

50 Ω

75 Ω

DC - 6 GHz

INTRODUCTION

- Microminiature coaxial connectors
- "Push-pull" snap-on mating
- Complies with specification CECC 22220
- CEI standard 1169-36

APPLICATIONS

50 Ω models :

- Wireless communications
- Civil and military radio-telecommunication equipment
- Videocommunication

75 Ω models :

- Videocommunication
- Television broad casting

The **MCX series** utilises the SMB series electrical line and features a particularly simple, compact and robust interface.

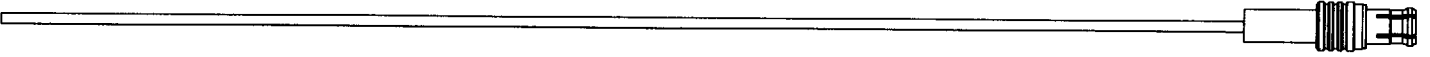
The MCX series is 30 % smaller than the SMB.

The **MCX series** helps to **miniaturize equipments**. It lowers wiring connection costs through its full crimp and solder-crimp versions as the center contact of the straight models can be either crimped or soldered. It optimizes PCB layouts with its range of models for PCBs including surface mount and press-fit receptacles.

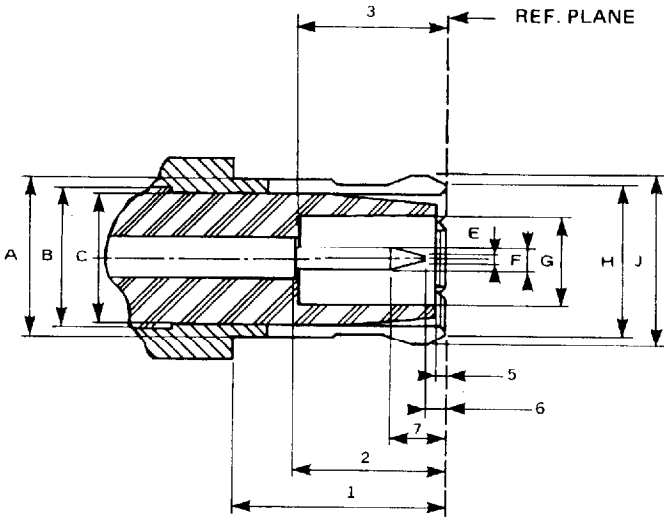
This catalogue also includes the whole range of PCB solder coaxial cable terminals (see pages 18/20).

MCX

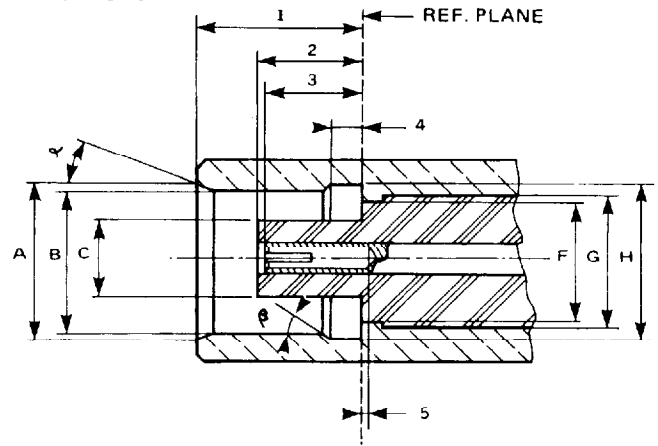
INTERFACE



PLUG



JACK



PLUG

ITEM	mm		Inch	
	mini	maxi	mini	maxi
1	4,15	—	.163	
2	2,80	3,20	.110	.126
3	2,80		.110	
5	0,00	0,30	.000	.012
6	0,15		.006	
7		1,20		.047
A		3,40		.134
B	3,05 NOM.		.120 NOM.	
C		3,00		.118
F		0,25		.010
F	0,48	0,53	.019	.021
G	2,00		.079	
H		3,60		.142
J		3,80		.150

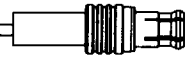
JACK

ITEM	mm		Inch	
	mini	maxi	mini	maxi
1	4,00	4,12	.157	.162
2	2,60	2,80	.102	.110
3	2,30	2,80	.090	.110
4	0,75	0,85	.029	.033
5	0,00		.000	
α	18 °	22 °	18 °	22 °
β	43 °	47 °	43 °	47 °
A	3,80		.150	
B	3,42	3,48	.135	.137
C		1,98		.078
F		3,00		.118
G	3,05 NOM.		3,05 NOM.	
H	3,60	3,75	.142	.148

Note : All dimensions in the following pages of this catalogue are given in inches (mm).

