



**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 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 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 Screw Lock</b>	<b>50 Ω</b>	<b>3 GHz</b>
<b>F</b>	<b>Coaxial Connectors Screw Lock</b>	<b>75 Ω</b>	<b>1 GHz</b>
<b>1.6/5.6</b>	<b>Coaxial Connectors Screw Lock</b>	<b>75 Ω</b>	<b>1 GHz</b>
<b>7/16</b>	<b>Coaxial Connectors 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

SMA X X XX — X — XXX — X

## Connector Series

SMA  
SMB  
MCX  
MMCX  
MHF (U.FL Compatible)  
N  
TNC  
BNC  
F  
FME  
1.6/5.6 DIN  
7/16 DIN

## Frequency Range

1: DC -- 1GHz  
2: 1GHz -- 3GHz  
3: 3GHz -- 6GHz  
4: 6GHz --

## Interface

1: Plug (Male)  
2: Reverse Polarity  
(Plug Body Jack Pin)  
3: Plug Bulkhead  
6: Jack (Female)  
7: Reverse Polarity  
(Jack Body Plug Pin)  
8: Jack Bulkhead  
9: Reverse Polarity  
Bulkhead  
(Jack Body Plug Pin)

## Cable Type

000: None  
008: RG 8/U  
058: RG 58/U  
059: RG 59/U  
142: RG 142/U, 223/U, 400/U  
178: RG 178/U  
179: RG 179/U, 187/U  
213: RG 213/U  
214: RG 214/U  
316: RG 316/U, 174/U, 188/U  
085: .085" Semi-Rigid Cable  
141: .141" Semi-Rigid Cable  
081: 0.81mm Mini Coaxial Cable  
113: 1.13mm Mini Coaxial Cable  
132: 1.32mm Mini Coaxial Cable  
148: 1.48mm Mini Coaxial Cable  
L100: LMR100  
L240: LMR240  
L400: LMR400  
L600: LMR600  
R240: RF240  
R400: RF400

## Connector Type

1: Straight  
2: Right Angle

## Impedance

50: 50 ohm  
75: 75 ohm

## Connector Pattern / Cable Entry

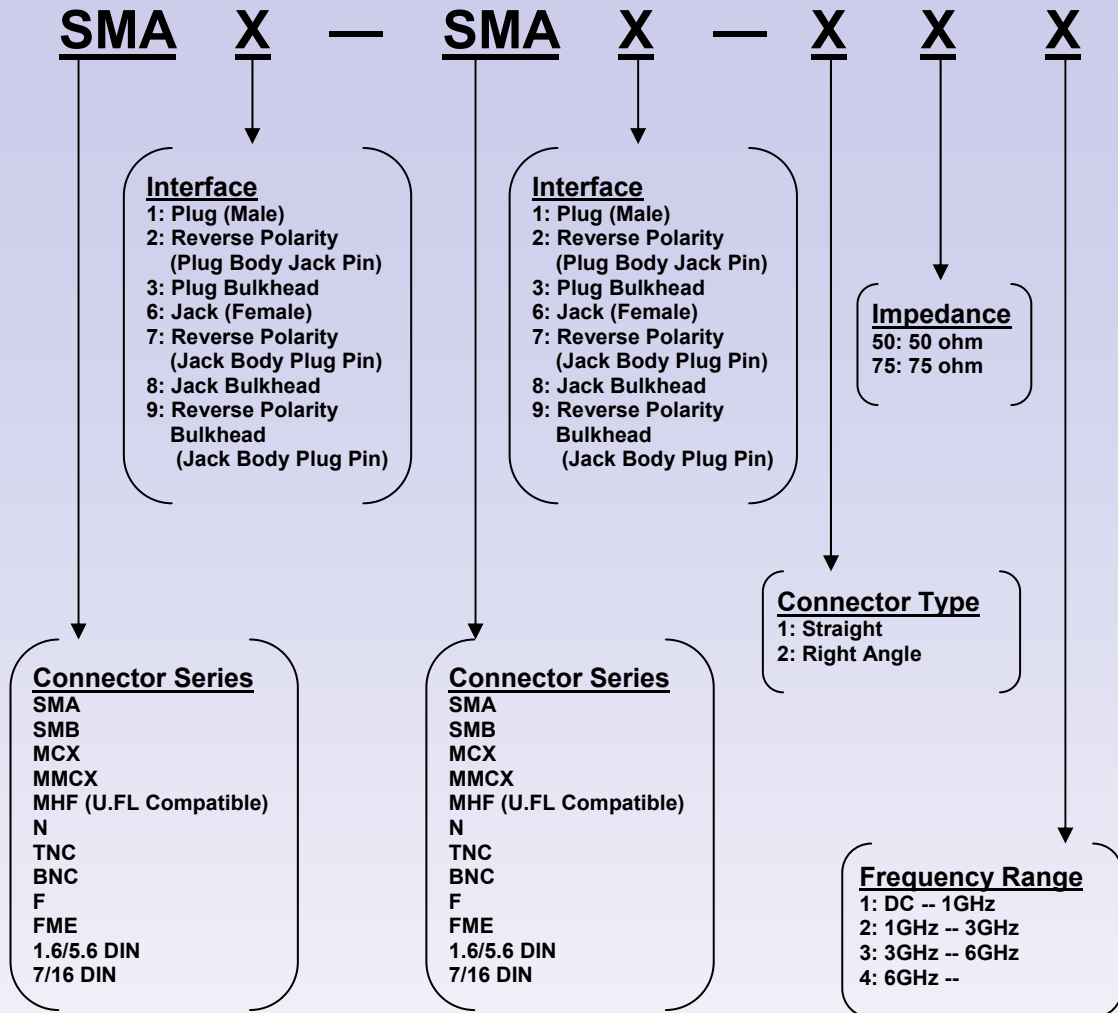
0: Shorting  
1: Crimp  
2: Clamp  
3: Solder  
4: P.C.B Mount  
5: Bulkhead Receptacle  
6: Panel Flange Receptacle  
7: Protective Cap  
8: Termination  
9: Surface Mount

