

KJ COMTECH

MMCX connectors are designed for frequency ranges from DC up to 6 GHz and for applications where smallest dimensions have to be achieved. The reliable "snap-on" coupling mechanism ensures that the electrical parameters are consistently reproduced. MMCX series provide a low RF leakage due to its non-slotted outer contact.

Series MMCX-50Ω

Microminiature Coaxial Connector

Technical Data

Material Data

Cable Connector

PCB Connector

Right Angle PCB Jack(female)



Microminiature Coaxial Connector

Description

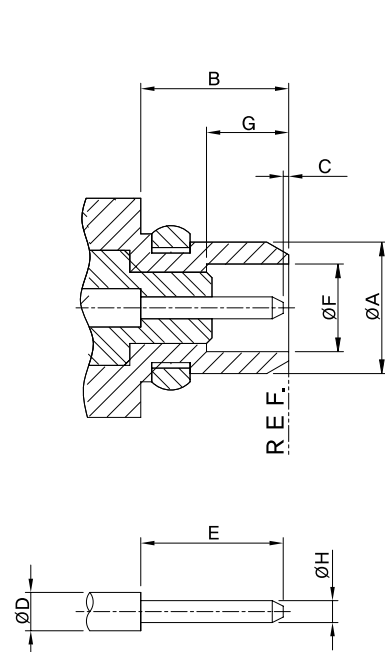
MMCX connectors are designed for frequency ranges from DC up to 6 GHz and for applications where smallest dimensions have to be achieved. The reliable "snap-on" coupling mechanism ensures that the electrical parameters are consistently reproduced. MMCX series provide a low RF leakage due to its non-slotted outer contact.

Contents

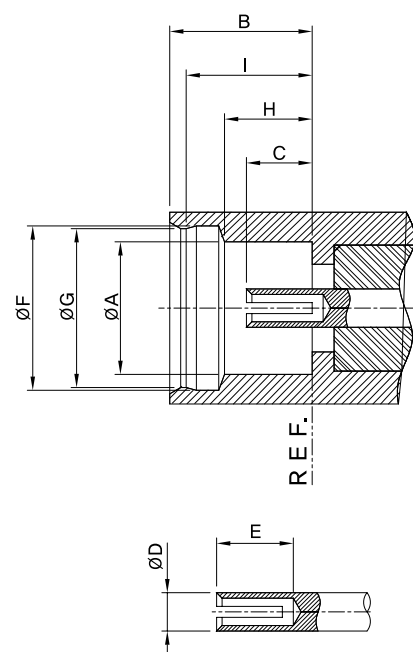
Microminiature Coaxial Connector	116
Technical Data	117
Material Data	117
Cable Connector	118
PCB Connector	121
Right Angle PCB Jack(female)	121

Interface Dimensions

Plug (Male)



Jack (Female)



Interface Dimensions in mm/inch

	Plug (Male)		Jack (Female)	
	Min.	Max.	Min.	Max.
A	-	2.40 / 0.094	2.41 / 0.095	-
B	2.70 / 0.106	-	-	2.65 / 0.104
C	-	0.25 / 0.010	0.90 / 0.035	1.20 / 0.047
D	0.70 / 0.028	-	0.70 / 0.028	-
E	1.23 / 0.048	-	1.40 / 0.055	-
F	1.58 / 0.062	1.62 / 0.064	3.00 / 0.118	3.04 / 0.120
G	1.23 / 0.048	-	2.88 / 0.113	2.92 / 0.115
H	0.38 / 0.015	0.42 / 0.017	1.57 / 0.062	1.63 / 0.064
I	-	-	2.26 / 0.089	2.34 / 0.092

Technical Data

Requirement

ELECTRICAL DATA

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)	500 V rms, 50 Hz
Working voltage (at sea level)	≤ 170 V rms, 50 Hz
Insulation resistance	≥ 10 MΩ
Contact resistance	
- Center contacts	≤ 5.0 mΩ
- Outer contacts	≤ 2.5 mΩ