* statistics cotation : $.0539 \pm .0055$ (.0594 max)/(1.37 \pm 0.14)(1.51 max)

- 1) Coupling nut against on datum 1
- 2) Coupling nut against on datum 2



REQUIREMENT	GENERAL SPECIFICATIONS		
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ELECTRICAL

Impedance	50 Ω and 75 Ω		
Frequency range	DC - 6 GHz		
Typical V.S.W.R.	1 GHz	2.5 GHz	6 GHz
<i>Straight styles</i> .085 2.6/50/S	1.04 1.06	1.08 1.09	1.13 1.12
<i>Right angle styles</i> .085 2.6/50/S	1.03 1.04	1.06 1.07	1.10 1.10
Insulation resistance	1000 M Ω		
Contact resistance (m Ω)	Initial	After environment	
Center contact	≤ 5	≤ 15	
Outer contact	≤ 2.5	≤ 7.5	
Voltage rating (V.R.M.S)	At sea level	At 70.000 Ft	
Cable RG 196/U -.047 - RG 188/U	170 V rms max	45 V rms max	
.102(2.6) double screen	335 V rms max	85 V rms max	
RG 405/U -.085	250 V rms max	65 V rms max	
Dielectric withstanding voltage	at sea level	at 70.000 Ft	
Cable RG 196/U -.047 - RG 188/U	500 V rms max	100 V rms max	
.102(2.6) double screen	750 V rms max	100 V rms max	
RG 405/U -.085	750 V rms max	100 V rms max	

MECHANICAL

Mechanical endurance	500 matings
Engagement and separation force	
Engagement	≤ 14.2 lbs - 63 N max
Separation	≥ 1.8 Lbs - 8N ≤ 4.5 lbs 20 N
Cable retention force	
RG 196/U-	≥ 7.2 lbs - 32 N
RG 188/U-	≥ 11.9 lbs - 53 N
K 02252 d .102 (2.6/50 Ω) double screen	≥ 24.1 lbs - 107 N
.047	≥ 9.7 lbs - 43 N
RG 405/U-.085	≥ 34.9 lbs - 155 N
Contact captivation	Axial force 2.25 Lbs 10 N

ENVIRONMENTAL

Operating temperature	-55°C +155°C	
Temperature cycling	CECC 22220 paragraph 4-6-5	
Thermal shock	CECC 22220 paragraph 4-6-7	MIL STD 202 - method 107 condition C
High temperature test	CECC 22220 paragraph 4-7-2	MIL STD 202 - method 108A condition D
Corrosion (salt spray)	CECC 22220 paragraph 4-6-10	MIL STD 202 - method 101 condition B
Vibration	CECC 22220 paragraph 4-6-3	MIL STD 202 - method 204 condition D

MATERIALS

Bodies and male contacts	Brass
Interface and female center contacts	Beryllium copper
Ferrules	Brass
Insulators	PTFE

PLATING

Bodies	Gold Nickel BBR (non magnetic) Tin lead
Center contacts	Gold

STRAIGHT FEMALE PCB RECEPTACLES (captive center contact)

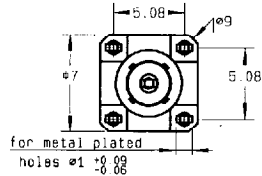


Fig. 1

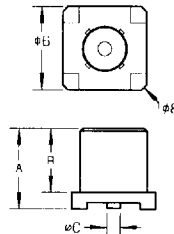


Fig. 3

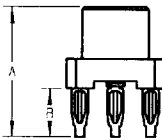


Fig. 2

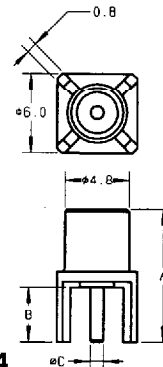
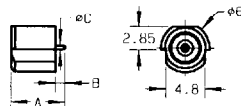


Fig. 4

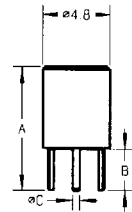


Fig. 5

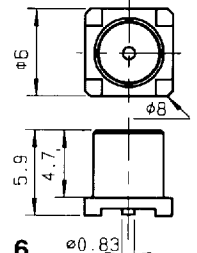
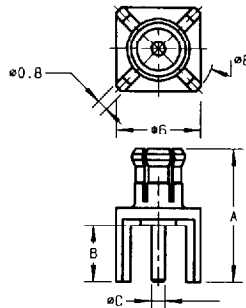


