

**RF/MICROWAVE**

**Coaxial Connectors**

**TAIWANGAST INC.**

2F, No.27, Jhong-Rong St., Sin-Jhuang City, Taipei County 242, Taiwan

TEL. 886 2 8994 1601, FAX. 886 2 8994 1602

sales@rfconnector.com.tw, www.rfconnector.com.tw

# General Information

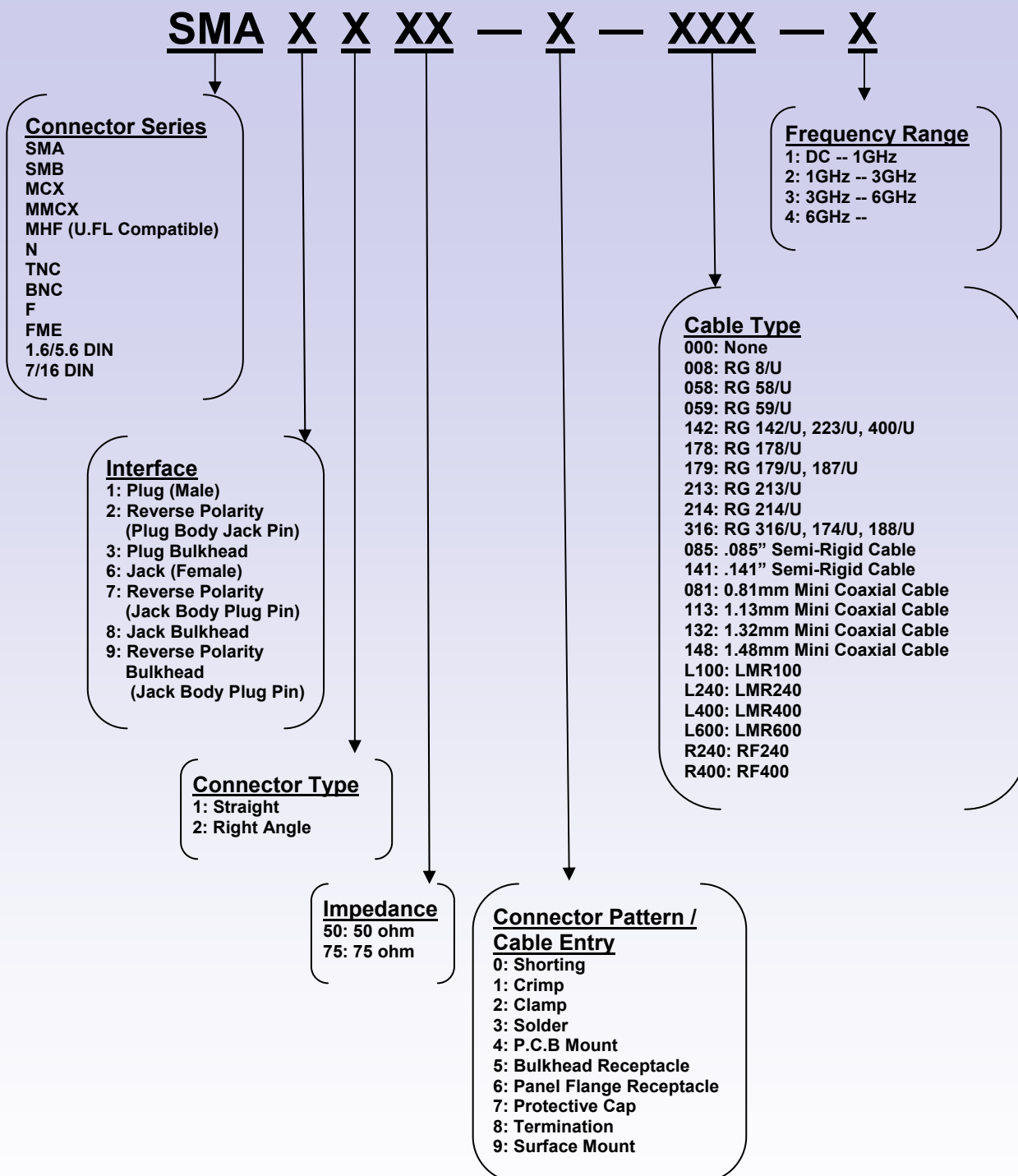
|                 |  |             |                |
|-----------------|--|-------------|----------------|
| <b>SMA</b>      | <b>Subminiature Connectors<br/>Screw Lock</b>      | <b>50 Ω</b> | <b>18 GHz</b>  |
| <b>SMB</b>      | <b>Subminiature Connectors</b>                     | <b>50 Ω</b> | <b>4 GHz</b>   |
|                 | <b>Snap Lock</b>                                   | <b>75 Ω</b> | <b>3 GHz</b>   |
| <b>MCX</b>      | <b>Microax Connectors</b>                          | <b>50 Ω</b> | <b>6 GHz</b>   |
|                 | <b>Snap Lock</b>                                   | <b>75 Ω</b> | <b>3 GHz</b>   |
| <b>MMCX</b>     | <b>Miniature Microax Connectors<br/>Snap Lock</b>  | <b>50 Ω</b> | <b>6 GHz</b>   |
| <b>N</b>        | <b>Coaxial Connectors</b>                          | <b>50 Ω</b> | <b>11 GHz</b>  |
