



SMA Male Connector Crimp/Solder Attachment for RG174, RG316, RG188 Gold Plated

RF Connectors Technical Data Sheet

PE45145

Configuration

- SMA Male Connector
- 50 Ohms
- Straight Body Geometry
- RG174, RG316, RG188 Interface Type
- Crimp/Solder Attachment
- 5/16 in Hex

Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Frequency Range	DC		12.4	GHz

Mechanical Specifications

Size	
Length	0.654 in [16.61 mm]
Weight	0.01 lbs [4.54 g]
Mating Torque	5 in-lbs [0.57 Nm]

Material Specifications

Description	Material	Plating
Contact	Brass	Gold
Insulation	PTFE	
Body	Brass	Gold
Coupling Nut	Brass	Gold

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [SMA Male Connector Crimp/Solder Attachment for RG174, RG316, RG188 Gold Plated PE45145](#)



SMA Male Connector Crimp/Solder Attachment for RG174, RG316, RG188 Gold Plated

RF Connectors Technical Data Sheet

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

Plotted and Other Data

Notes:

SMA Male Connector Crimp/Solder Attachment for RG174, RG316, RG188 Gold Plated 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.

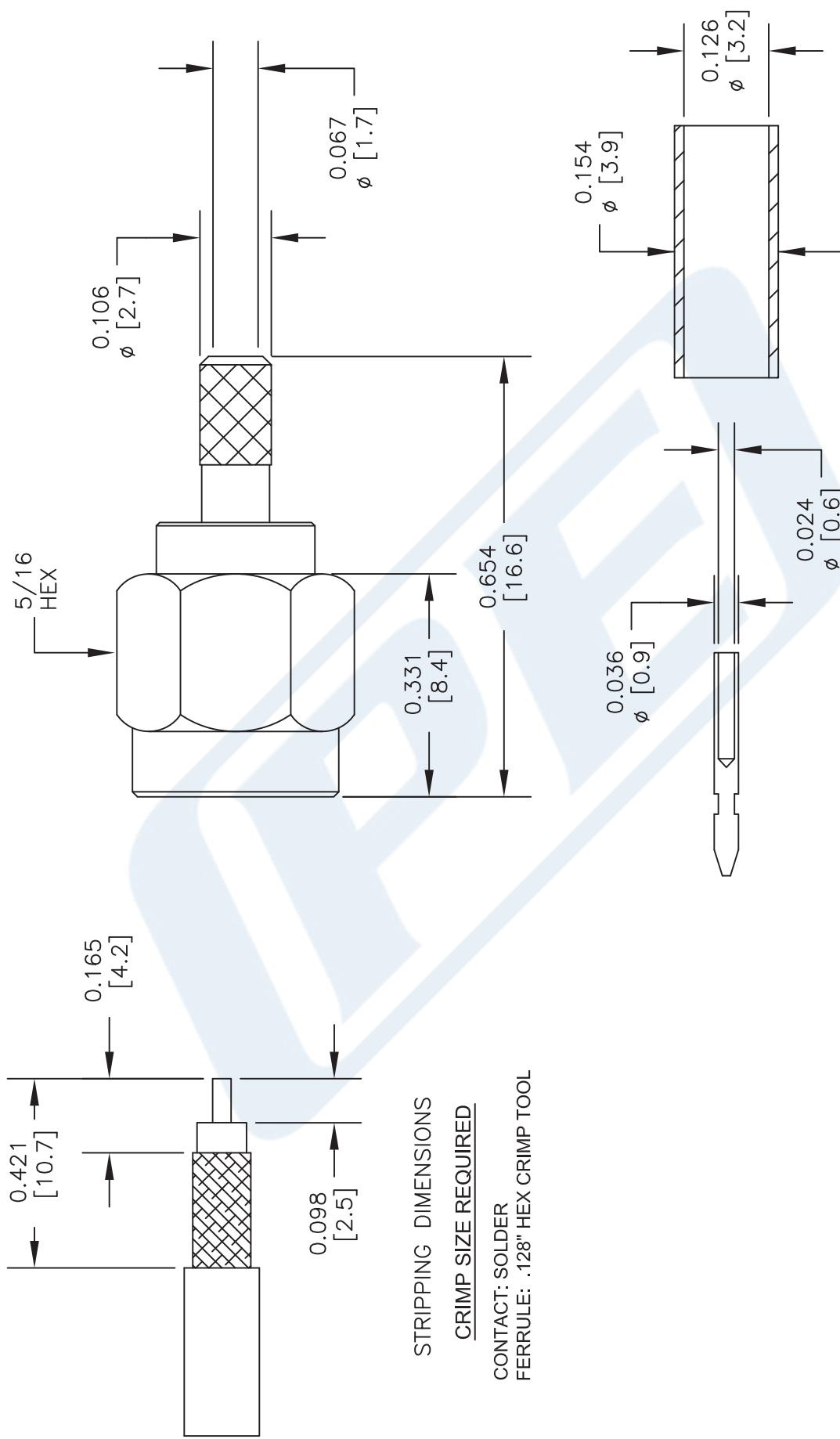
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URL: <https://www.pasternack.com/sma-male-rg174-rg316-rg188-connector-pe45145-p.aspx>

