



## SSMC Plug Connector Crimp/Solder Attachment for LMR-100A, RG188, RG174, PE-C100- LSZH, PE-B100, LMR-100A-FR, RG316

### RF Connectors Technical Data Sheet

PE45491

#### Configuration

- SSMC Plug Connector
- 50 Ohms
- Straight Body Geometry
- LMR-100A, RG188, RG174, PE-C100-LSZH, PE-B100, LMR-100A-FR, RG316 Interface Type
- Crimp/Solder Attachment

#### Features

- Max. Operating Frequency 12.4 GHz
- Good VSWR of 1.5:1
- Gold Plated Beryllium Copper Contact
- Contact plating according to MIL-G-45204
- Reliable threaded coupling
- Small SSMC connector form factor (50% smaller than SMA, radially)
- IEC 60169-20 SSMC connector interface
- In stock and ready to ship

#### Applications

- General Purpose Test
- Custom Cable Assemblies
- Avionics
- A/D Modules
- Data Acquisition
- Software defined radio (SDR)
- RADAR/SONAR
- Ultra Wideband Digital Receivers
- Medical equipment

#### Description

Pasternack's PE45491 SSMC plug connector with crimp/solder attachment for LMR-100A, RG188, RG174, PE-C100-LSZH, PE-B100, LMR-100A-FR and RG316 is part of our full line of RF components available for same-day shipping. Our SSMC plug connector operates up to a maximum frequency of 12.4 GHz and offers good VSWR of 1.5:1.

Our SSMC plug connector PE45491 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.

#### Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Frequency Range	DC		12.4	GHz
VSWR			1.5:1	
Insertion Loss			0.3	dB
Operating Voltage (AC)			250	Vrms
High Potential Voltage 5 MHz			400	Vrms
Inner Conductor DC Resistance			4	mOhms
Outer Conductor DC Resistance			1	mOhms
Insulation Resistance	1,000			MOhms
RF Leakage	-50			dB

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [SSMC Plug Connector Crimp/Solder Attachment for LMR-100A, RG188, RG174, PE-C100-LSZH, PE-B100, LMR-100A-FR, RG316 PE45491](#)



SSMC Plug Connector Crimp/Solder Attachment  
for LMR-100A, RG188, RG174, PE-C100-  
LSZH, PE-B100, LMR-100A-FR, RG316

RF Connectors  
Technical Data Sheet

PE45491

**Mechanical Specifications**

**Size**

Length 0.7 in [17.78 mm]  
Width/Dia. 0.156 in [3.96 mm]

Mating Cycles 500 Cycles  
Mating Torque 1.75 to 2 in-lbs [0.20 to 0.23 Nm]

**Material Specifications**

Description	Material	Plating
Contact	Beryllium Copper	Gold MIL-G-45204
Insulation	Teflon	
Body	Beryllium Copper	Gold MIL-G-45204
Coupling Nut	Beryllium Copper	Gold MIL-G-45206
Crimp Sleeve	Brass	Gold MIL-G-45204

**Environmental Specifications**

**Temperature**

Operating Range -65 to +165 deg C  
Shock Method 213, Condition B, 75G @6ms @1/2 sine  
Vibration Method 204, Condition D (20G)  
Salt Spray Method 101, Condition B, 5% salt solution

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

**Plotted and Other Data**

Notes:

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [SSMC Plug Connector Crimp/Solder Attachment for LMR-100A, RG188, RG174, PE-C100-LSZH, PE-B100, LMR-100A-FR, RG316 PE45491](#)



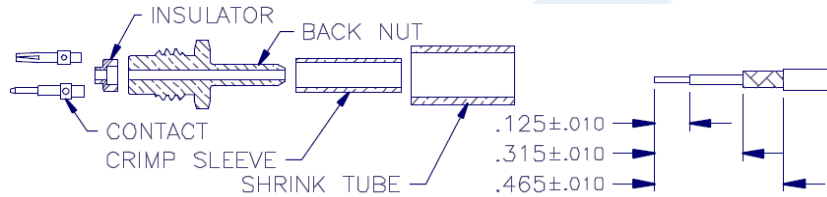
SSMC Plug Connector Crimp/Solder Attachment  
for LMR-100A, RG188, RG174, PE-C100-  
LSZH, PE-B100, LMR-100A-FR, RG316