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# RF Adapter Number Legend

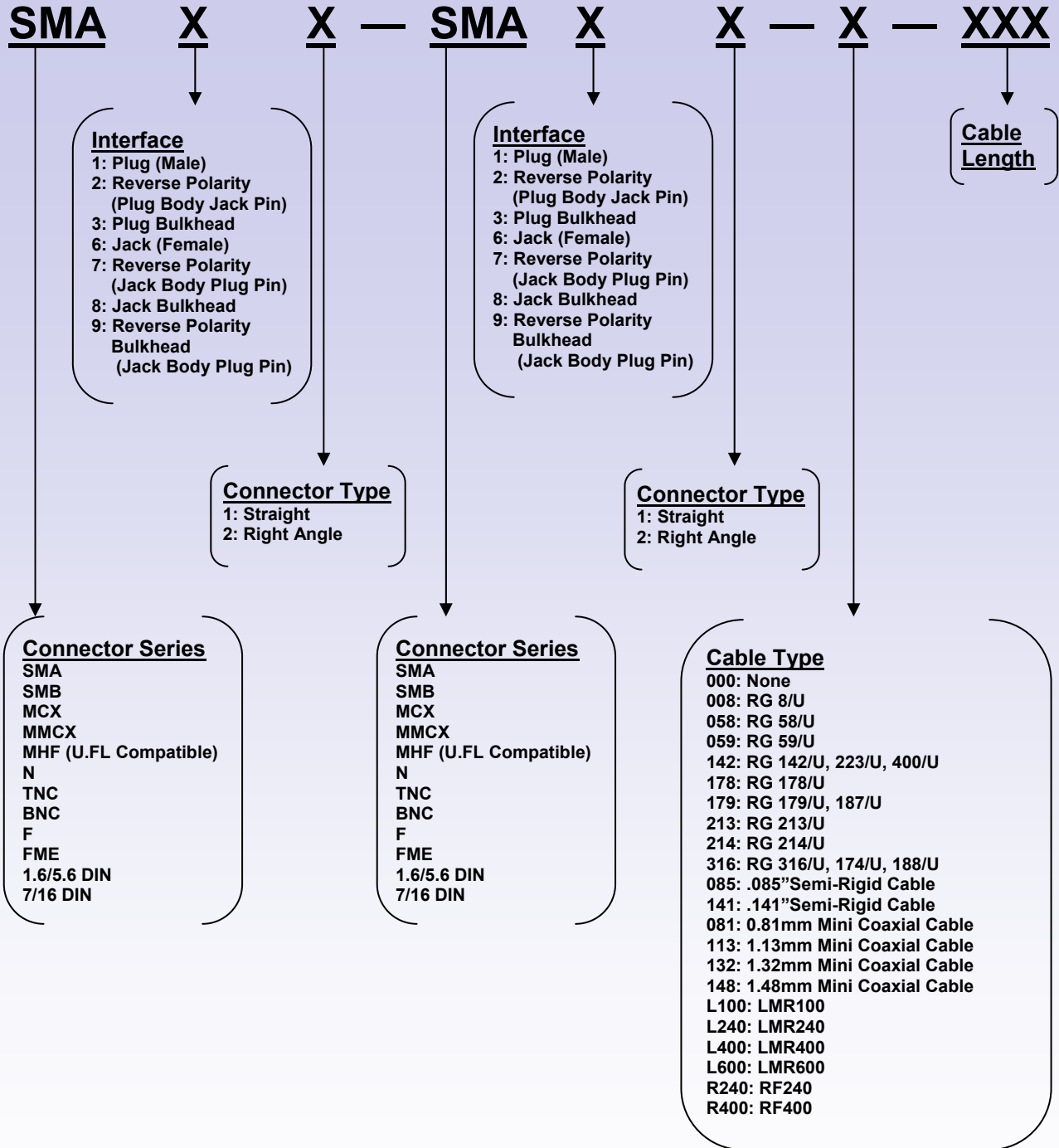


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# RF Cable Assembly Number Legend



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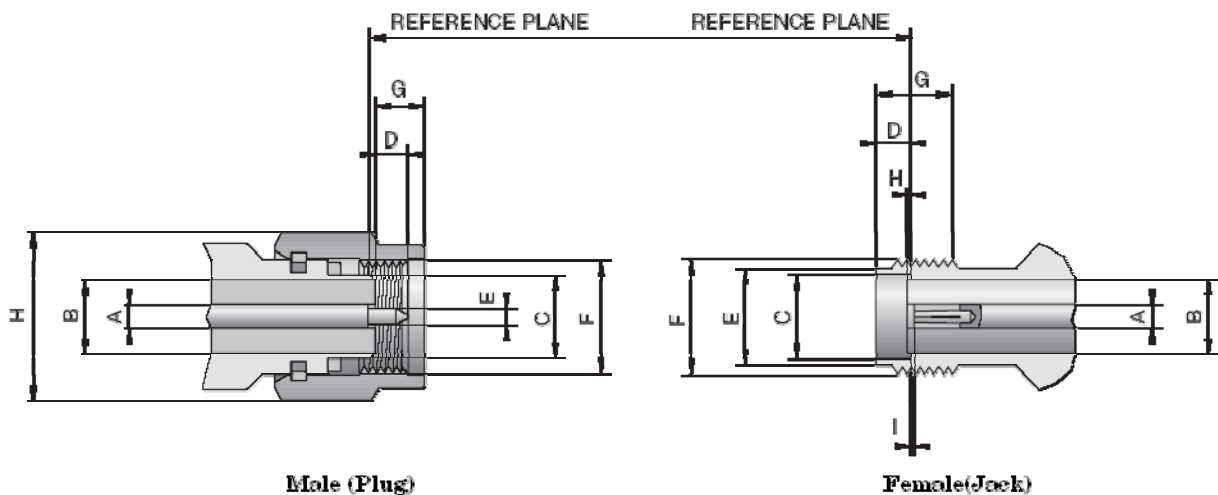
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# SMA SERIES

The SMA Series is a sub-miniature providing excellent electrical performance for microwave applications up to 18 GHz. They use a threaded interface and are constructed of high quality brass ensuring durability and mechanical strength. The main features are high mechanical strength, high durability and low VSWR.

- ◆ Base Stations
- ◆ Instrumentation
- ◆ Process Controls
- ◆ Telecommunication
- ◆ Wireless LAN
- ◆ PC/LAN
- ◆ Microwave components
- ◆ Cable Assemblies
- ◆ Mil/Aero

## Interface Mating Dimensions:



Interface Dimension in Millimeters					
Male			Female		
mm			mm		
	Min.	Max.		Min.	Max.
A	1.24	1.30	A	1.24	1.30
B		4.18	B		4.18
C	4.53	4.59	C	4.60	4.67
D	1.91	2.54	D	1.88	1.98
E	0.90	0.94	E	5.28	5.49
F	1/4-36UNS-2A		F	1/4-36UNS-2A	
G	2.54	3.43	G	4.32	
H	.315 HEX		H	0.05	0.20
			I	0.05	0.25

