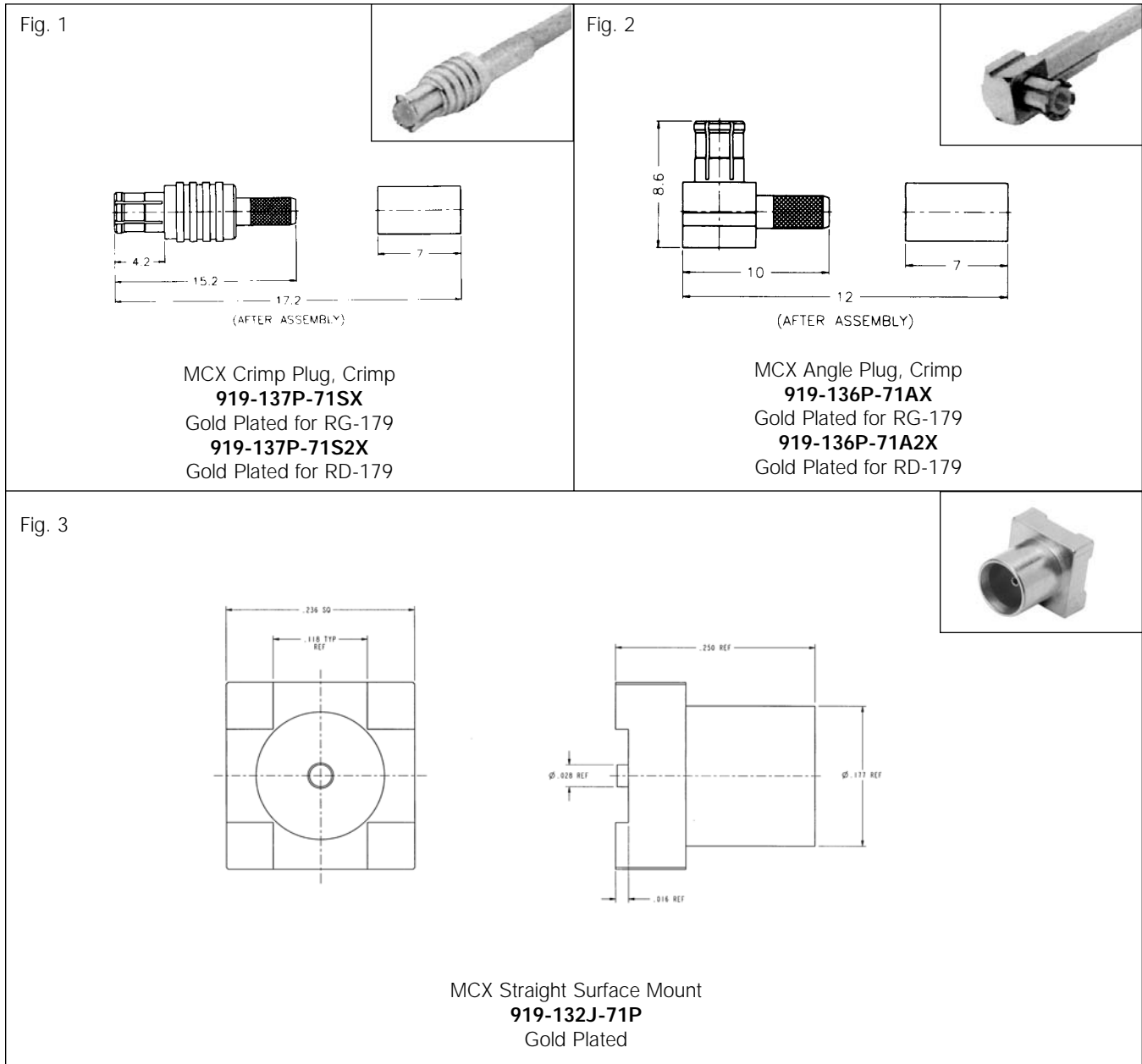
JACK



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75 Ohm Crimp Attachments for Flexible Cable



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75 OHM MCX CABLE CONNECTORS

Cable RG-/U	Cable Attachment		CAI	Plt.	Ins.	Construction Notes	Amphenol Number	Fig.
	Outer	Inner						
RG-179	Crimp	Solder	C74	P11	D1	Gold Plated	919-137P-71SX	1
RD-179	Crimp	Solder	C74	P11	D1	Gold Plated	919-137P-71S2X	1
RG-179	Crimp	Solder	C77	P11	D1	Gold Plated	919-136P-71AX	2
RD-179	Crimp	Solder	C77	P11	D1	Gold Plated	919-136P-71A2X	2

75 OHM SURFACE MOUNT CONNECTOR

	Cable Attachment		CAI	Ins.	Construction Notes	Amphenol Number	Fig.
	Outer	Inner					
	Crimp	Solder	C74	D1	Gold Plated	919-132J-71P	3