Specification

TEST REQUIREMENTS

MECHANICAL DATA

Engagement force	≤ 15 N / 3.4 lbs
Disengagement force	6 N ~ 15 N / 1.4 lbs ~ 3.4 lbs
Contact captivation	≥ 10 N / 2.3 lbs
Durability (matings)	≥ 500

TEST REQUIREMENTS

Material Data

Connector Part	Material		Plating
	Male	Female	
PIN	Brass	Beryllium-Copper	Gold
INSULATOR	PTFE	PTFE	-
BODIES	Brass	Brass	Gold
SPRING RING	-	Beryllium-CopperBrass	Gold

Cable Connector

● Straight Cable Plugs(male)

For flexible cable
Cable entry soldered
Center contact soldered

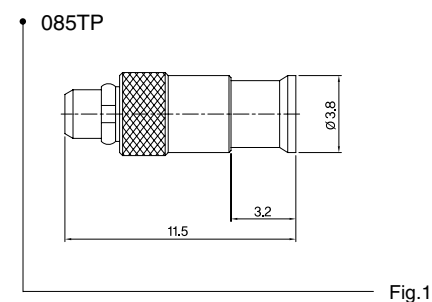


Fig	Type	Code		Cable Goup (example)	Plating			AS-In	Note
		Old Code	New Code		Pin	Body	Pipe		
1	MMCX50-PS-085	K311-002-000	CN1111S03-001-1/1	S03 085TP	Gold	Gold	Gold		

For flexible cable
Cable entry crimp
Center contact soldered

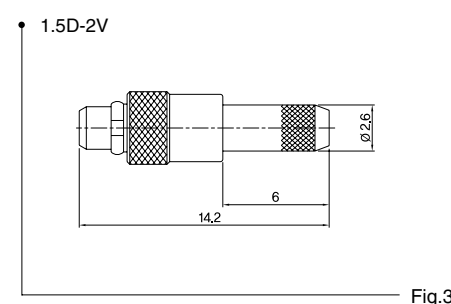
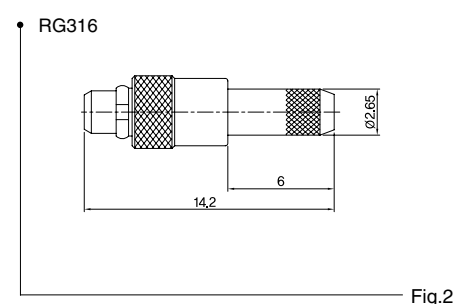
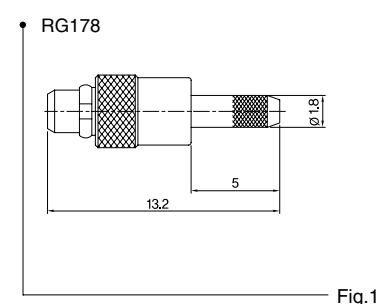


Fig	Type	Code		Cable Goup (example)	Plating			AS-In	Note
		Old Code	New Code		Pin	Body	Pipe		
1	MMCX50-PC-178	K311-003-000	CN1111X01-001-1/1	X01 RG178	Gold	Gold	Gold		
2	MMCX50-PC-316	K311-001-000	CN1111X02-001-1/1	X02 RG316	Gold	Gold	Gold		
3	MMCX50(R)-PC-1.5D-2V	K311-001-001	CN1113X03-001-1/1	X03 1.5D-2V	Gold	Gold	Gold		Reverse Polarity

● Right Angle Plugs(male)

For semi-rigid cable
Cable entry crimp
Center contact soldered

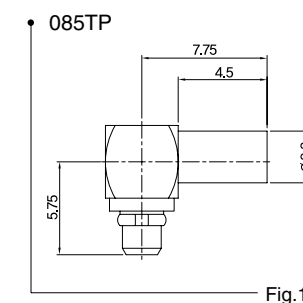


Fig	Type	Code		Cable Goup (example)	Plating			AS-In	Note
		Old Code	New Code		Pin	Body	Pipe		
1	MMCX50-LPS-085	K311-132-000	CN1131S03-001-1/1	S03 085TP	Gold	Gold	Gold		