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# SMA SERIES

## Technical Characteristics

### Electrical

Impedance	50 ohm	
Frequency Range	0 – 18 GHz	
Working Voltage	RG-178, 196:	250 VRMS max.
	RG-174, 188, 316, .085":	335 VRMS max.
	RG-58, 141, 142, 223, .141":	500 VRMS max.
Dielectric Withstanding Voltage	RG-178, 196:	500 VRMS
	RG-174, 188, 316, .085":	750 VRMS
	RG-58, 141, 142, 223, .141":	1000 VRMS
VSWR	Straight	1.20 max.
	Right Angle	1.25 max.
Contact Resistance	Center Contact	5 Milliohm Max.
	Outer Contact	1 Milliohm Max.
Insulator Resistance	5000 Mega ohms min.	

### Material:

Part Name	Material	Finish
Body, Metal Parts	Brass, Stainless Steel	Gold, Nickel or Passivated
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

Engagement Force	2 in-lbs. max
Disengagement Force	2 in-lbs max.
Coupling Nut Retention	60 lbs. min.
Coupling Proof Torque	15 in-lbs. min.
Contact Retention	6 lbs. min.
Durability (Mating)	500 cycles min. (For Be/Cu Jack Contact only)
Temperature Range	-65°C ~ 165°C
Vibration	MIL-STD-202 Meth. 204/D
Salt Spray	MIL-STD-202 Meth. 101/B
Thermal Shock	MIL-STD-202 Meth. 102/C

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# SMA SERIES

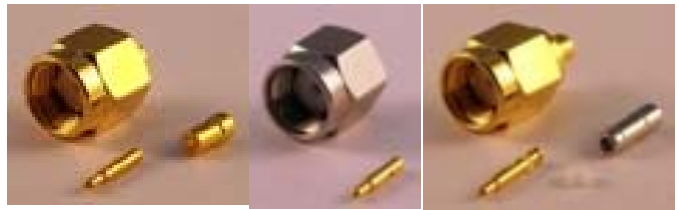
**SMA1150-1-XXX**  
**SMA STR. PLUG CRIMP TYPE**  
Suitable Cable:  
(1)RG58  
(2)RG142, RG223, RG400



**SMA1150-1-XXX**  
**SMA STR. PLUG CRIMP TYPE**  
Suitable Cable:  
(1)RG178, RG196  
(2)RG174, RG188, RG316  
(3)RD316



**SMA1150-3-XXX**  
**SMA STR. PLUG SOLDER TYPE**  
Suitable Semi-Rigid Cable:  
(1) .047  
(2) .085  
(3) .141



**SMA1150-4**  
**SMA STR. PLUG P.C.B. MOUNT**



**SMA1150-4EL**  
**SMA STR. PLUG P.C.B MOUNT (END LAUNCH)**  
P.C.B. Thickness (mm) : 0.8, 1.6



**SMA1150-6-2H**  
**SMA STR. PLUG**  
**2 HOLE PANEL FLANGE RECEPTACLE**



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# SMA SERIES

**SMA1150-6-4H**  
**SMA STR. PLUG**  
**4 HOLE PANEL FLANGE RECEPTACLE**



**SMA1150-8**  
**SMA STR. PLUG TERMINATION**



**SMA1250-1-XXX**  
**SMA R/A PLUG CRIMP TYPE**  
**Suitable Cable:**  
**(1)RG58**  
**(2)RG142, RG223, RG400**



**SMA1250-1-XXX**  
**SMA R/A PLUG CRIMP TYPE**  
**Suitable Cable:**  
**(1)RG178, RG196**  
**(2)RG174, RG188, RG316**  
**(3)RD316**



**SMA1250-3-XXX**  
**SMA R/A PLUG SOLDER TYPE**  
**Suitable Semi-Rigid Cable:**  
**(1) .047**  
**(2) .085**  
**(3) .141**



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# SMA SERIES

**SMA6150-1-XXX**  
**SMA STR. JACK CRIMP TYPE**  
Suitable Cable:  
(1)RG58  
(2)RG142, RG223, RG400



**SMA6150-1-XXX**  
**SMA STR. JACK CRIMP TYPE**  
Suitable Cable:  
(1)RG178, RG196  
(2)RG174, RG188, RG316  
(3)RD316



**SMA6150-3-2H**  
**SMA STR. JACK SOLDER TYPE**  
**2 HOLE PANEL FLANGE RECEPTACLE**  
Suitable Semi-Rigid Cable:  
(1) .047  
(2) .085