RF Connectors  
Technical Data Sheet

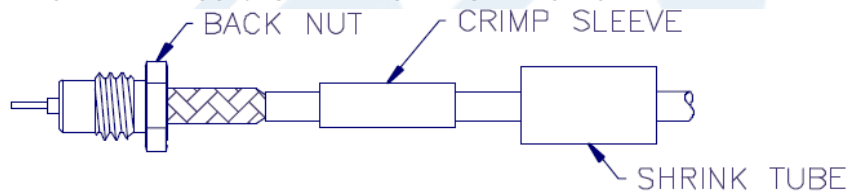
PE45491

Assembly Instruction

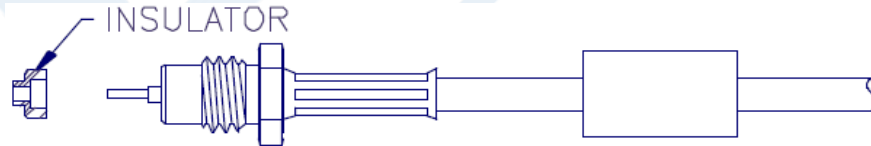
Assembly Instructions



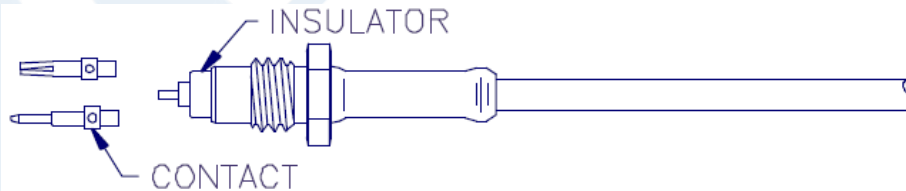
1. TRIM CABLE AS SHOWN ABOVE. TIN END OF CENTER CONDUCTOR.
2. SLIDE CRIMP SLEEVE AND SHRINK TUBE (IF SUPPLIED) OVER CABLE JACKET.
3. FLARE CABLE BRAID OUT SLIGHTLY BY ROTATING DIELECTRIC.



4. INSERT CABLE INTO TAIL-END OF BACK NUT, MAKING SURE TAIL GOES OVER DIELECTRIC AND UNDER BRAID. SLIDE IN UNTIL BRAID TOUCHES REAR SURFACE OF NUT.
5. SLIDE CRIMP SLEEVE FORWARD AND USE .105 HEX DIE TO CRIMP.



6. POSITION INSULATOR OVER CABLE DIELECTRIC AND CENTER CONDUCTOR.



7. SOLDER CONTACT TO CENTER CONDUCTOR.
8. INSERT CABLE ASSEMBLY INTO BODY AND TIGHTEN NUT WITH A TORQUE WRENCH WITH A TORQUE OF 35-45 INCH-OUNCES.
9. SLIDE SHRINK TUBE (IF SUPPLIED) OVER CRIMP SLEEVE AND SHRINK TO FIT.

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [SSMC Plug Connector Crimp/Solder Attachment for LMR-100A, RG188, RG174, PE-C100-LSZH, PE-B100, LMR-100A-FR, RG316 PE45491](#)



SSMC Plug Connector Crimp/Solder Attachment  
for LMR-100A, RG188, RG174, PE-C100-  
LSZH, PE-B100, LMR-100A-FR, RG316

RF Connectors  
Technical Data Sheet

PE45491

SSMC Plug Connector Crimp/Solder Attachment for LMR-100A, RG188, RG174, PE-C100-LSZH, PE-B100, LMR-100A-FR, RG316 from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99.4% availability and are part of the broadest selection in the industry.