|                 | <b>Screw Lock</b>                                  | <b>75 Ω</b> | <b>1.5 GHz</b> |
| <b>TNC</b>      | <b>Coaxial Miniature Connectors</b>                | <b>50 Ω</b> | <b>11 GHz</b>  |
|                 | <b>Screw Lock</b>                                  | <b>75 Ω</b> | <b>1 GHz</b>   |
| <b>BNC</b>      | <b>Coaxial Miniature Connectors</b>                | <b>50 Ω</b> | <b>4 GHz</b>   |
|                 | <b>Bayonet Lock</b>                                | <b>75 Ω</b> | <b>1 GHz</b>   |
| <b>FME</b>      | <b>Coaxial Miniature Connectors<br/>Screw Lock</b> | <b>50 Ω</b> | <b>3 GHz</b>   |
| <b>F</b>        | <b>Coaxial Connectors<br/>Screw Lock</b>           | <b>75 Ω</b> | <b>1 GHz</b>   |
| <b>1.6/5.6</b>  | <b>Coaxial Connectors<br/>Screw Lock</b>           | <b>75 Ω</b> | <b>1 GHz</b>   |
| <b>7/16</b>     | <b>Coaxial Connectors<br/>Screw Lock</b>           | <b>50 Ω</b> | <b>7.5 GHz</b> |
| <b>Adaptors</b> | <b>Between Series</b>                              |             |                |