For flexible cable
Cable entry crimp
Center contact soldered

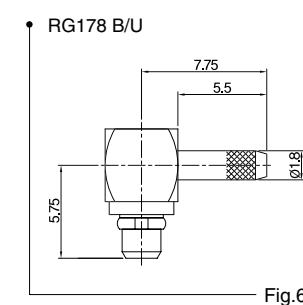
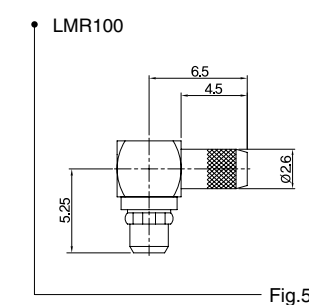
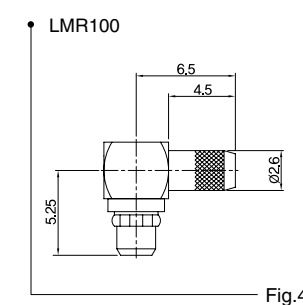
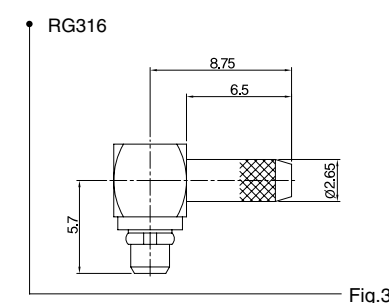
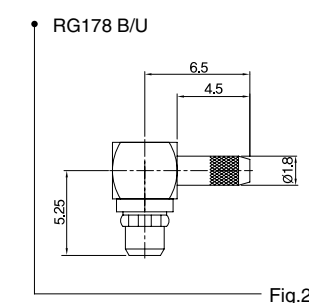
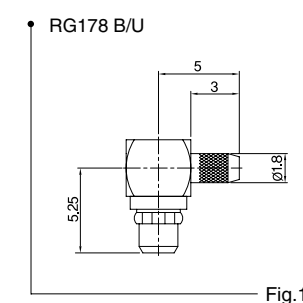


Fig	Type	Code		Cable Goup (example)	Plating			AS-In	Note
		Old Code	New Code		Pin	Body	Pipe		
1	MMCX50-LPC-178	K311-133-002	CN1131X01-002-1/1	X01 RG178 B/U	Gold	Gold	Gold		
2	MMCX50-LPC-178	K311-133-001	CN1139X01-001-1/1	X01 RG178 B/U	Gold	Gold	Gold		Reverse Polarity
3	MMCX50-LPC-316	K311-131-000	CN1131X02-002-1/1	X02 RG316	Gold	Gold	Gold		
4	MMCX50-LPC-LMR100	K311-134-000	CN1139X02-001-1/1	X02 LMR100	Gold	Gold	Gold		
5	MMCX50-LPC-LMR100	K311-134-001	CN1112X02-001-1/1	X02 LMR100	Gold	Gold	Gold		Reverse Polarity
6	MMCX50-LPC-178	K311-133-000	CN1131X01-002-1/1	X01 RG178 B/U	Gold	Gold	Gold		

● Straight Cable Jacks(female)

