



SSMC Plug Connector Crimp/Solder Attachment for RG316, RG174, RG188

RF Connectors Technical Data Sheet

PE45209

Configuration

- SSMC Plug Connector
- 50 Ohms
- Straight Body Geometry
- Connector Interface Types: RG316, RG174, RG188
- 5/32 inch Hex

Features

- Max. Operating Frequency 12.4 GHz
- Good VSWR of 1.5:1
- Gold Plated Beryllium Copper Contact

Applications

- General Purpose Test
- Custom Cable Assemblies

Description

Pasternack's PE45209 SSMC plug connector with crimp/solder attachment for RG316, RG174 and RG188 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 PE45209 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	
Insulation Resistance	1,000			MOhms

Mechanical Specifications

Size

Length	0.94 in [23.88 mm]
Width/Dia.	0.156 in [3.96 mm]
Weight	0.0033 lbs [1.5 g]
Mating Cycles	500 Cycles
Mating Torque	1 in-lbs [0.11 Nm]

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 RG316, RG174, RG188 PE45209](#)



SSMC Plug Connector Crimp/Solder
Attachment for RG316, RG174, RG188

RF Connectors
Technical Data Sheet

PE45209

Material Specifications

Description	Material	Plating
Contact	Beryllium Copper	Gold
Insulation	PTFE	
Body	Beryllium Copper	Gold
Coupling Nut	Beryllium Copper	Gold

Environmental Specifications

Temperature

Operating Range -45 to +120 deg C

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

Plotted and Other Data

Notes:

SSMC Plug Connector Crimp/Solder Attachment for RG316, RG174, RG188 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 RG316, RG174, RG188 PE45209](#)

URL: <https://www.pasternack.com/ssmc-male-rg316-rg174-rg188-connector-pe45209-p.aspx>

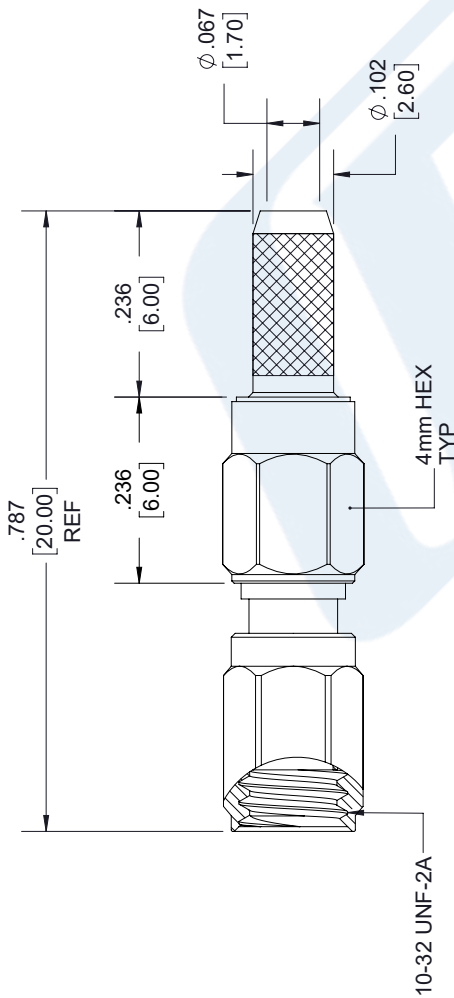
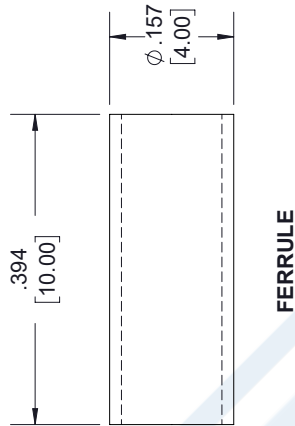
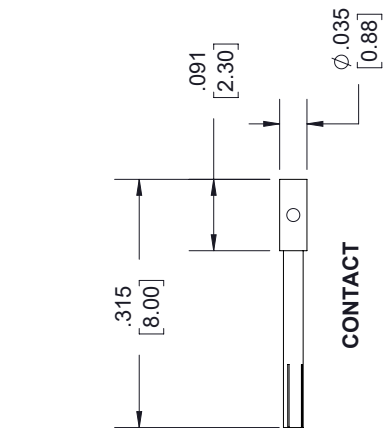
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PE45209 CAD Drawing