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# RF Connector Number Legend

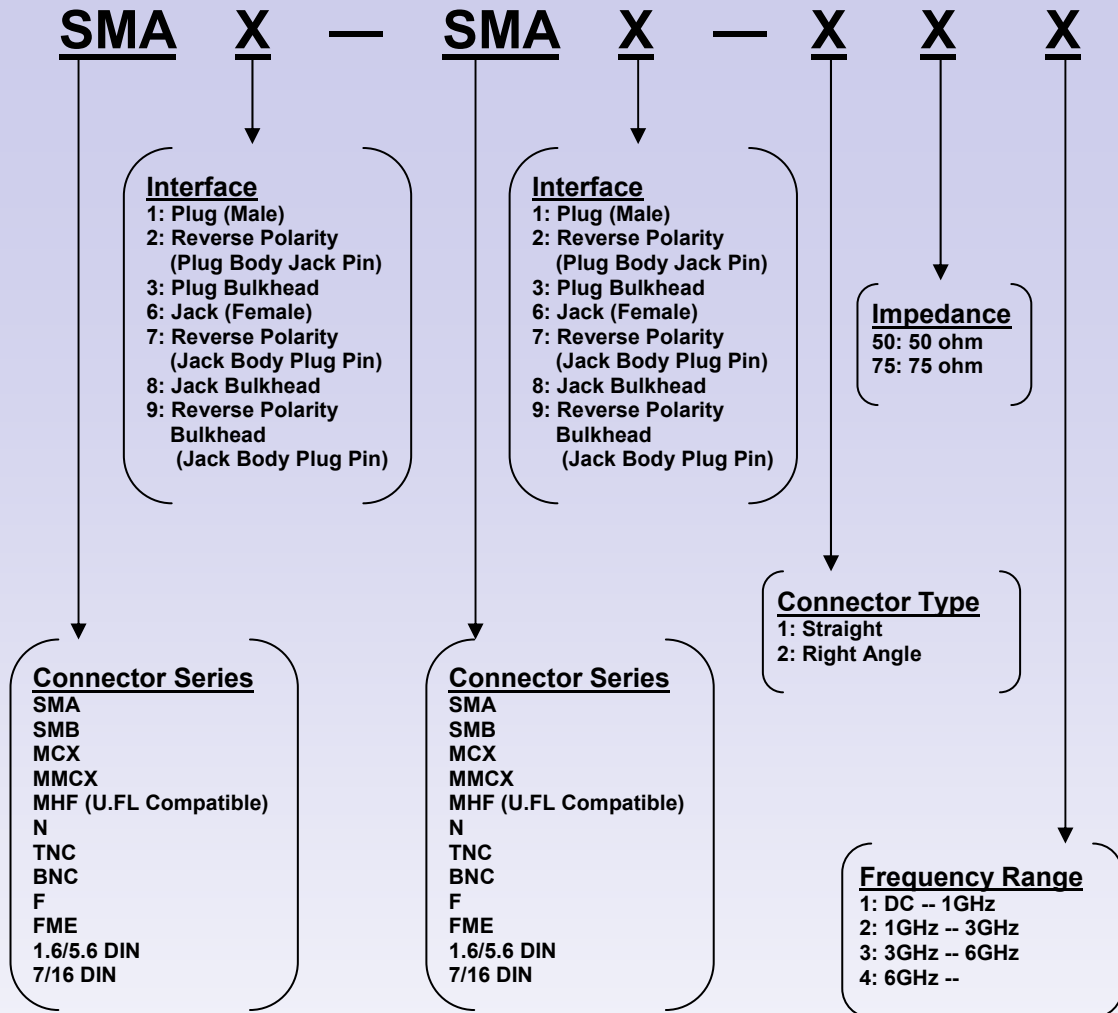


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# RF Adapter Number Legend

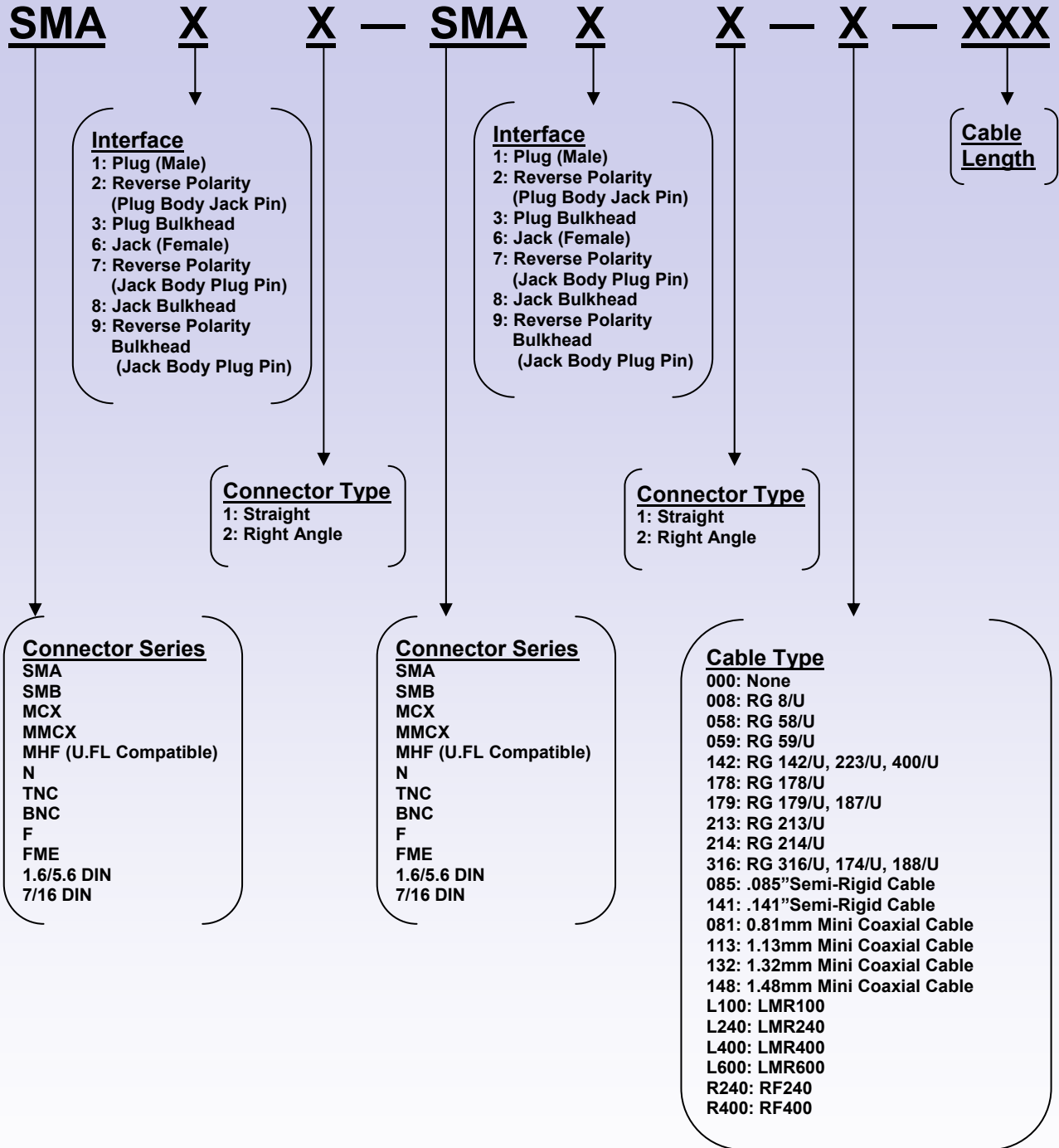


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# RF Cable Assembly Number Legend



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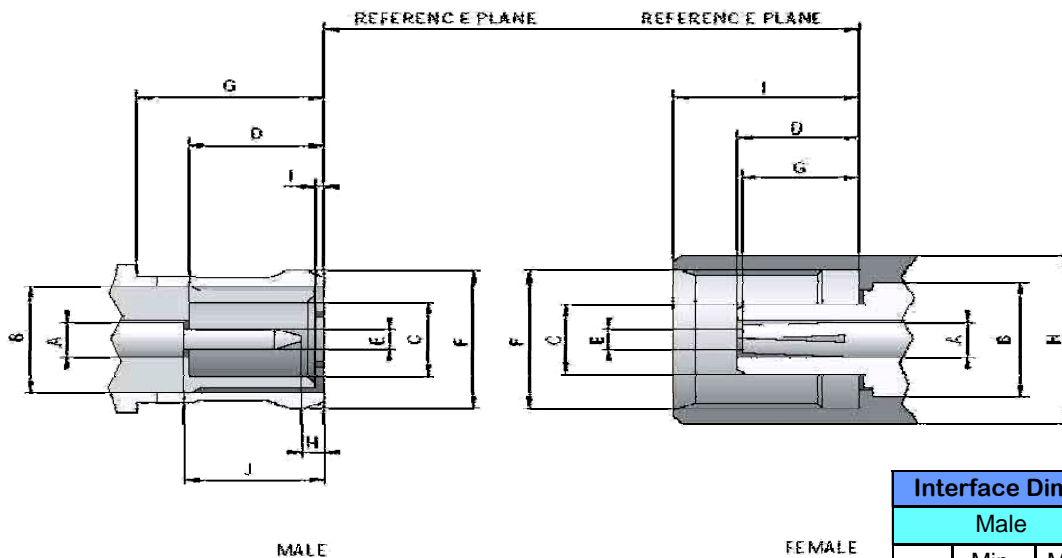
# MCX SERIES

The MCX Series is approximately 30% smaller than the SMB. It features a quick connect-disconnect snap-on coupling system and this series provides designers with options where size, weight, performance and ease on assembly are the driving considerations to the final design decision.

## Applications:

- ◆ Automotive
- ◆ Telecom
- ◆ GPS
- ◆ Radios
- ◆ Base Station
- ◆ Wireless
- ◆ Instrumentation
- ◆ Components
- ◆ PC/LAN
- ◆ Head End Equipment