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PE45145 CAD Drawing

SMA Male Connector Crimp/Solder Attachment for RG174, RG316, RG188 Gold Plated



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	PE45145	CAD FILE	012815	SCALE	N/A	SIZE	A	150
PASTERNAK® THE ENGINEER'S RF SOURCE	PASTERNAK® THE ENGINEER'S RF SOURCE	Pasternak Enterprises, Inc. P.O. Box 16759 Irvine CA 92623 Phone: (949) 261-1920 Fax: (949) 261-7451 Website: www.pasternak.com E-Mail: sales@pasternak.com						



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
Width/Dia.

0.7 in [17.78 mm]
0.156 in [3.96 mm]

Mating Cycles
Mating Torque

500 Cycles
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:

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

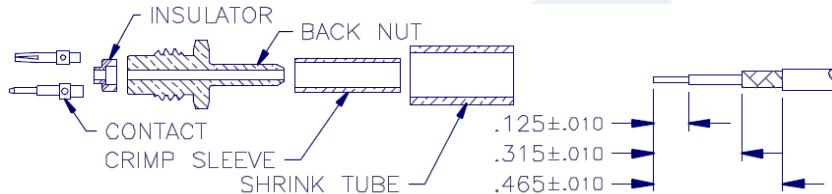


RF Connectors
Technical Data Sheet

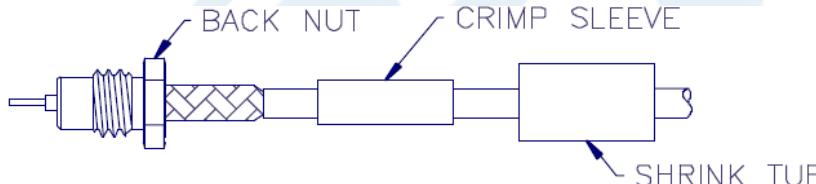
PE45491

Assembly Instruction

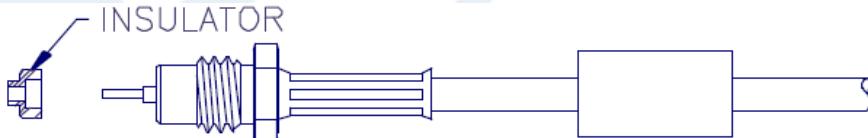
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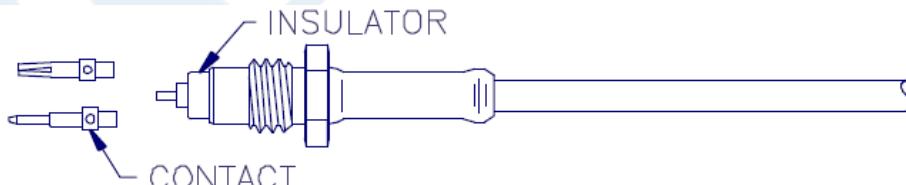
1. TRIM CABLE AS SHOWN ABOVE. TIN END OF CENTER CONDUCTOR.
2. SLIDE CRIMP SLEEVE AND SHRINK TUBE **(IF SUPPLIED)** OVER CABLE JACKET.
3. FLARE CABLE BRAID OUT SLIGHTLY BY ROTATING DIELECTRIC.