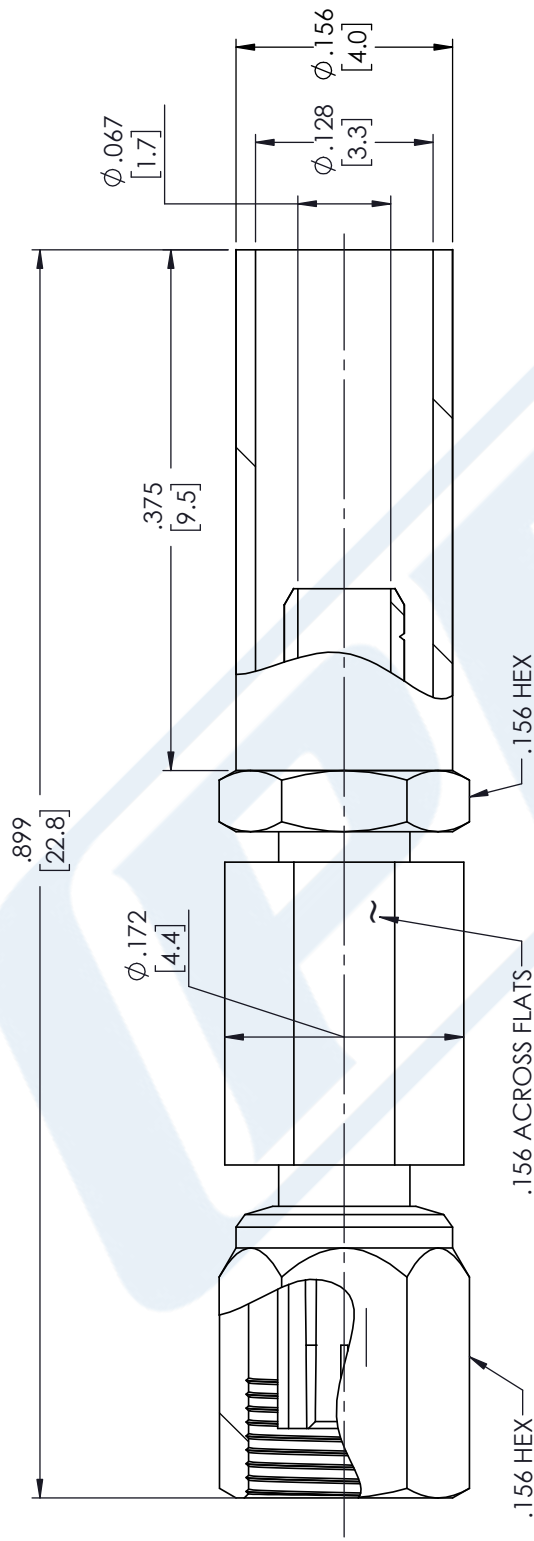
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [SSMC Plug Connector Crimp/Solder Attachment for LMR-100A, RG188, RG174, PE-C100-LSZH, PE-B100, LMR-100A-FR, RG316 PE45491](https://www.pasternack.com/ssmc-plug-lmr-100a-rg188-rg174-pe-c100-lszh-pe-b100-lmr-100a-fr-rg316-pe45491)

URL: <https://www.pasternack.com/ssmc-plug-lmr-100a-rg188-pe-c100-lszh-pe-b100-connector-pe45491-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.

# PE45491 CAD Drawing

SSMC Plug Connector Crimp/Solder Attachment for LMR-100A, RG188, RG174, PE-C100-LSZH, PE-B100, LMR-100A-FR, RG316



### STANDARD TOLERANCES

- .X ±0.2
- .XX ±0.01
- .XXX ±0.005

\*STANDARD TOLERANCES APPLY ONLY TO DIMENSIONS IN INCHES



Pasternack Enterprises, Inc.  
 P.O. Box 16759 | Irvine | CA | 92623  
**Phone:** (949) 261-1920 | **Fax:** (949) 261-7451  
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DWG TITLE  
 PE45368

CAGE CODE 53919

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].