## Interface Mating Dimensions:



| Interface Dimension in Millimeters |          |      |        |          |      |
|------------------------------------|----------|------|--------|----------|------|
|                                    | Male     |      | Female |          |      |
|                                    | Min.     | Max. |        | Min.     | Max. |
| A                                  | 0.95 nom |      | A      | 0.95 nom |      |
| B                                  |          | 3.00 |        |          |      |
| C                                  | 2.00     | 2.07 | C      | 1.85     | 1.95 |
| D                                  | 2.80     |      | D      | 2.60     | 2.80 |
| E                                  | 0.48     | 0.53 | E      | 5.55     | 5.58 |
| F                                  |          | 3.80 | F      | 3.60     | 3.75 |
| G                                  | 4.15     |      | G      | 2.30     | 2.80 |
| H                                  | 0.15     |      |        |          |      |
| I                                  | 0.00     | 0.30 | I      | 4.00     | 4.12 |
| J                                  | 2.80     | 3.20 |        |          |      |

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## Technical Characteristics

### Electrical

|                                 |   |                 |
|---------------------------------|---|-----------------|
| Impedance                       | <b>50 ohm/ 75 ohm</b>                               |                 |
| Frequency Range                 | 0 – 6 GHz   |                 |
| Working Voltage                 | 335 VRMX  |                 |
| Dielectric Withstanding Voltage | RG-178, 196: 500 VRMS<br>RG-174, 188, 316: 750 VRMS |                 |
| VSWR                            | Straight  | 1.35 max.       |
|                                 | Right Angle   | 1.63 max.       |
| Contact Resistance              | Center Contact                                      | 5 Milliohm Max. |
|                                 | Outer Contact                                       | 1 Milliohm Max. |
| Insulator Resistance            | 1000 Mega ohms min.                                 |                 |

### Material:

| Part Name         | Material                                | Finish         |
|-------------------|---|----------------|
| Body, Metal Parts | Brass                                   | Gold or Nickel |
| Center Contacts   | Plug: Brass                             | Gold           |
|                   | Jack: Beryllium Copper, Phosphor Bronze | Gold           |
| Insulator         | PTFE                                    |                |
| Crimp Ferrule     | Annealed Copper                         | Gold or Nickel |
| Clamp Gaskets     | Silicone Rubber                         |                |

### Mechanical & Environmental

|                     |   |
|---------------------|---|
| Mating              | "Push-Pull" Snap-On Coupling                  |
| Engagement Force    | 3.4 lbs. max                                  |
| Disengagement Force | 4.5 lbs max.                                  |
| Contact Retention   | 4.0 lbs. min.                                 |
| Durability (Mating) | 500 cycles min. (For Be/Cu Jack Contact only) |
| Temperature Range   | -65°C ~ 155°C                                 |
| Vibration           | MIL-STD-202 Meth. 204/B                       |
| Salt Spray          | MIL-STD-202 Meth. 101/B                       |
| Thermal Shock       | MIL-STD-202 Meth. 107                         |

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# MCX SERIES

**50 ohm**

**MCX1150-1-XXX  
MCX STR. PLUG CRIMP TYPE**

Suitable Cable:

(1)RG178, RG196

(2)RG174, RG188, RG316

(3)RD316



**MCX1150-3-XXX  
MCX STR. PLUG SOLDER TYPE**

Suitable Semi-Rigid Cable:

(1) .047

(2) .085



**MCX1150-4  
MCX STR. PLUG P.C.B. MOUNT**



**MCX1250-1-XXX  
MCX R/A PLUG CRIMP TYPE**

Suitable Cable:

(1)RG178, RG196

(2)RG174, RG188, RG316

(3)RD316



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# MCX SERIES

**50 ohm**

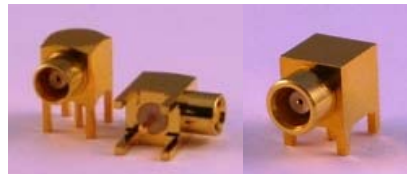
**MCX6150-4**  
**MCX STR. JACK P.C.B. MOUNT**



**MCX6150-9**  
**MCX STR. JACK SURFACE MOUNT**



**MCX6250-4**  
**MCX R/A JACK P.C.B. MOUNT**



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# MCX SERIES

**75 ohm**

**MCX1175-1-XXX**  
**75 ohm MCX STR. PLUG CRIMP TYPE**  
**Suitable Cable:**  
**(1)RG179, RG187**



**MCX1275-1-XXX**  
**75 ohm MCX R/A PLUG CRIMP TYPE**  
**Suitable Cable:**  
**(1)RG179, RG187**



**MCX6175-4**  
**75 ohm MCX STR. JACK P.C.B. MOUNT**



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