For flexible cable
Cable entry crimp
Center contact soldered

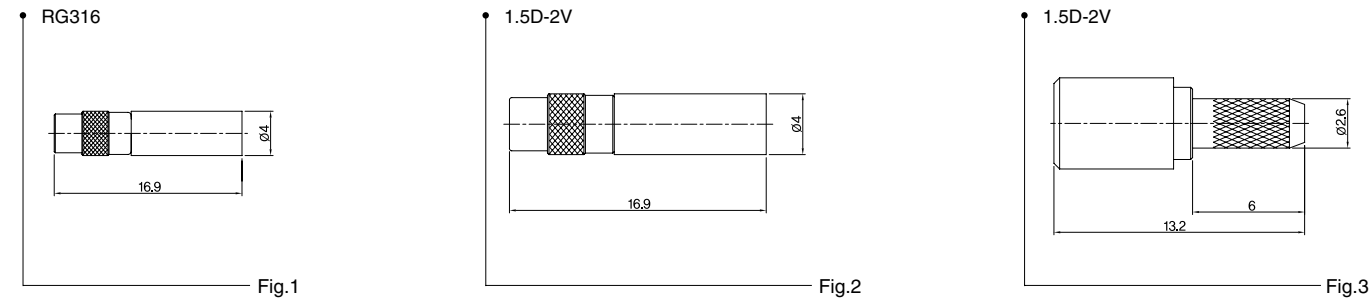


Fig	Type	Code		Cable Goup (example)	Plating			AS-In	Note
		Old Code	New Code		Pin	Body	Coupling		
1	MMCX50-JC-316	K311-201-000	CN1112X02-001-1/1	X02 RG316	Gold	Gold	Gold		
2	MMCX50-JC-1.5D-2V	K311-202-000	CN1112X03-002-1/1	X03 1.5D-2V	Gold	Gold	Gold		
3	MMCX50-JC-1.5D-2V	K311-002-001	CN1112X03-001-1/1	X03 1.5D-2V	Gold	Gold	Gold		Reverse Polarity

PCB Connector

● Straight PCB Plug(male) & Jack (female)

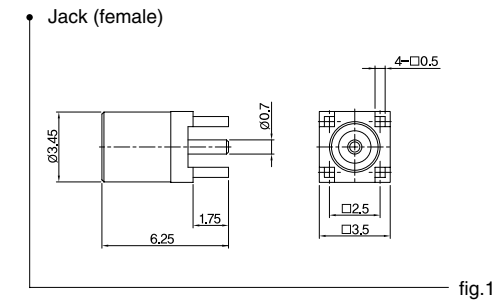


Fig	Type	Code		Plating			Mounting Hole	AS-In	Note
		Old Code	New Code	Pin	Body	Coupling			
1	MMCX50-JC-4R-R	K311-456-000	CN1151000-001-1/1	Gold	Gold	Gold	ML1		

● SMT PCB Plug(male) and Jack(female)

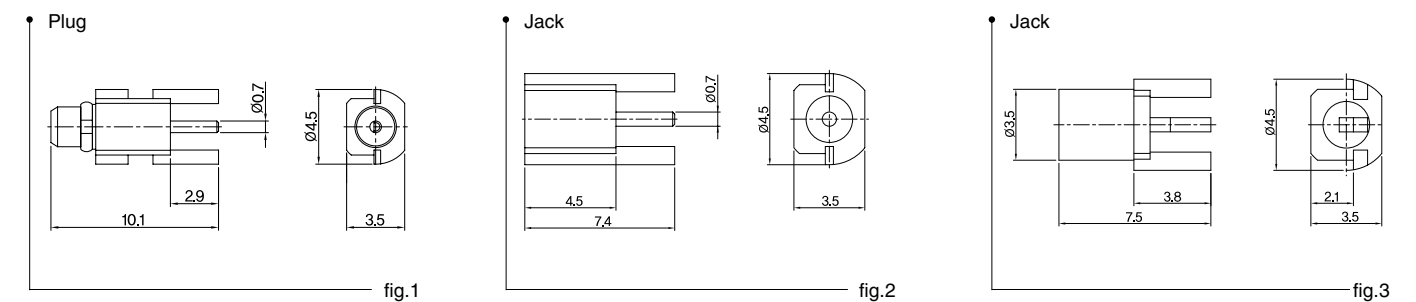


Fig	Type	Code		Plating			Mounting Hole	AS-In	Note
		Old Code	New Code	Pin	Body	Coupling			
1	MMCX50-P-2R-R	K311-479-000	CN1159000-001-1/1	Gold	Gold	Gold	ML98		EDGE
2	MMCX50-J-2R-R	K311-426-000	CN115A000-001-1/1	Gold	Gold	Gold	ML99		EDGE
3	MMCX50-J-2R-R	K311-426-005	CN115B000-001-1/1	Gold	Gold	Gold	ML100		Reverse

Right Angle PCB Jack(female)

