

## Plenum Low PIM RA SMA Male to RA SMA Male Cable SPP-250-LLPL Coax in 12 Inch Using Times Microwave Parts

### FMCA1878-12



#### Configuration

- Connector 1: SMA Male Right Angle TC-SPP250-SM-RA-LP
- Connector 2: SMA Male Right Angle TC-SPP250-SM-RA-LP
- Cable Type: SPP-250-LLPL
- Coax Flex Type: Corrugated

#### Features

- Max Frequency 5.8 GHz
- Low PIM: -160 dBc Max
- Shielding Effectivity > 100 dB
- 76% Phase Velocity
- FEP Jacket
- 100% Tested with PIM Test Results Marked on Cable
- UL910 Plenum Rated Cable
- Lightweight and Extremely Flexible
- Low Loss with Excellent VSWR
- IP67 (when mated)
- Using Times Microwave Components



#### Applications

- General Purpose
- Laboratory Use
- Low PIM Applications
- Distributed Antenna Systems (DAS)
- Plenum Installations
- Multi-Carrier Communication Systems
- PIM Testing

#### Description

The RA SMA male to RA SMA male 12 inch cable using SPP-250-LLPL coax, part number FMCA1878-12, from Fairview Microwave is in-stock and ships same day. This Fairview SMA to SMA cable assembly has a male to male gender configuration with 50 ohm corrugated SPP-250-LLPL coax. Fairview Microwave's corrugated RF cable assemblies are ideal for applications where durability and high power are needed. Our low PIM design offers excellent passive intermodulation performance with PIM levels better than -160 dBc. The FMCA1878-12 SMA male to SMA male cable assembly operates to 5.8 GHz. The right angle SMA interfaces on the SPP-250-LLPL cable allow for easier connections in tight spaces. Times Microwave cable is used in each assembly and TMS components are used to form connections with the super flexible low PIM cable. These cable assemblies are expertly built to satisfy your specific need with high quality Times Microwave Systems manufactured parts.

Custom versions of most RF cable assemblies can be built and shipped same day. Custom cable assembly lengths can be obtained by specifying the desired length on the web site at time of order or by contacting a sales representative. Other RF cable assembly value added services including connector orientation or clocking, heat shrink booting and labeling are also available. RF testing can also be performed to document the electrical performance of your cable assembly.

#### Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Frequency Range	DC		5.8	GHz
VSWR			1.4:1	
Velocity of Propagation		76		%

Plenum Low PIM RA SMA Male to RA SMA Male Cable SPP-250-LLPL Coax in 12 Inch Using Times Microwave Parts



**FMCA1878-12**

**Electrical Specifications**

Description	Minimum	Typical	Maximum	Units
RF Shielding	100			dB
Passive Intermodulation IM3 (2x43dBm Tones) at 850 MHz or 1900 MHz		-165	-160	dBc
Capacitance		27 [88.58]		pF/ft [pF/m]
Inductance		0.067 [0.22]		uH/ft [uH/m]
DC Resistance Inner Conductor		3 [9.84]		Ohms/1000ft [Ohms/Km]

**Specifications by Frequency**

Description	F1	F2	F3	F4	F5	Units
Frequency	0.45	0.7	1	2.5	5.8	GHz
Insertion Loss (Max.)	0.26	0.31	0.36	0.58	0.89	dB

Electrical Specification Notes:

PIM test results vary between cables

The Insertion Loss data above is based on the performance specifications of the coax used in this assembly. The Insertion Loss includes an estimated insertion loss of  $0.15 \cdot \sqrt{FGHz}$  dB per connector.

