



RP SMA Male Connector Clamp/Solder Attachment for RG174,  
 RG316, RG188, PE-B100, PE-C100, 0.100 inch, LMR-100

## RF Connectors Technical Data Sheet

PE4770

### Configuration

- SMA Male Reverse Polarity Connector
- MIL-STD-348
- 50 Ohms
- Straight Body Geometry

- RG174, RG316, RG188, PE-B100, PE-C100, 0.100 inch, LMR-100 Interface Type
- Clamp/Solder Attachment
- 5/16 inch Hex

### Features

- Gold Plated Contact
- Contact plating according to MIL-G-45204

- Reverse Polarity

### Applications

- General Purpose Test
- Custom Cable Assemblies

### Description

Pasternack's PE4770 RP SMA male connector with clamp/solder attachment for RG174, RG316, RG188, PE-B100, PE-C100, 0.100 inch and LMR-100 is part of our full line of RF components available for same-day shipping. The male reverse polarity configuration uses a male connector body with a female inner contact receptacle.

Our reverse polarity SMA male connector PE4770 datasheet specifications and drawing with dimensions are shown below in this PDF. Pasternack's broad catalog of RF, microwave and millimeter wave connectors allows designers to configure and customize their signal connections however they like. Whether the need is to provide an I/O for a board design, or simply create a custom cable assembly configuration, Pasternack has the right connector for the job. Pasternack can also expertly build your custom cable assemblies for you and ship same-day.

### Mechanical Specifications

#### Size

Length  
 Width/Dia.

0.8 in [20.32 mm]  
 0.312 in [7.92 mm]

Weight

0.013 lbs [5.9 g]

Mating Torque

3 to 5 in-lbs [0.34 to 0.57 Nm]

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [RP SMA Male Connector Clamp/Solder Attachment for RG174, RG316, RG188, PE-B100, PE-C100, 0.100 inch, LMR-100 PE4770](#)



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### Material Specifications

Description	Material	Plating
Contact		Gold MIL-G-45204
Insulation	PTFE	
Body	Brass	Nickel QQ-N-290
Coupling Nut	Brass	Nickel QQ-N-290

### Environmental Specifications

#### Temperature

Operating Range

-65 to +165 deg C

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

### Plotted and Other Data

Notes:

RP SMA Male Connector Clamp/Solder Attachment for RG174, RG316, RG188, PE-B100, PE-C100, 0.100 inch, LMR-100 from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99% availability and are part of the broadest selection in the industry.