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.

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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

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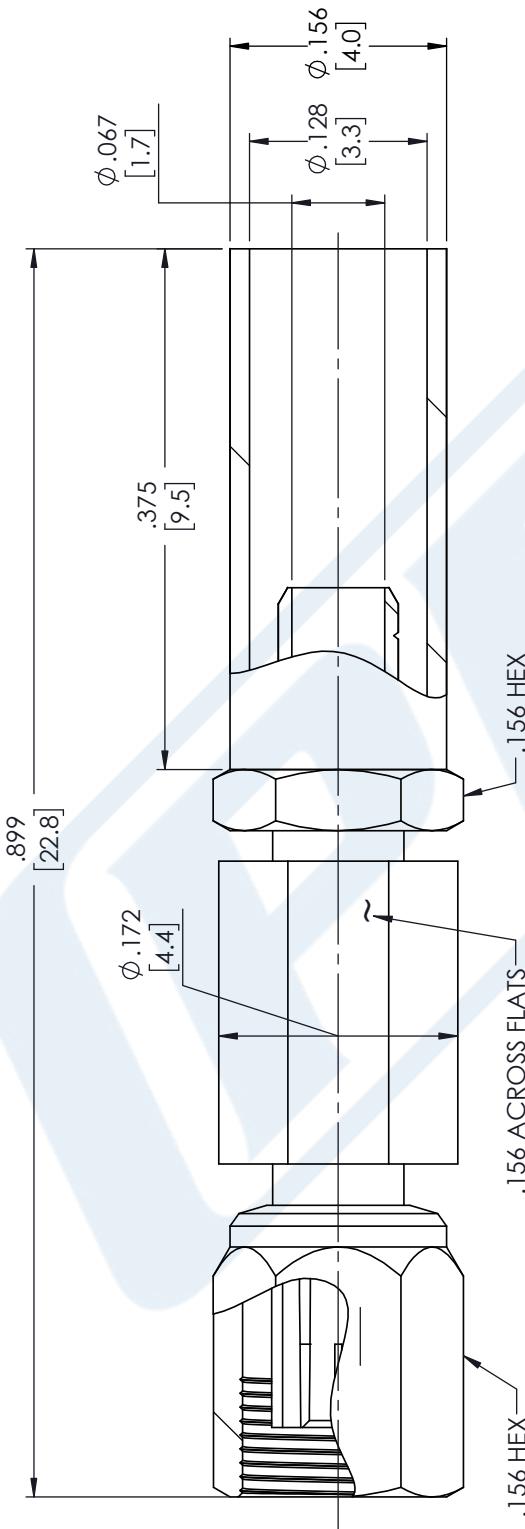
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URL: <https://www.pasternack.com/ssmc-plug-lmr-100a-rg188-pe-c100-lszh-pe-b100-connector-pe45491-p.aspx>

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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

PE THE ENGINEER'S RESOURCE

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DWG TITLE
PE45368

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CAGE CODE 53919 CAD FILE 08/09/18 SCALE N/A SIZE A

CN2245

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).