CAD FILE 08/09/18

SCALE N/A

SIZE A

CN2245



**BNC Female Connector Crimp/Solder Attachment  
for RG174, RG316, RG188, LMR-100, PE-B100,  
PE-C100, .100 inch, Extended Ferrule**

**RF Connectors  
Technical Data Sheet**

PE45395

**Configuration**

- BNC Female Connector
- MIL-STD-348A
- 50 Ohms
- Straight Body Geometry
- Connector Interface Types: RG174, RG316, RG188, LMR-100, PE-B100, PE-C100, .100 inch

**Features**

- Max. Operating Frequency 4 GHz
- Gold Plated Brass Contact

**Applications**

- General Purpose Test
- Custom Cable Assemblies

**Description**

Pasternack's PE45395 BNC female connector with crimp/solder attachment for RG174, RG316, RG188, LMR-100, PE-B100, PE-C100 and .100 inch is part of our full line of RF components available for same-day shipping. Our BNC female connector operates up to a maximum frequency of 4 GHz.

Our BNC female connector PE45395 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.

**Electrical Specifications**

Description	Minimum	Typical	Maximum	Units
Frequency Range	DC		4	GHz
Operating Voltage (AC)			500	Vrms
Inner Conductor DC Resistance			1.5	mOhms
Outer Conductor DC Resistance			0.5	mOhms
Insulation Resistance	5,000			MOhms

**Performance by Frequency**

Description	F1	F2	F3	F4	F5	Units
Frequency Range	DC to 1					GHz
VSWR, Max	1.5:1					

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [BNC Female Connector Crimp/Solder Attachment for RG174, RG316, RG188, LMR-100, PE-B100, PE-C100, .100 inch, Extended Ferrule PE45395](#)



BNC Female Connector Crimp/Solder Attachment  
for RG174, RG316, RG188, LMR-100, PE-B100,  
PE-C100, .100 inch, Extended Ferrule

RF Connectors  
Technical Data Sheet

PE45395

**Mechanical Specifications**

**Size**

Length 1.28 in [32.51 mm]  
Width/Dia. 0.45 in [11.43 mm]  
Weight 0.021 lbs [9.53 g]

**Material Specifications**

Description	Material	Plating
Contact	Brass	Gold
Insulation	PTFE	
Outer Conductor	Brass	Nickel
Body	Brass	Nickel
Crimp Sleeve	Brass	Nickel

**Environmental Specifications**

**Temperature**

Operating Range -65 to +165 deg C

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

**Plotted and Other Data**

Notes:

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [BNC Female Connector Crimp/Solder Attachment for RG174, RG316, RG188, LMR-100, PE-B100, PE-C100, .100 inch, Extended Ferrule PE45395](#)



**BNC Female Connector Crimp/Solder Attachment  
for RG174, RG316, RG188, LMR-100, PE-B100,  
PE-C100, .100 inch, Extended Ferrule**

**RF Connectors  
Technical Data Sheet**

**PE45395**

BNC Female Connector Crimp/Solder Attachment for RG174, RG316, RG188, LMR-100, PE-B100, PE-C100, .100 inch, Extended Ferrule from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99.4% 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: [BNC Female Connector Crimp/Solder Attachment for RG174, RG316, RG188, LMR-100, PE-B100, PE-C100, .100 inch, Extended Ferrule PE45395](https://www.pasternack.com/bnc-female-rg174-rg316-rg188-lmr-100-pe-b100-pe-c100-connector-pe45395-p.aspx)

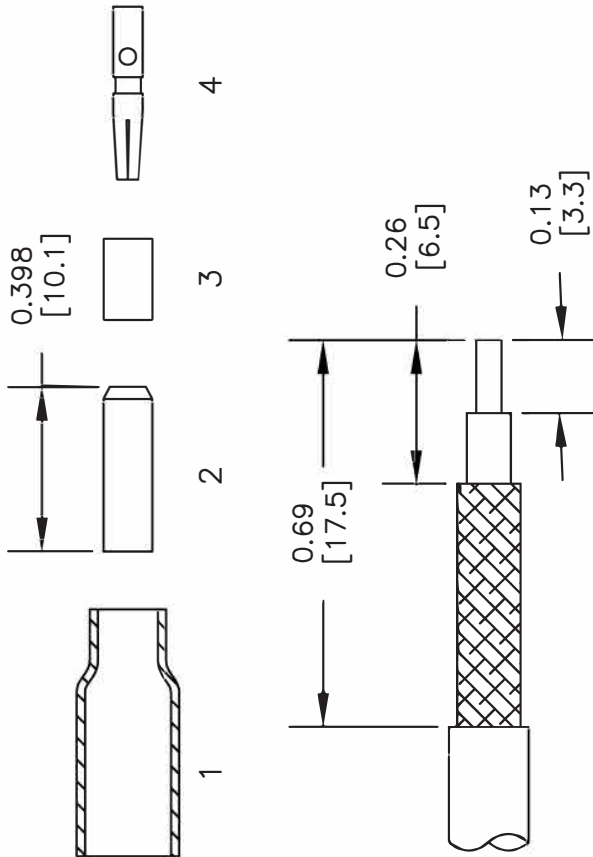
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# PE45395 CAD Drawing