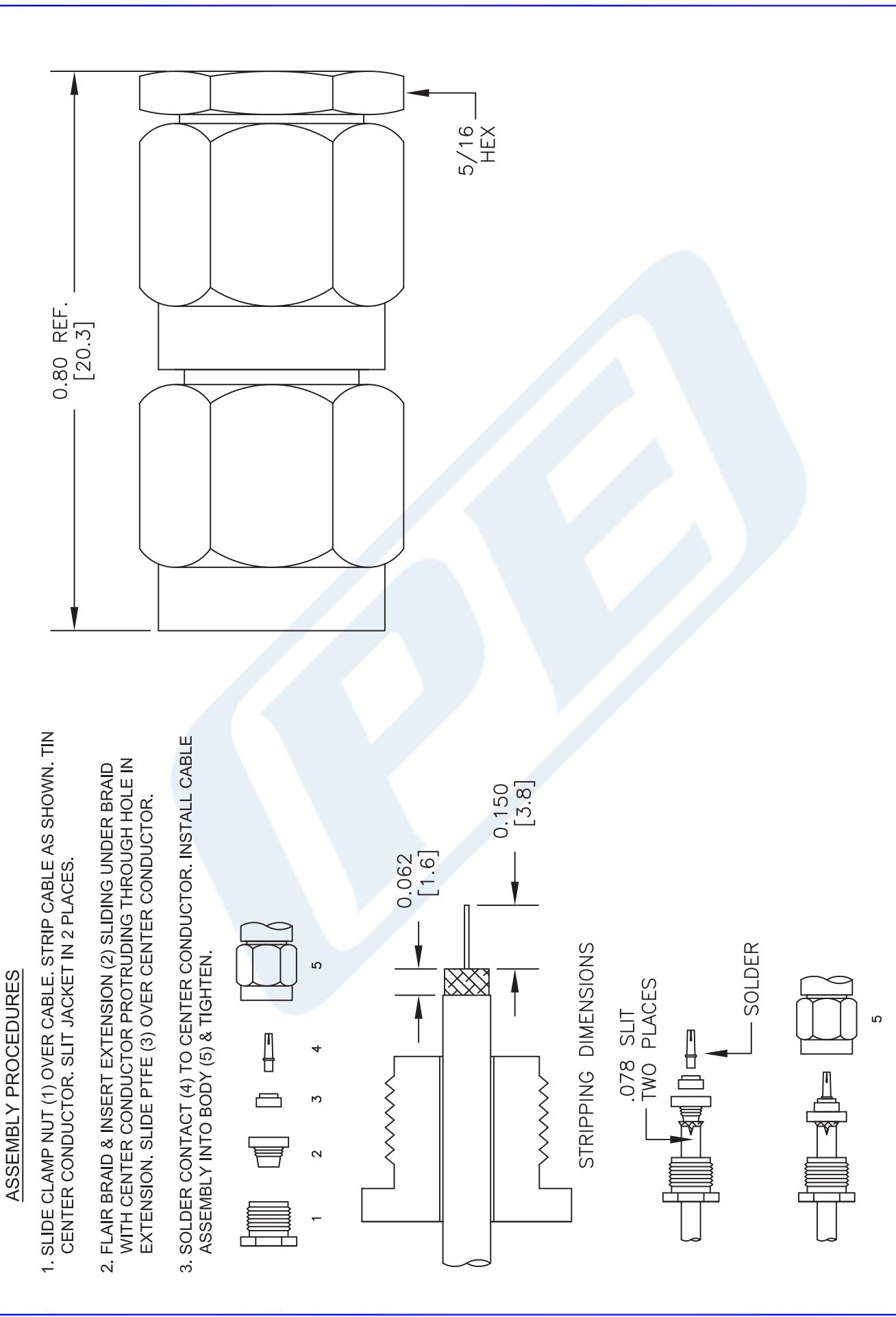
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URL: <https://www.pasternack.com/sma-male-reverse-polarity-rg174-rg316-rg188-connector-pe4770-p.aspx>

The information contained in 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. Pasternack reserves the right to make such changes as required. Unless otherwise stated, all specifications are nominal. Pasternack does not make any representation or warranty regarding the suitability of the part described herein for any particular purpose, and Pasternack does not assume any liability arising out of the use of any part or documentation.

# PE4770 CAD Drawing

RP SMA Male Connector Clamp/Solder Attachment for RG174,  
RG316, RG188, PE-B100, PE-C100, 0.100 inch, LMR-100



NOTES:  
1. UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE NOMINAL.  
2. ALL SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE AT ANY TIME.  
3. DIMENSIONS ARE IN INCHES [mm].  
4. FITS MIL-C-17 AND EQUIVALENT CABLES.

DWG TITLE	PE4770		
CAD REV. A	FSCM NO.	CAD FILE	SCALE N/A
	53919	090412	SIZE A
			2233

**PE PASTERNACK®**  
Pasternack Enterprises, Inc.  
P.O. Box 16759 | Irvine | CA | 92623  
Phone: (949) 261-1920 | Fax: (949) 261-7451  
Website: [www.pasternack.com](http://www.pasternack.com) | E-Mail: [sales@pasternack.com](mailto:sales@pasternack.com)


**RP SMA Female Bulkhead Connector Clamp/Solder Attachment For RG174, RG316, RG188, .235 inch D Hole**
**TECHNICAL DATA SHEET**
**PE4858**
**RP SMA Female Bulkhead Connector Clamp/Solder Attachment For RG174, RG316, RG188, .235 inch D Hole**
**Configuration**

Connector	SMA Female Reverse Polarity
Connector Specification	MIL-C-39012
Connector Interface Type	RG174, RG316, RG188
Cable Attachment Method (Shield/Contact)	Clamp/Solder
Body Style	Straight
Mount Method	Bulkhead