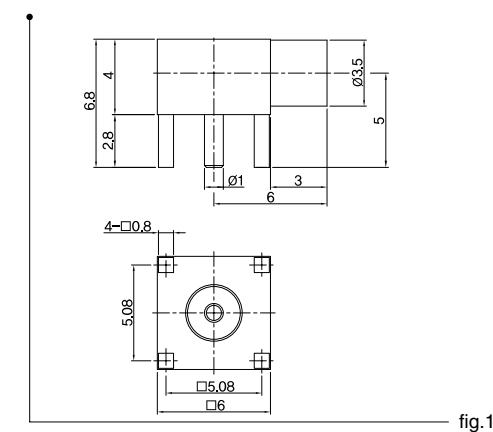


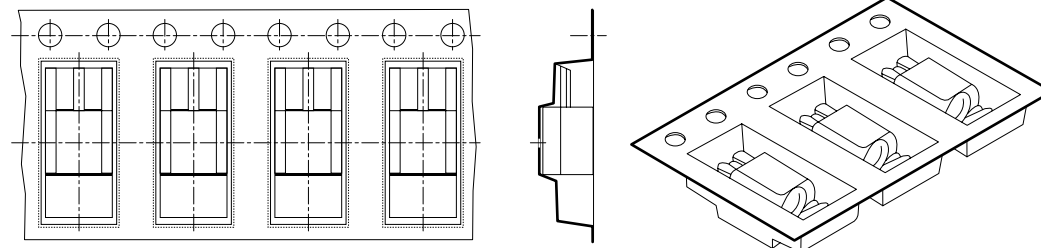
Fig	Type	Code		Plating			Mounting Hole	AS-In	Note
		Old Code	New Code	Pin	Body	Coupling			
1	MMCX50-LJ-4R-R	K311-666-000	CN1153000-001-1/1	Gold	Gold	Gold	ML31		

Appropriate operation

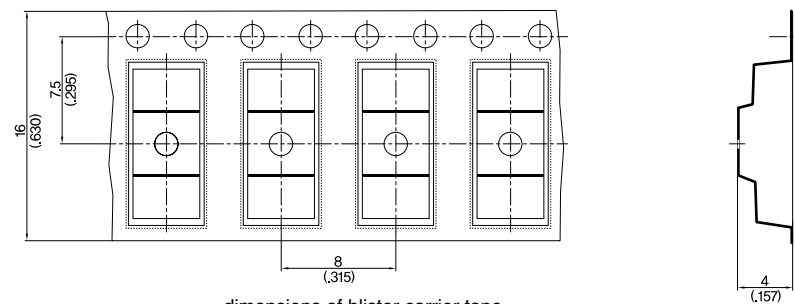
For automated placement the connectors can be supplied on industry standard type-and-reel.

- **Bulk supply in bags of 100 pcs.**

This delivery form is suitable for manual or automated tube fed pick-and-place assembly.



straight (horizontal) application

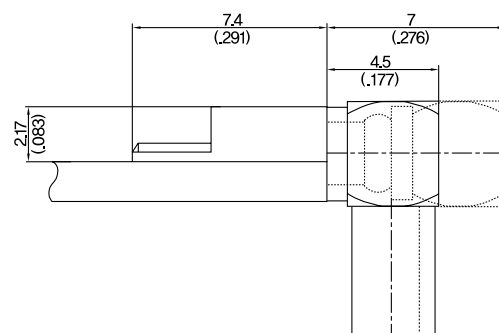


dimensions of blister carrier tape

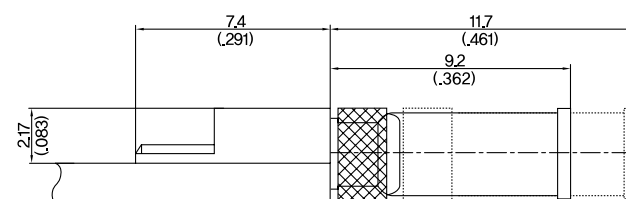
The 16 mm/.63 inches blister tape is delivered on reels of 330 mm/ 13 inches diameter, in a tough cardboard box.