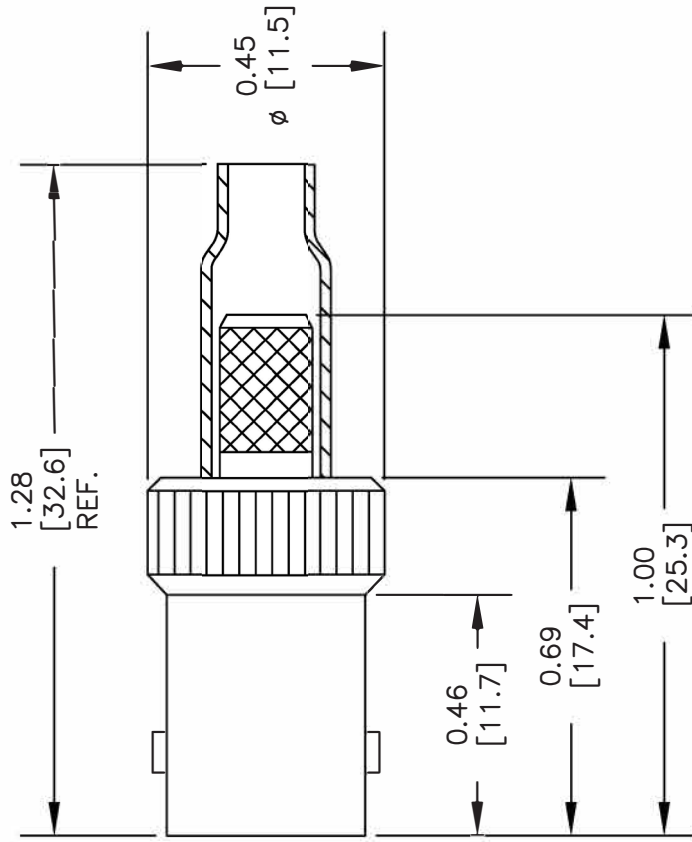
BNC Female Connector Crimp/Solder Attachment for RG174, RG316, RG188, LMR-100, PE-B100, PE-C100, .100 inch, Extended Ferrule



## STRIPPING DIMENSIONS ASSEMBLY PROCEDURES

1. STRIP CABLE AS SHOWN & SLIDE FERRULE (1) ONTO CABLE.
2. FLARE END OF CABLE BRAID & SLIDE METAL SPACER (2) & PTFE (3) SPACER OVER CABLE DIELECTRIC.
3. THE CONTACT (4) SHOULD BUTT AGAINST THE DIELECTRIC & PTFE SPACER. CRIMP CONTACT TO CABLE CENTER CONDUCTOR. ALTERNATIVELY, CONTACT CAN BE SOLDERED ONTO CENTER CONDUCTOR OF CABLE.
4. INSTALL CABLE ASSEMBLY INTO BODY SO THAT THE INNER FERRULE PORTION OF BODY SLIDES UNDER BRAID. PUSH CABLE ASSEMBLY FORWARD UNTIL CONTACT SNAPS INTO PLACE. SLIDE FERRULE OVER BRAID AND UP AGAINST CONNECTOR BODY & CRIMP. CRIMP SIZE REQUIRED