**Electrical Specifications**

Impedance, Ohms	50
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**Mechanical Specifications**

Temperature	-65 to +165
Operating Range, deg C	
Size	
Length, in [mm]	0.875 [22.23]
Width/Dia., in [mm]	0.312 [7.92]
Weight, lbs [g]	0.013 [5.9]

**Connector**

Type	SMA Female Reverse Polarity
Contact Material and Plating	Gold
Contact Plating Specification	MIL-G-45204
Body Material and Plating	Brass, Nickel
Dielectric Type	Teflon

**Compliance Certifications** (visit [www.Pasternack.com](http://www.Pasternack.com) for current document)

RoHS Compliant	Yes
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Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [RP SMA Female Bulkhead Connector Clamp/Solder Attachment For RG174, RG316, RG188, .235 inch D Hole PE4858](#)

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RP SMA Female Bulkhead Connector Clamp/Solder  
Attachment For RG174, RG316, RG188, .235 inch D Hole

TECHNICAL DATA SHEET

PE4858

**Plotted and Other Data**

Notes:

Values at 25 °C, sea level

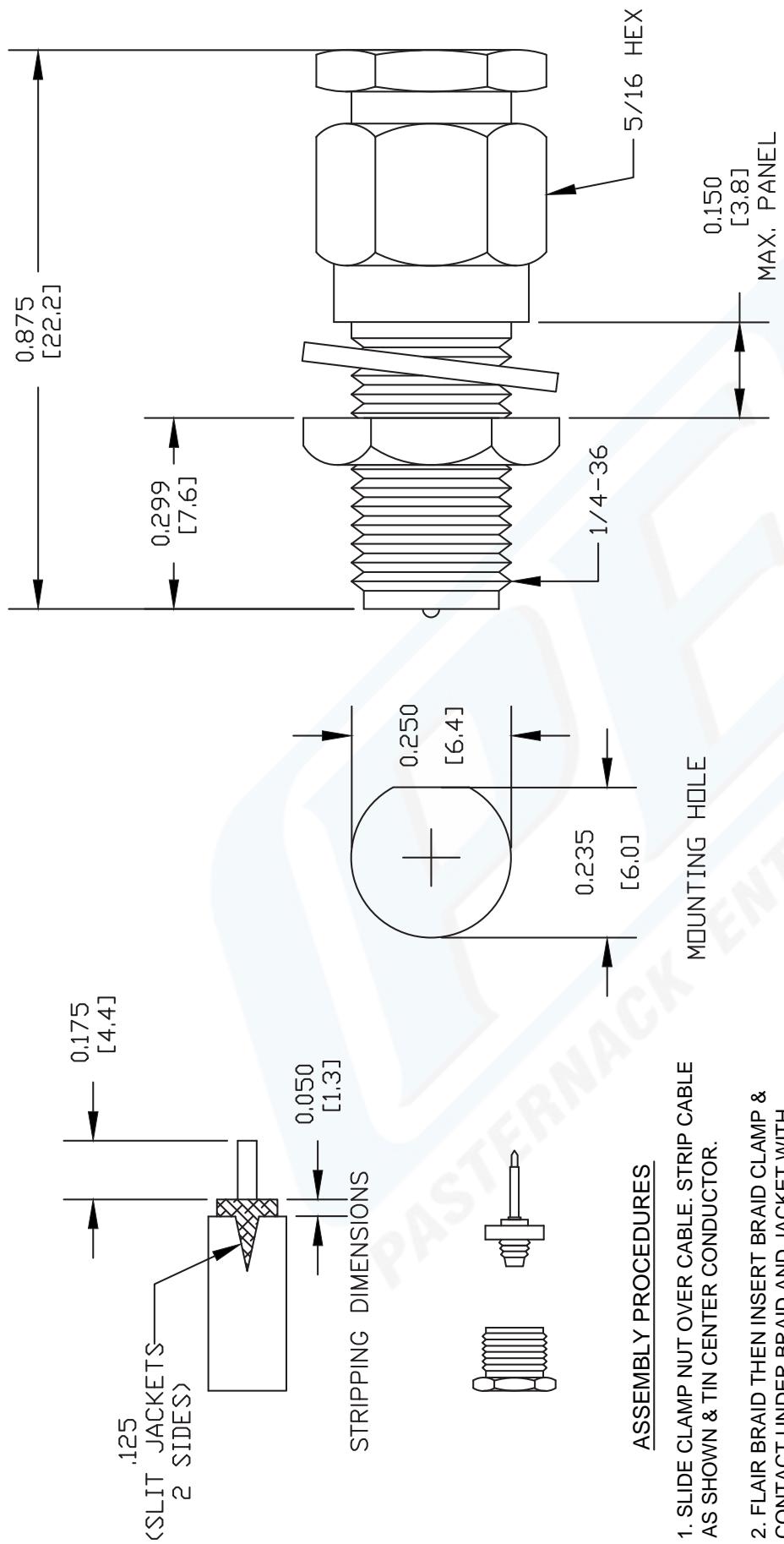
RP SMA Female Bulkhead Connector Clamp/Solder Attachment For RG174, RG316, RG188, .235 inch D Hole from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and fiber optic products maintain a 99% availability and are part of the broadest selection in the industry.