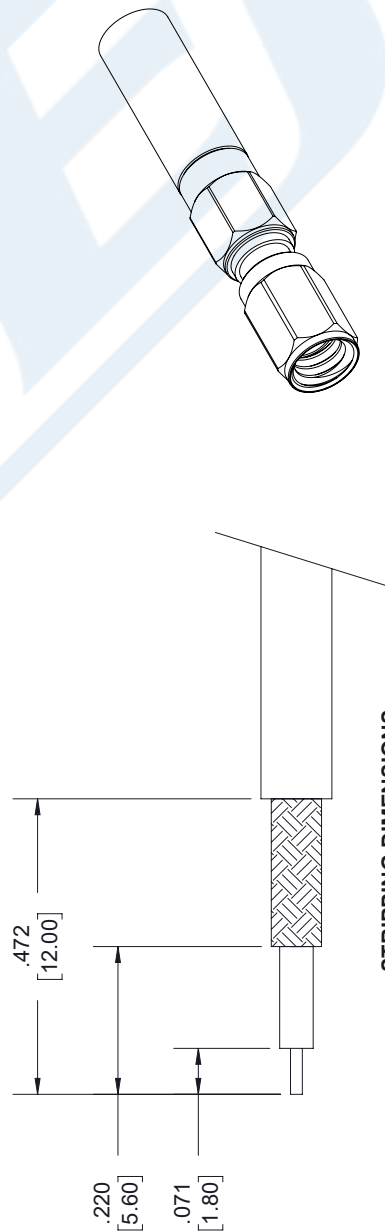
SSMC Plug Connector Crimp/Solder Attachment for RG316, RG174, RG188

REV.	DESCRIPTION	DATE	APPROVED
A	PCR PE45209 2011127	12/13/19	S.ELLIS

REV.	DESCRIPTION	DATE	APPROVED
A	PCR PE45209 2011127	12/13/19	S.ELLIS



SSMC PLUG



STRIPPING DIMENSIONS

NOTES:

- CABLE ATTACHMENT:
 - OUTER: CRIMP.
 - INNER: SOLDER.
- CRIMP SIZE REQUIRED:
 - FERRULE: .134 [3.40] HEX. CRIMP TOOL.
 - CONTACT: SOLDER.

UNLESS OTHERWISE SPECIFIED LEADING DIMENSIONS ARE INCHES DIMENSIONS IN [] ARE MILLIMETERS

TOLERANCES:

- .X = ± .2 [5.08]
- .XX = ± .02 [0.51]
- .XXX = ± .005 [0.13]
- FRACTIONS ± 1/32
- ANGLES ± 1°
- CABLE LENGTH (L) TOLERANCES:
 - L ≤ 12 [305] = +1 [25] / -0
 - 12 [305] < L ≤ 60 [1524] = +2 [51] / -0
 - 60 [1524] < L ≤ 120 [3048] = +4 [102] / -0
 - 120 [3048] < L ≤ 300 [7620] = +6 [152] / -0
 - 300 [7620] < L = +5% / L / -0
- ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.

THIRD-ANGLE PROJECTION

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SHEET 1 OF 1

SCALE N/A



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SIZE	CAGE CODE	DRAWN BY	ITEM NO.	REV
A	53919	K.DANG	PE45209	A

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SMA Male Connector Crimp/Solder Attachment for LMR-100, PE-C100, RG174, RG188, RG316

RF Connectors Technical Data Sheet

Times Microwave Systems Connector Specification

Configuration

- SMA Male Connector
- 50 Ohms
- Straight Body Geometry
- Connector Interface Types: LMR-100, PE-C100, RG174, RG188, RG316

Features

- Max. Operating Frequency 6 GHz
- Gold Plated Brass Contact
- 15 µin contact plating

Applications

- General Purpose Test
- Custom Cable Assemblies

Description

Pasternack's SC-100-SM , SMA, Standard, Connector is part of our full line of RF components available for same-day shipping. Our SMA male connector operates up to a maximum frequency of 6 GHz.

Our SMA male connector SC-100-SM 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		6	GHz
Insertion Loss			0.25	dB
Operating Voltage (AC)			375	Vrms
Impedance		50		Ohms
Dielectric Withstanding Voltage (AC)			500	Vrms
Insulation Resistance	5,000			MOhms

Performance by Frequency

Description	F1	F2	F3	F4	F5	Units
Frequency Range	DC to 3	3 to 5				GHz
VSWR, Max	1.2:1	1.3:1				

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 LMR-100, PE-C100, RG174, RG188, RG316 SC-100-SM](#)



SMA Male Connector Crimp/Solder Attachment for
LMR-100, PE-C100, RG174, RG188, RG316

RF Connectors
Technical Data Sheet

Mechanical Specifications

Size

Length	1.00 in [25.40 mm]
Width	0.32 in [8.00 mm]
Height	0.32 in [8.00 mm]
Weight	0.01 lbs [4.31 g]
Mating Cycles	500 Cycles
Mating Torque	7 to 10 in-lbs [0.79 to 1.13 Nm]
Cable Retention Force	20 lbs [9.07 kg]

Material Specifications

Description	Material	Plating
Contact	Brass	Gold 15 µin
Insulation	PTFE	
Body	Brass	Nickel 200 µin
Coupling Nut	Brass	Nickel 200 µin