CONTACT: .068" HEX CRIMP TOOL  
FERRULE: .178" HEX CRIMP TOOL



STANDARD TOLERANCES	
.X	±0.2
.XX	±0.1
.XXX	±0.05

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DWG TITLE

**PE45395**

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**PE PASTERNAK**  
THE ENGINEER'S RF SOURCE

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CAGE CODE 53919

CAD FILE 041717

SCALE N/A

SIZE A

2233

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

• **LMR<sup>®</sup>-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



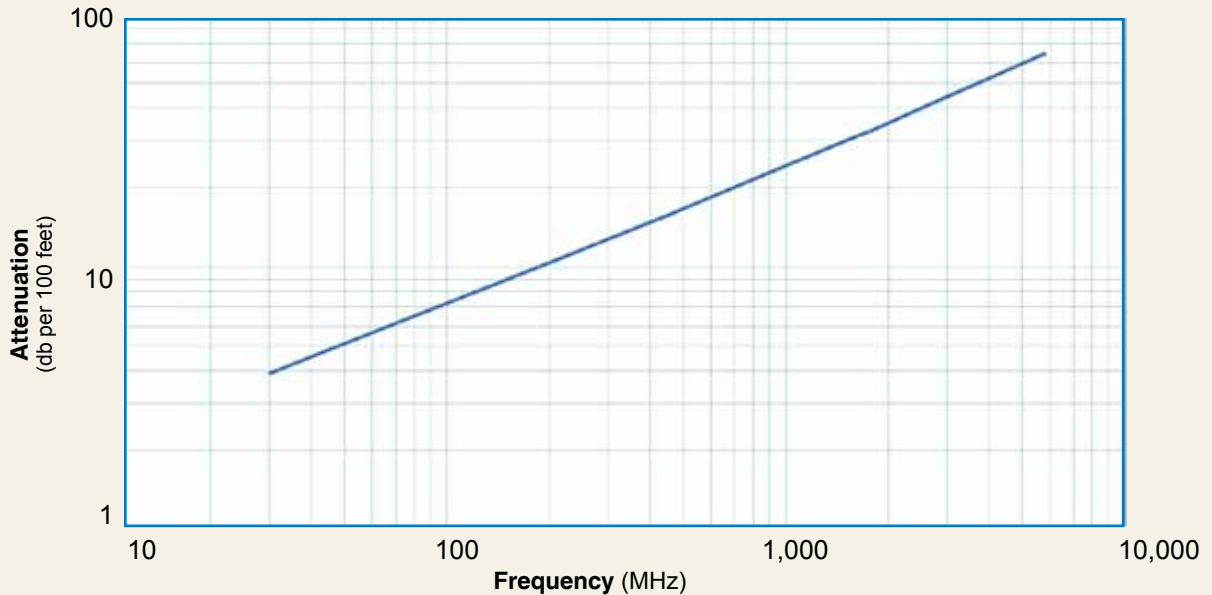
Construction Specifications			
Description	Material	In.	(mm)
Inner Conductor	Solid BCCS	0.018	(0.46)
Dielectric	Solid PE	0.060	(1.52)
Outer Conductor	Aluminum Tape	0.065	(1.65)
Overall Braid	Tinned Copper	0.083	(2.11)
Jacket	(see table above)	0.110	(2.79)

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
<b>Attenuation dB/100 ft</b>	3.9	5.1	8.9	10.9	15.8	22.8	30.1	33.2	35.2	39.8	64.1
<b>Attenuation dB/100 m</b>	12.9	16.7	29.4	35.8	51.9	74.9	98.7	109.0	115.5	130.6	210.3
<b>Avg. Power kW</b>	0.230	0.180	0.100	0.083	0.057	0.039	0.029	0.027	0.025	0.022	0.013

Calculate Attenuation =  $(0.709140) \cdot \sqrt{\text{FMHz}} + (0.001740) \cdot \text{FMHz}$  (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 ** Freq. (GHz)	Coupling Nut	Inner Contact Attach	Outer Contact Attach	Finish* Body /Pin	Length in (mm)	Width in (mm)	Weight 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