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [RP SMA Female Bulkhead Connector Clamp/Solder Attachment For RG174, RG316, RG188, .235 inch D Hole PE4858](#)

URL: <http://www.pasternack.com/sma-female-reverse-polarity-rg174-rg316-rg188-connector-pe4858-p.aspx>

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**PE4858 CAD Drawing**  
 RP SMA Female Bulkhead Connector Clamp/Solder Attachment  
 For RG174, RG316, RG188, .235 inch D Hole



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 3. DIMENSIONS ARE IN INCHES [mm].  
 4. FITS MIL-C-17 AND EQUIVALENT CABLES.

PASTERNACK <sup>®</sup>	DWG TITLE
<b>PE</b>	<b>PE4858</b>
Pasternack Enterprises, Inc. P.O. Box 16759   Irvine   CA   92623 Phone: (949) 261-1920   Fax: (949) 261-7451 Website: <a href="http://www.pasternack.com">www.pasternack.com</a>   E-Mail: <a href="mailto:sales@pasternack.com">sales@pasternack.com</a>	
	FSCM NO. 53919 CAD FILE 061102 SCALE N/A SIZE A xxxx

## LMR®-100A

# Flexible Low Loss Communications Coax

### Ideal for...

- Drop-in Replacement for RG-316/RG-174 (uses standard connectors)
- Jumper Assemblies in Wireless Communications Systems
- Short Antenna Feeder runs
- Any application (e.g. WLL, GPS, LMR, WLAN, WISP, WiMax, SCADA, Mobile Antennas) requiring an easily routed, low loss RF cable

• **LMR®-PVC** is designed for low loss general-purpose indoor/outdoor applications and is somewhat more flexible than the standard polyethylene jacketed LMR.

• **LMR®-PVC-W** is a white-jacketed version of LMR-PVC for marine and other indoor/outdoor applications where color compatibility is desired.

• **Flexibility** and bendability are hallmarks of the LMR-100A cable design. The flexible outer conductor enables the tightest bend radius available for any cable of similar size and performance.

• **Low Loss** is another hallmark feature of LMR-100A. Size for size LMR has the lowest loss of any flexible cable and comparable loss to semirigid hard-line cables.

• **RF Shielding** is 50 dB greater than typical single shielded coax (40 dB). The multi-ply bonded foil outer conductor is rated conservatively at > 90 dB (i.e. >180 dB between two adjacent cables).