Environmental Specifications

Temperature

Operating Range	-40 to +125 deg C
Shock	MIL-STD 202G, Meth. 213, Cond. I
Vibration	MIL-STD 202G, Meth. 204, Cond. D
Thermal Shock	MIL-STD 202G, Meth. 107, Cond. B

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: [SMA Male Connector Crimp/Solder Attachment for LMR-100, PE-C100, RG174, RG188, RG316 SC-100-SM](#)



SMA Male Connector Crimp/Solder Attachment for LMR-100, PE-C100, RG174, RG188, RG316

RF Connectors Technical Data Sheet

SMA Male Connector Crimp/Solder Attachment for LMR-100, PE-C100, RG174, RG188, 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.

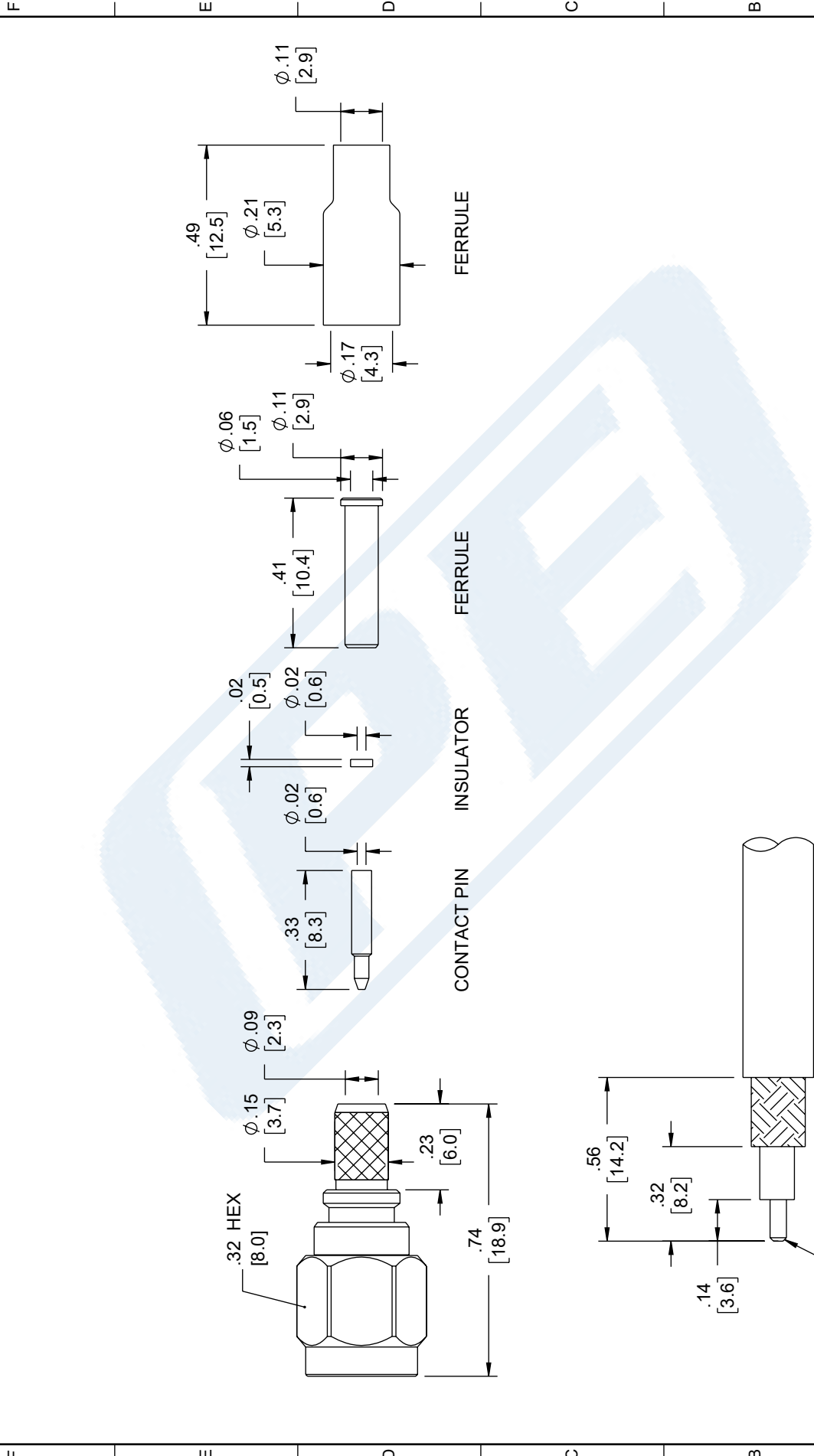
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [SMA Male Connector Crimp/Solder Attachment for LMR-100, PE-C100, RG174, RG188, RG316 SC-100-SM](https://www.pasternack.com/sma-male-lmr-100-pe-c100-rg174-rg188-rg316-connector-sc-100-sm)

URL: <https://www.pasternack.com/sma-male-lmr-100-pe-c100-rg188-rg316-connector-sc-100-sm-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.