**SMA6150-3-4H**  
**SMA STR. JACK SOLDER TYPE**  
**4 HOLE PANEL FLANGE RECEPTACLE**  
Suitable Semi-Rigid Cable:  
(1) .047  
(2) .085



**SMA6150-3-XXX**  
**SMA STR. JACK SOLDER TYPE**  
Suitable Semi-Rigid Cable:  
(1) .047  
(2) .085



**SMA6150-4**  
**SMA STR. JACK P.C.B. MOUNT**



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# SMA SERIES

**SMA6150-4EL**  
**SMA STR. JACK P.C.B MOUNT (END LAUNCH)**  
P.C.B. Thickness (mm) : 0.8, 1.0, 1.3, 1.6



**SMA6150-5**  
**SMA STR. JACK**  
**BULKHEAD RECEPTACLE**



**SMA6150-6-2H**  
**SMA STR. JACK**  
**2 HOLE PANEL FLANGE RECEPTACLE**



**SMA6150-6-4H**  
**SMA STR. JACK**  
**4 HOLE PANEL FLANGE RECEPTACLE**



**SMA6150-6-4H**  
**SMA STR. JACK**  
**4 HOLE PANEL FLANGE RECEPTACLE**



**SMA6250-4**  
**SMA R/A JACK P.C.B. MOUNT**



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# SMA SERIES

**SMA8150-1-XXX**  
**SMA STR. JACK BULKHEAD CRIMP TYPE**

Suitable Cable:

(1)RG178, RG196

(2)RG174, RG188, RG316

(3)RD316



**SMA8150-3-XXX**  
**SMA STR. JACK BULKHEAD SOLDER TYPE**

Suitable Semi-Rigid Cable:

(1) .047

(2) .085



**SMA8150-4EL**  
**SMA STR. JACK BULKHEAD**  
**P.C.B. MOUNT (END LAUNCH)**  
P.C.B. Thickness (mm) : 0.8, 1.0, 1.3, 1.6



**SMA8150-4-H**  
**SMA STR. JACK BULKHEAD**  
**P.C.B. MOUNT**



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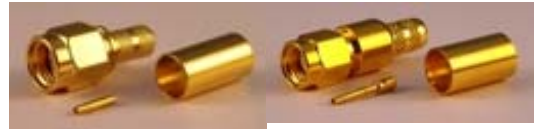
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# SMA SERIES

## Reverse Polarity

**SMA2150-1-XXX**  
**SMA STR. PLUG REVERSE POLARITY CRIMP TYPE**  
Suitable Cable:  
(1)RG58  
(2)RG142, RG223, RG400



**SMA2150-3-XXX**  
**SMA STR. PLUG REVERSE POLARITY SOLDER TYPE**  
Suitable Semi-Rigid Cable:  
(1) .085  
(2) .141



**SMA2250-1-XXX**  
**SMA R/A PLUG REVERSE POLARITY CRIMP TYPE**  
Suitable Cable:  
(1)RG178, RG196  
(2)RG174, RG188, RG316  
(3)RD316



**SMA2250-3-XXX**  
**SMA R/A PLUG REVERSE POLARITY SOLDER TYPE**  
Suitable Semi-Rigid Cable:  
(1) .085  
(2) .141



**SMA7150-1-XXX**  
**SMA STR. JACK REVERSE POLARITY CRIMP TYPE**  
Suitable Cable:  
(1)RG58  
(2)RG142, RG223, RG400



**SMA7150-3-XXX**  
**SMA STR. JACK REVERSE POLARITY SOLDER TYPE**  
Suitable Semi-Rigid Cable:  
(1) .085  
(2) .141



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# SMA SERIES

## Reverse Polarity

**SMA7150-9**  
**SMA STR. JACK REVERSE POLARITY**  
**SURFACE MOUNT**



**SMA7250-4**  
**SMA R/A JACK REVERSE POLARITY P.C.B. MOUNT**



**SMA9150-1-XXX**  
**SMA STR. JACK BULKHEAD REVERSE POLARITY**  
**CRIMP TYPE**

**Suitable Cable:**

**(1)RG178, RG196**

**(2)RG174, RG188, RG316, RD316**



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