**Mechanical Specifications**

**Cable Assembly**

Length 12 in [304.8 mm]

**Cable**

Cable Type SPP-250-LLPL  
 Impedance 50 Ohms  
 Inner Conductor Type Solid  
 Inner Conductor Material and Plating Copper  
 Dielectric Type PTFE  
 Number of Shields 1  
 Shield Layer 1 Helically Corrugated Copper Tube  
 Outer Conductor 1 Material and Plating Copper  
 Outer Conductor Diameter 0.25 in [6.35 mm]  
 Jacket Material FEP, Blue  
 Jacket Diameter 0.28 in [7.11 mm]  
 One Time Minimum Bend Radius 1.25 in [31.75 mm]  
 Bending Moment 0.8 lbs-ft [1.08 N-m]

Plenum Low PIM RA SMA Male to RA SMA Male Cable SPP-250-LLPL Coax in 12 Inch Using Times Microwave Parts



**FMCA1878-12**

**Connectors**

Description	Connector 1	Connector 2
Type	SMA Male Right Angle	SMA Male Right Angle
Impedance	50 Ohms	50 Ohms
Configuration	Right Angle	Right Angle
Contact Material and Plating	Phosphor Bronze, Silver	Phosphor Bronze, Silver
Contact Plating Specification	196µ in	196µ in
Dielectric Type	PTFE	PTFE
Body Material and Plating	Brass, Tri-Metal	Brass, Tri-Metal
Body Plating Specification	118µ in	118µ in
Coupling Nut Material and Plating	Brass, Tri-Metal	Brass, Tri-Metal
Coupling Nut Plating Specification	118µ in	118µ in
Torque	10 in-lbs 1.13 Nm	10 in-lbs 1.13 Nm

**Environmental Specifications**

Operating Range Temperature	-55 to +200 deg C
Storage Range Temperature	-55 to +200 deg C
Plenum Rating	UL910

**Compliance Certifications** (see [product page](#) for current document)

**Plotted and Other Data**

Notes:  
Values at 25°C, sea level.

Plenum Low PIM RA SMA Male to RA SMA Male Cable SPP-250-LLPL Coax in 12 Inch Using Times Microwave Parts

**FMCA1878-12**



Typical Performance Data



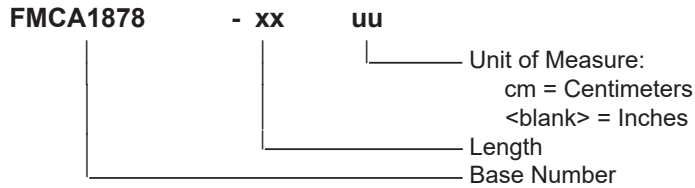
Plenum Low PIM RA SMA Male to RA SMA Male Cable SPP-250-LLPL Coax in 12 Inch Using Times Microwave Parts



**FMCA1878-12**

**How to Order**

Part Number Configuration:



Example: FMCA1878-12 = 12 inches long cable  
FMCA1878-100cm = 100 cm long cable

Plenum Low PIM RA SMA Male to RA SMA Male Cable SPP-250-LLPL Coax in 12 Inch Using Times Microwave Parts from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Lewisville, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [Plenum Low PIM RA SMA Male to RA SMA Male Cable SPP-250-LLPL Coax in 12 Inch Using Times Microwave Parts FMCA1878-12](https://www.fairviewmicrowave.com/low-pim-ra-sma-male-ra-sma-male-cable-spp250llpl-coax-fmca1878-12-p.aspx)

URL: <https://www.fairviewmicrowave.com/low-pim-ra-sma-male-ra-sma-male-cable-spp250llpl-coax-fmca1878-12-p.aspx>

The information contained within this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part in order to implement improvements. Fairview Microwave reserves the right to make such changes as required. Unless otherwise stated, all specifications are nominal. Fairview Microwave does not make any representation or warranty regarding the suitability of the part described herein for any particular purpose, and Fairview Microwave does not assume liability arising out of the use of any part or document.

# FMCA1878-12 CAD Drawing

Plenum Low PIM RA SMA Male to RA SMA Male Cable SPP-250-LLPL Coax in 12 Inch Using Times Microwave Parts