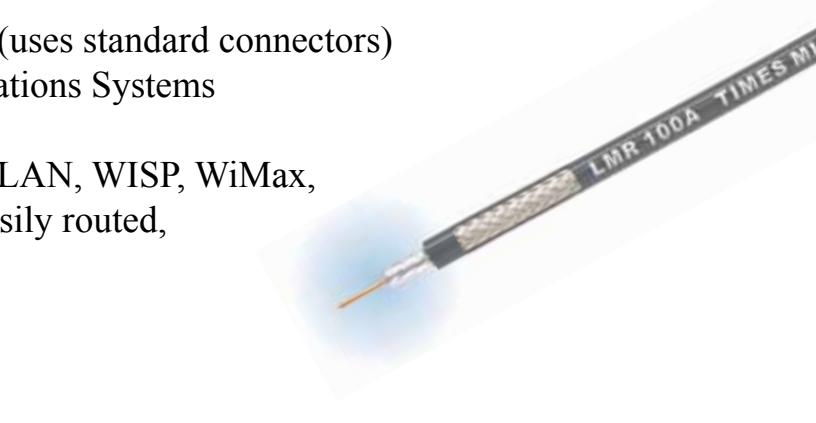
• **Weatherability**: LMR-100A cables designed for outdoor exposure incorporate the best materials for UV resistance and have life expectancy in excess of 20 years.

• **Connectors**: A wide variety of connectors are available for LMR-100A cable, including all common interface types, reverse polarity, and a choice of solder or non-solder center pins. Most LMR connectors employ crimp outer attachment using standard hex crimp sizes.

• **Cable Assemblies**: All LMR-100A cable types are available as pre-terminated cable assemblies. Refer to the section on FlexTech for further details.

Part Description				Stock
Part Number	Application	Jacket	Color	Code
LMR-100A-FR	Indoor/Outdoor Riser CMR	FRPE	Black	54037
LMR-100A-PVC	Indoor/Outdoor	PVC	Black	54119
LMR-100A-PVC-W	Indoor/Outdoor	PVC	White	54200

PVC = Poly Vinyl Chloride; MTO = Made to Order



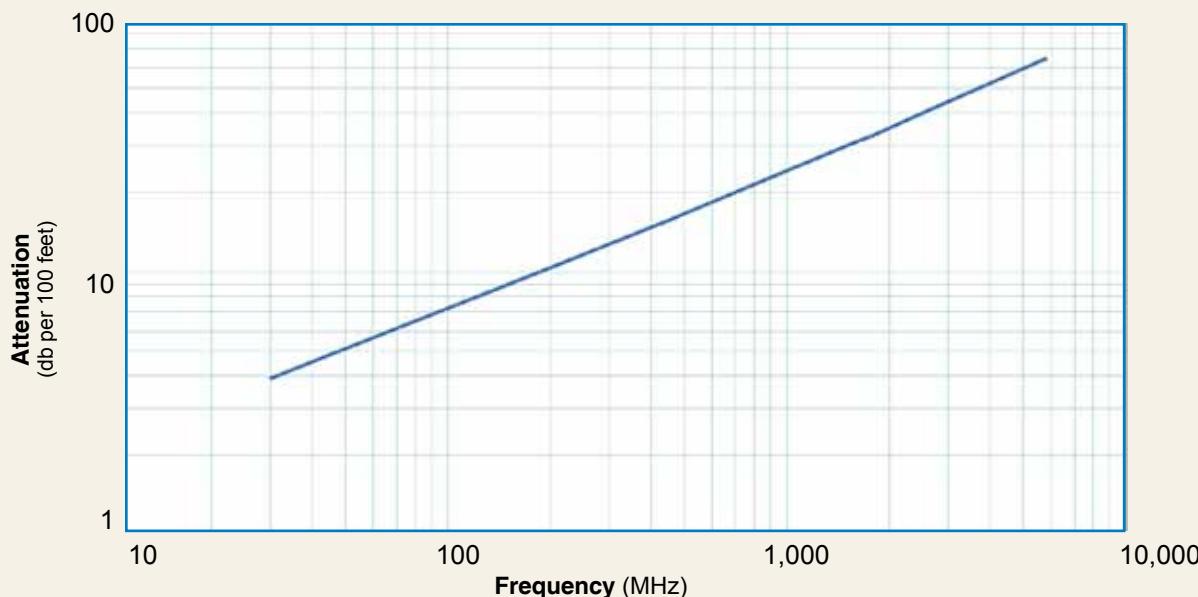
Construction Specifications			
Description	Material	In.	(mm)
Inner Conductor	Solid BCCS	0.018	(0.46)
Dielectric	Solid PE	0.060	(1.52)
Outer Conductor	Aluminum Tape	0.065	(1.65)
Overall Braid	Tinned Copper	0.083	(2.11)
Jacket	(see table above)	0.110	(2.79)

