

## SMA Male (Plug) Connector For RG316, RG174, RG188, LMR-100, LMR-100A, 0.100 inch Cable, Crimp/Solder, Ni Plated Brass Body, Length 0.59 In

SMA male connector with crimp/solder attachment for 0.100 inch, RG316, RG174, RG188, LMR-100, LMR-100A and LMR-100A-FR, part number SC7059, from Fairview Microwave is in-stock and ships same day. This SMA male connector operates up to a maximum frequency of 6 GHz and offers excellent VSWR of 1.21:1.

Fairview's SMA male connector SC7059 datasheet specifications and outline drawing are shown in this PDF below. Our extensive offering of RF, microwave and millimeter wave connectors allows designers to configure and customize their signal connections however they like. From providing an I/O for a board design to creating a custom cable assembly configuration, Fairview Microwave has a connector solution to meet your needs. Fairview Microwave also has the expertise to build your custom cable assemblies for you and ship them same-day.

### Electrical Specifications

Description	Min	Typ	Max	Units
Frequency Range	DC		6	GHz
VSWR			1.21:1	
Operating Voltage (AC)			335	Vrms

### Mechanical Specifications

<b>Size</b>	
Length	0.593 in [15.06 mm]
Width/Dia.	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]

### Material Specifications

Description	Material	Plating
Contact	Brass	Gold 50 µin minimum
Insulation	PTFE	
Body	Brass	Nickel 100 µin minimum
Coupling Nut	Brass	Nickel 100 µin minimum

### Environmental Specifications

#### Temperature

Operating Range -65 to +165 deg C

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

### Plotted and Other Data

Notes:



### Configuration:

- SMA Male Connector
- MIL-STD-348A
- 50 Ohms
- Straight Body Geometry
- 0.100 inch, RG316, RG174, RG188, LMR-100, LMR-100A, LMR-100A-FR Interface Type
- Crimp/Solder Attachment
- 5/16 inch Hex

### Features:

- Operating Frequency of 6 GHz Max.
- Excellent VSWR of 1.21:1
- Gold Plated Brass Contact
- 50 µin minimum contact plating