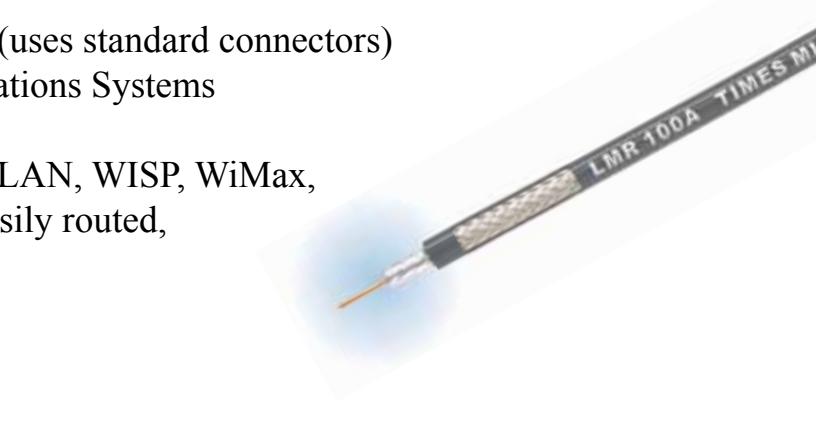
• **Weatherability**: LMR-100A cables designed for outdoor exposure incorporate the best materials for UV resistance and have life expectancy in excess of 20 years.

• **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



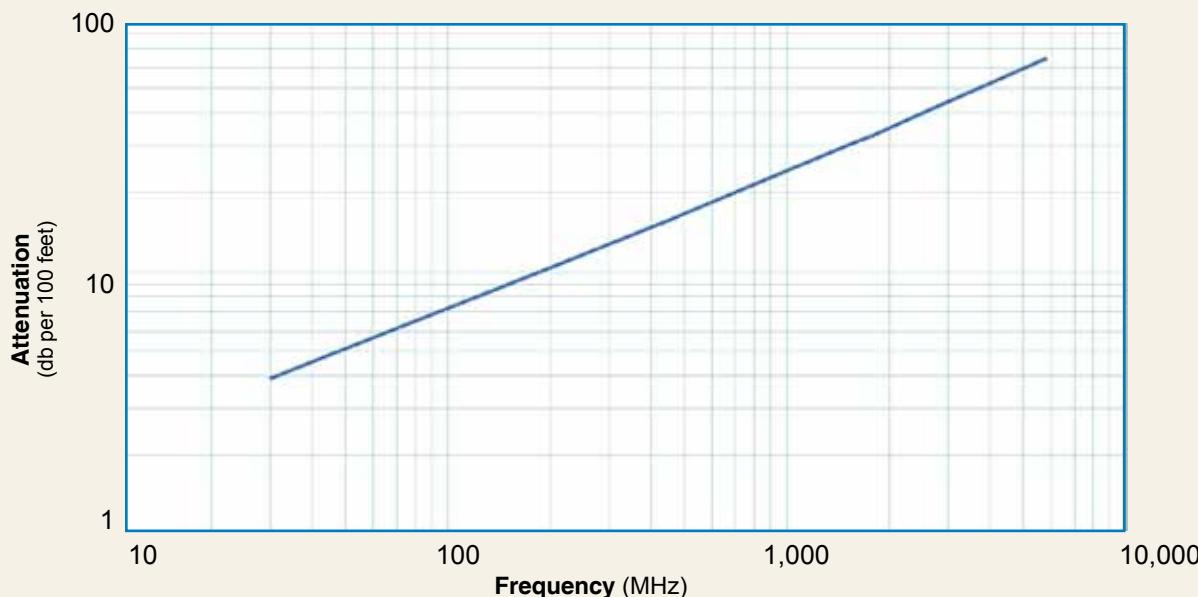
Construction Specifications			
Description	Material	In.	(mm)
Inner Conductor	Solid BCCS	0.018	(0.46)
Dielectric	Solid PE	0.060	(1.52)
Outer Conductor	Aluminum Tape	0.065	(1.65)
Overall Braid	Tinned Copper	0.083	(2.11)
Jacket	(see table above)	0.110	(2.79)

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