Mechanical Specifications			
Performance Property	Units	US	(metric)
Bend Radius: installation	in. (mm)	0.25	(6.4)
Bend Radius: repeated	in. (mm)	1	(25.4)
Bending Moment	ft-lb (N-m)	0.1	(0.014)
Weight	lb/ft (kg/m)	0.0092	(.014)
Tensile Strength	lb (kg)	15	(6.8)
Flat Plate Crush	lb/in. (kg/mm)	10	(0.18)

Environmental Specifications		
Performance Property	°F	°C
Installation Temperature Range	-40/+185	-40/+85
Storage Temperature Range	-94/+185	-70/+85
Operating Temperature Range	-40/+185	-40/+85

Electrical Specifications			
Performance Property	Units	US	(metric)
Velocity of Propagation	%	66	
Dielectric Constant	NA	2.30	
Time Delay	nS/ft (nS/m)	1.54	(5.05)
Impedance	ohms	50	
Capacitance	pF/ft (pF/m)	30.8	(101.1)
Inductance	uH/ft (uH/m)	0.077	(0.25)
Shielding Effectiveness	dB	>90	
DC Resistance			
Inner Conductor	ohms/1000ft (/km)	81.0	(266)
Outer Conductor	ohms/1000ft (/km)	9.5	(31.2)
Voltage Withstand	Volts DC	500	
Jacket Spark	Volts RMS	2000	
Peak Power	kW	0.6	

### Attenuation vs. Frequency (typical)



Frequency (MHz)	30	50	150	220	450	900	1500	1800	2000	2500	5800
Attenuation dB/100 ft	3.9	5.1	8.9	10.9	15.8	22.8	30.1	33.2	35.2	39.8	64.1
Attenuation dB/100 m	12.9	16.7	29.4	35.8	51.9	74.9	98.7	109.0	115.5	130.6	210.3
Avg. Power kW	0.230	0.180	0.100	0.083	0.057	0.039	0.029	0.027	0.025	0.022	0.013

Calculate Attenuation =  $(0.709140) \cdot \sqrt{F\text{MHz}} + (0.001740) \cdot F\text{MHz}$  (interactive calculator available at <http://www.timesmicrowave/telecom>)  
 Attenuation: VSWR=1.0 ; Ambient = +25°C (77°F) Power: VSWR=1.0; Ambient = +40°C; Inner Conductor = 100°C (212°F);  
 Sea Level; dry air; atmospheric pressure; no solar loading



### Connectors

Interface	Description	Part Number	Stock Code	VSWR **	Coupling	Inner Contact	Outer Contact	Finish*	Length	Width	Weight
				Freq. (GHz)	Nut	Attach	Attach	Body /Pin	in (mm)	in (mm)	lb (g)
SMA male	Straight Plug	TC-100-SM	3190-1551	<1.25:1	(<3 )	Hex	Solder	Crimp	SS/G 1.0 (25.4)	0.32 (8.1)	0.015 (6.8)
TNC male	Straight Plug	TC-100-TM	3190-1552	<1.25:1	(<3 )	Knurl	Solder	Crimp	S/G 1.4 (35.6)	0.59 (15.0)	0.045 (20.4)

\* Finish metals: N=Nickel, S=Silver, G=Gold, SS=Stainless Steel, A=Alballoy \*\*VSWR spec based on 3 foot cable with a connector pair



### Install Tools

Type	Part Number	Stock Code	Description
Crimp Tool	CT-240/200/195/100	3190-667	Crimp tool for LMR-100, 195, 200 and 240 connectors
Cutting Tool	CCT-01	3190-1544	Cable end flush cut tool
Replacement Blade	RB-01	3190-1609	Replacement blade for cutting tool