Application Notes

● Dimensions of mated pair and clearance for mating

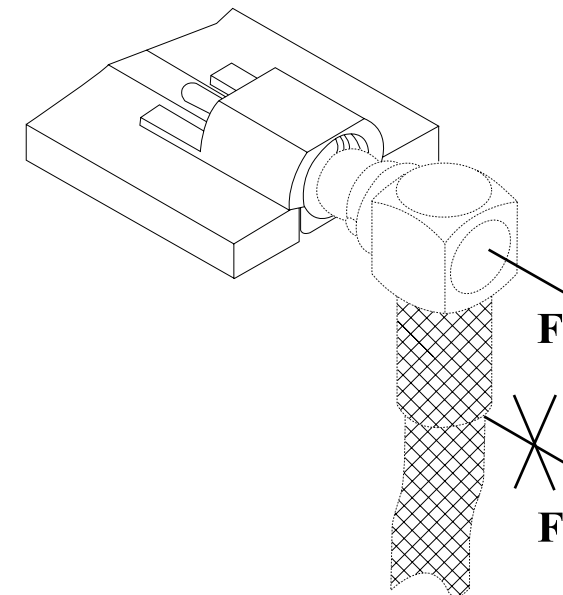


Horizontal mounting together with a right angle cable connector



Horizontal mounting together with a straight cable connector

 Warning:
force must not be applied in this region

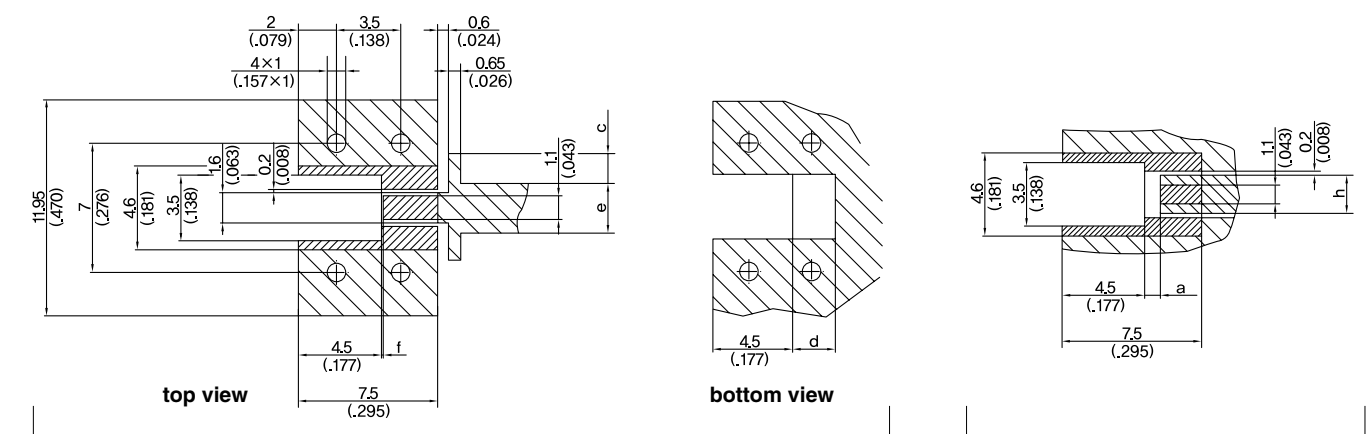


Recommended mounting pattern

Material FR ($\epsilon_r = 4.6$)

 pattern

 land(free of solder mask)



Microstrip line

Coplanar line

PCB thickness	a	b	c	d	e	f
0.8 mm/ .031 in	1.6 / .063	1.90 / .075	-	1.1 / .043	1.4 / .055	1.0 / .039
1.0 mm/ .039 in	1.4 / .055	1.75 / .069	0.3 / .012	1.2 / .047	1.8 / .071	0.9 / .035
1.6 mm/ .063 in	0.8 / .031	1.55 / .061	1.6 / .063	2.3 / .091	2.8 / .110	0.4 / .016