Fig. 6

part number	fig.	imp. (Ω)	dimensions (mm)			mounting	PCB	finish	note
			A	B	C				
R113 416 000	1	50	9.45	3.5		M 06	P 04	Gold	Press-Fit PCB mount
R113 416 020	1	50	9.45	3.5		M 06	P 04	Nickel	Press-Fit PCB mount
R113 423 000	2	50	6.9	1.1	0.5	M12		Gold	SMT / Edge-card
R113 424 000	3	50	5.9	4.7	0.96	M12		Gold	SMT
R113 424 010	3	50	5.9	4.7	0.96	M12		Gold	SMT / reel 100 pieces
R113 424 020	3	50	5.9	4.7	0.96	M12		Gold	SMT / reel 500 pieces
R113 426 000	4	50	10	4	0.98		P 05	Gold	
R113 426 010●	4	50	10	3.6	0.98		P 05	Gold	Short pins
R113 426 020	4	50	10	4	0.98		P 05	BBR	
R113 426 120●	4	50	10	4	0.98		P 05	Tin lead	
R113 427 000	5	50	9	3	0.5		P 06	Gold	Space saving on PCB
R113 427 020	5	50	9	3	0.5		P 06	BBR	Space saving on PCB
R213 426 000●	4	75	10	4.1	0.71		P 05	Gold	
R213 424 800	6	75				M12			SMT / reel 100 pieces

STRAIGHT MALE PCB RECEPTACLE (captive center contact)



part number	imp. (Ω)	dimensions (mm)			PCB	finish
		A	B	C		
R113 425 000●	50	9.5	4	0.96	P 05	Gold

● Upon request.



STRAIGHT FEMALE PANEL RECEPTACLES (captive center contact)

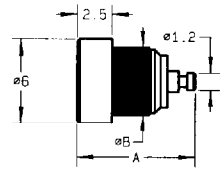
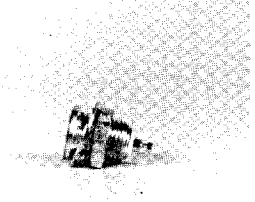


Fig. 1

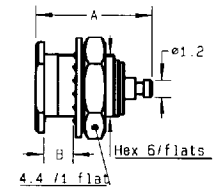


Fig. 2

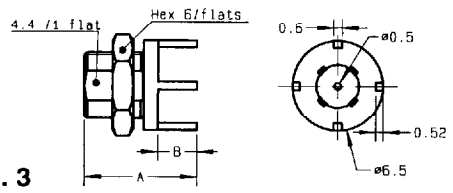


Fig. 3

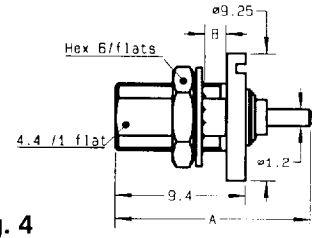
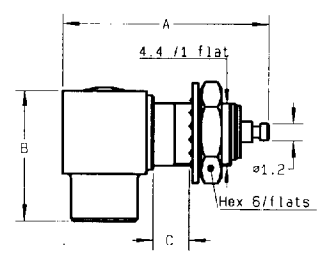
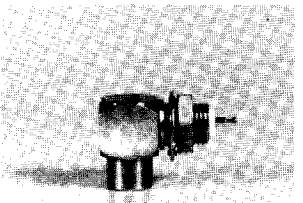


Fig. 4

part number	fig.	imp. (Ω)	dimensions (mm)		panel	finish	note
			A	B			
R113 402 220●	1	50	8.7	4.8	P 03	Nickel	Press-in mount
R113 553 000	2	50	8.65	2.5	P 02	Gold	Recessed front mount
R113 553 020	2	50	8.65	2.5	P 02	Nickel	Recessed front mount
R113 554 020●	3	50	8.1	2.8	P 04	Nickel	Panel mount + PCB
R113 556 500●	4	50	14	5	P 02	Gold	Rear mount

RIGHT ANGLE FEMALE PANEL RECEPTACLES (captive center contact)



part number	imp. (Ω)	dimensions (mm)			panel	finish
		A	B	C		
R113 670 000●	50	14.1	9.4	2.5	P 02	Gold
R113 670 020●	50	14.1	9.4	2.5	P 02	Nickel

● Upon request.