TIMES MICROWAVE SYSTEMS **SC-100-SM CAD Drawing**
 SMA Male Connector Crimp/Solder Attachment for LMR-100, PE-C100, RG174, RG188, RG316

ZONE	REV	DESCRIPTION	DATE	CHANGED BY	APPROVED
	A	INITIAL RELEASE	03/30/2023	HBAKKE	AGANWANI



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UNLESS OTHERWISE SPECIFIED
 LEADING DIMENSIONS ARE INCHES
 DIMENSIONS IN [] ARE MILLIMETERS

TOLERANCES:
 .X = ±.2 [5] | FRACTIONS ±1/32
 .XX = ±.02 [5] | ANGLES ± 1°
 .XXX = ±.005 [13] |
 CABLE LENGTH TOLERANCES:
 ≤12 [305] = +1 [25] / -0
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 >60 [1524] ≤ 120 [3048] = +4 [102] / -0
 >120 [3048] ≤ 300 [7620] = +6 [152] / -0
 >300 [7620] = +5% / -0

Website: www.Pasternack.com
 Phone: 1.866.727.8376 | 1.949.261.1920

DESCRIPTION
 SMA Male Connector Crimp/Solder Attachment for LMR-100, PE-C100, RG174, RG188, RG316

SCALE NONE SHEET 1 OF 1

INTERPRET ALL DIMENSIONS AND TOLERANCES PER ASME Y14.5

ITEM NO. SC-100-SM
 CAGE CODE 53919
 DRAWN BY HBAKKE
 REV A

RECOMMENDED CABLE STRIPPING DIMENSIONS

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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



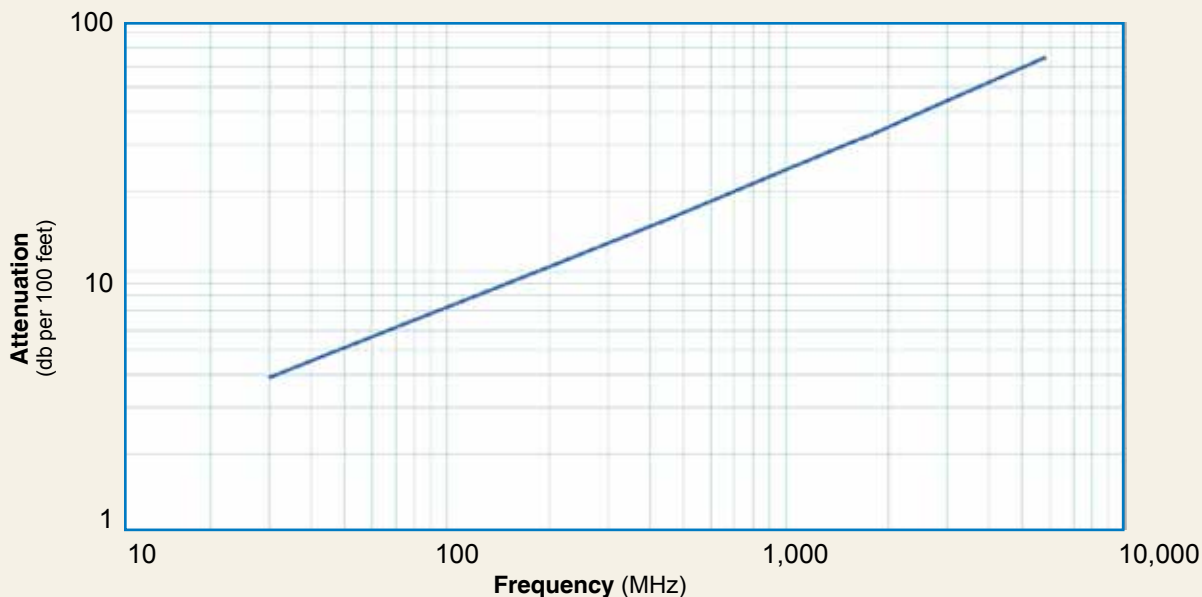
Construction Specifications			
Description	Material	In.	(mm)
Inner Conductor	Solid BCCS	0.018	(0.46)
Dielectric	Solid PE	0.060	(1.52)
Outer Conductor	Aluminum Tape	0.065	(1.65)
Overall Braid	Tinned Copper	0.083	(2.11)
Jacket	(see table above)	0.110	(2.79)

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 = $(0.709140) \cdot \sqrt{\text{FMHz}} + (0.001740) \cdot \text{FMHz}$ (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