RIGHT ANGLE FEMALE PCB RECEPTACLES (captive center contact)

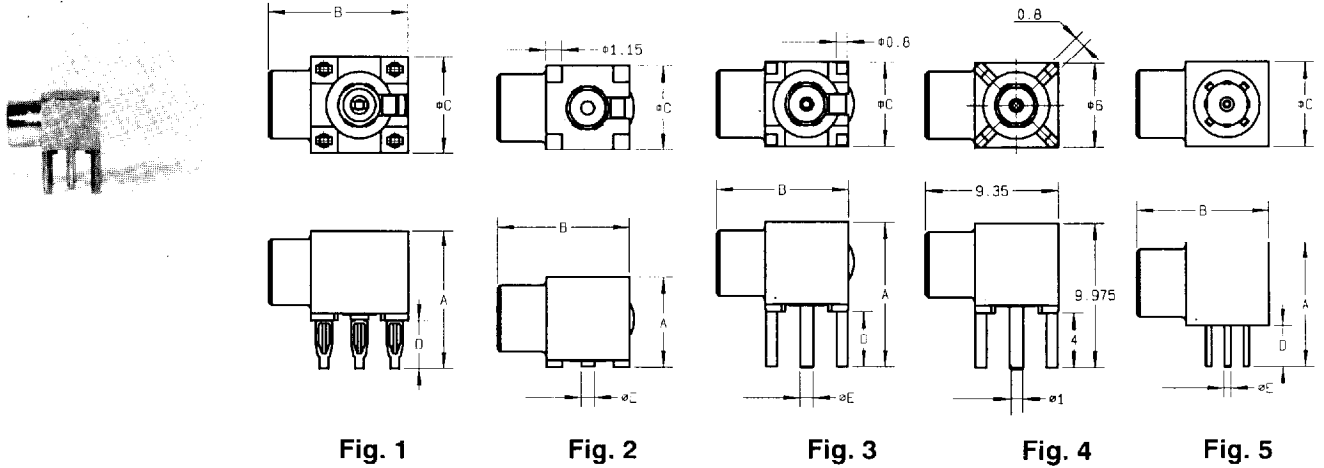


Fig. 1

Fig. 2

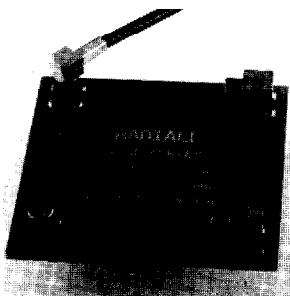
Fig. 3

Fig. 4

Fig. 5

part number	fig.	imp. (Ω)	dimensions (mm)					mounting	PCB	finish	note
			A	B	C	D	E				
R113 661 000	1	50	10	10	7	3.5		M 06	P 04	Gold	Press-fit PCB mount
R113 661 020	1	50	10	10	7	3.5		M 06	P 04	Nickel	Press-fit PCB mount
R113 661 027	1	50	10	10	7	3.5		M 06	P 04	BBR	Press-fit PCB mount
R113 664 000	2	50	6.5	9.5	6		0.98	M 12		Gold	SMT
R113 664 100	2	50	6.5	9.5	6		0.98	M 12		Gold	SMT / reel 100 pieces
R113 664 120	2	50	6.5	9.5	6		0.98	M 12		Gold	SMT / reel 500 pieces
R113 665 000	3	50	10.5	9.5	6	4	0.98		P 05	Gold	
R113 665 010●	4	50							P 05	Gold	
R113 665 020	3	50	10.5	9.5	6	4	0.98		P 05	BBR	
R113 665 037	3	50	9.5	9.5	6	3	0.98		P 05	BBR	Packaging : 100 pieces
R113 665 110●	3	50	11.5	9.5	6	2.5	0.98		P 05	Gold	
R113 665 127●	3	50	10.5	9.5	6	4	0.98		P 05	BBR+tin lead	Packaging : 100 pieces
R113 665 137●	3	50	9.5	9.5	6	3	0.98		P 05	BBR+tin lead	Packaging : 100 pieces
R113 666 000	5	50	9	9.4	6	3	0.5		P 06	Gold	Space saving pattern
R113 666 020	5	50	9	9.4	6	3	0.5		P 06	BBR	Space saving pattern
R213 664 800●	2	75	6.5	9.5	6		0.83	M 12		Gold	SMT / reel 100 pieces
R213 665 000	3	75	10.5	9.5	6	4	0.83		P 05	Gold	

DEMONSTRATION BOARDS



part number	imp. (Ω)
R113 900 520	50
R213 900 520	75

Including straight and right angle through holes and SMT pins receptacles.

● Upon request.