### Applications:

- General Purpose Test
- Custom Cable Assemblies

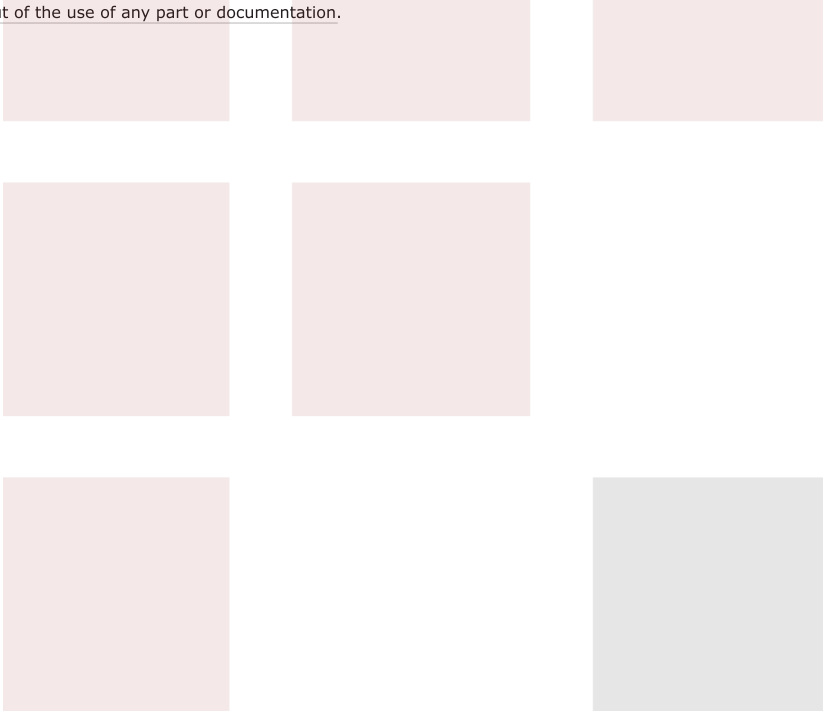
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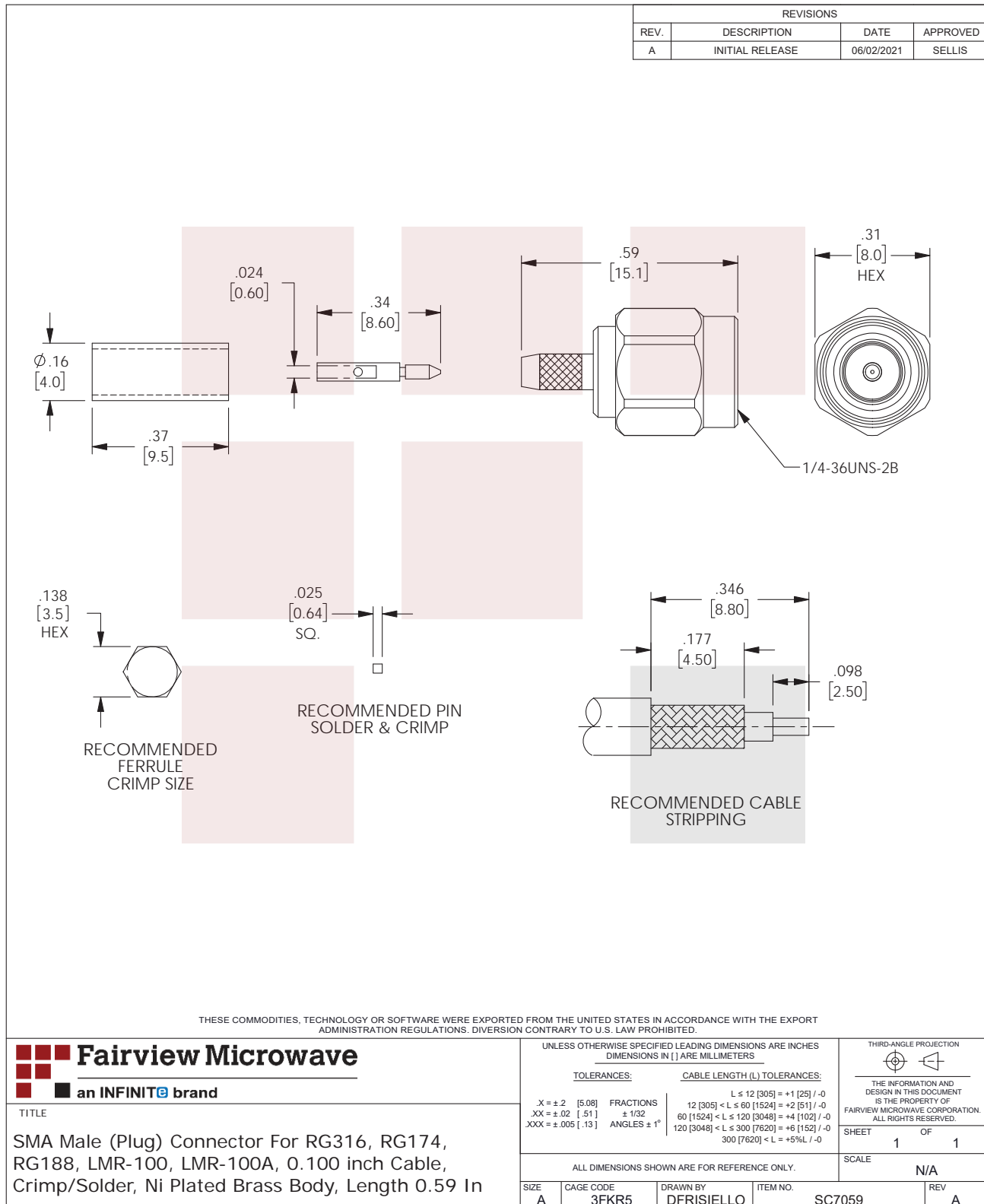
SMA Male (Plug) Connector For RG316, RG174, RG188, LMR-100, LMR-100A, 0.100 inch Cable, Crimp/Solder, Ni Plated Brass Body, Length 0.59 In from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Lewisville, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [SMA Male \(Plug\) Connector For RG316, RG174, RG188, LMR-100, LMR-100A, 0.100 inch Cable, Crimp/Solder, Ni Plated Brass Body, Length 0.59 In SC7059](#)

URL: <https://www.fairviewmicrowave.com/sma-male-0.100-rg316-rg174-rg188-lmr-100-lmr-100a-lmr-100a-fr-connec-tor-sc7059-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. 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 any liability arising out of the use of any part or documentation.





**TNC Female Bulkhead Connector Crimp/Solder  
Attachment For RG316/U, RG174A/U, RG188 Cable  
IP 67 Rated**

**Configuration**

Connector TNC Female

**Electrical Specifications\***

Description	Min	Typ	Max	Units
Frequency Range	DC		3	GHz
Impedance		50		Ohms
VSWR			1.25:1	

\* Values at 25°C, sea level

**Mechanical Specifications**

**Temperature**

Operating Range -40 to +85 deg C

**Size**

Length 1.36 in [34.54 mm]  
Width/Dia. 0.68 in [17.27 mm]

**Connector**

Type TNC Female  
Contact Material and Plating Phosphor Bronze, Gold  
Hex Size 5/8 in  
Body Material and Plating Brass, Nickel  
Dielectric Type PTFE

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

**Plotted and Other Data**

Notes:

- Values at +25 °C, sea level

TNC Female Bulkhead Connector Crimp/Solder Attachment For RG316/U, RG174A/U, RG188 Cable IP 67 Rated 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 Allen, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [TNC Female Bulkhead Connector Crimp/Solder Attachment For RG316/U, RG174A/U, RG188 Cable IP 67 Rated SC4254](http://www.fairviewmicrowave.com/tnc-female-standard-rg316-u-rg174a-u-rg188-connector-sc4254-p.aspx)

URL: <http://www.fairviewmicrowave.com/tnc-female-standard-rg316-u-rg174a-u-rg188-connector-sc4254-p.aspx>

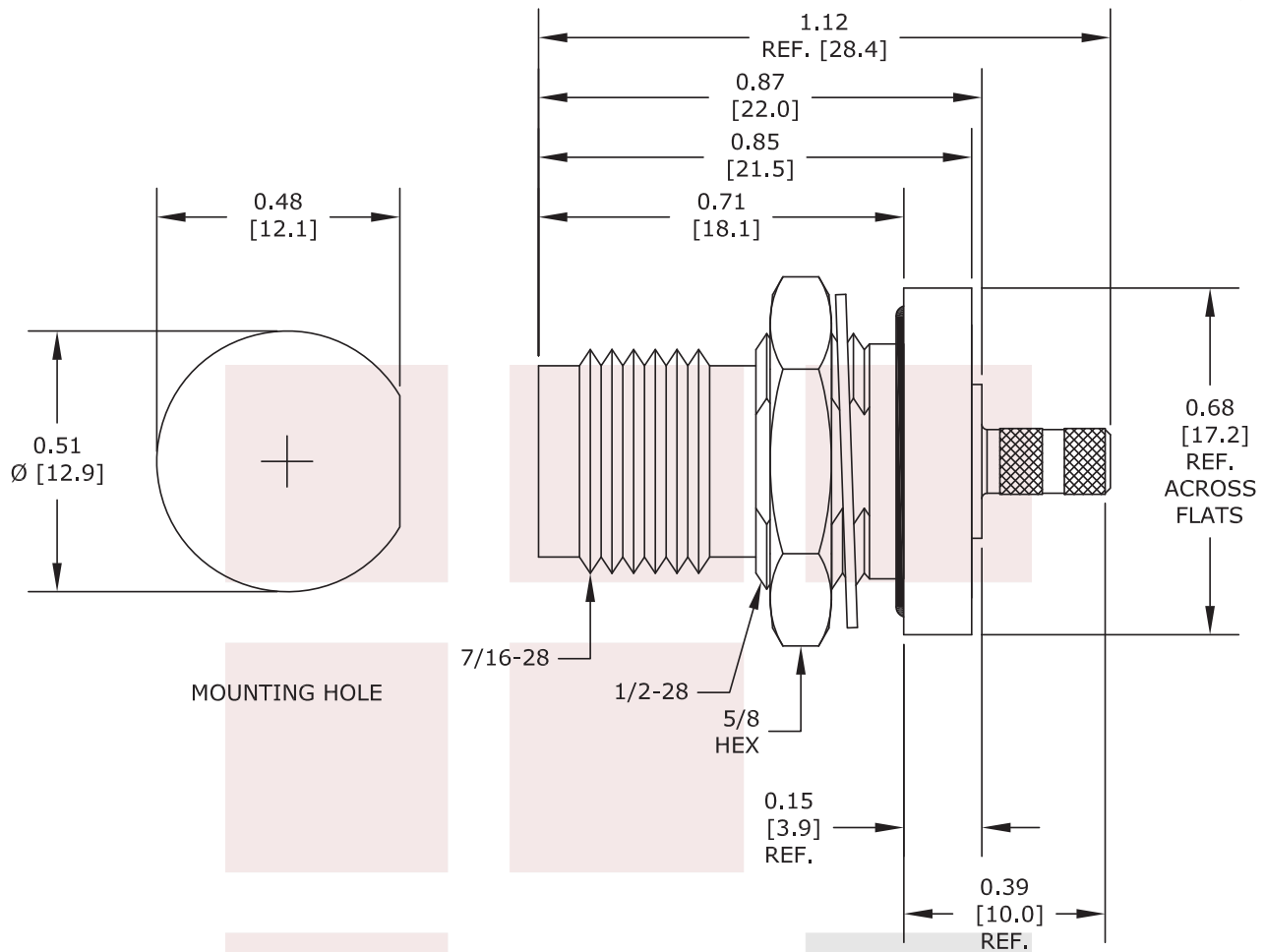
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**Features:**

- Specification: MIL-STD-348
- Interface: RG316/U, RG174A/U, RG188
- Attachment: Crimp/Solder
- Body Style: Straight
- Mount Method: Bulkhead

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MOUNTING HOLE

7/16-28

1/2-28

5/8  
HEX

0.15  
[3.9]  
REF.

0.39  
[10.0]  
REF.

0.68  
[17.2]  
REF.  
ACROSS  
FLATS

#### ASSEMBLY PROCEDURES

1. TRIM CABLE AS SHOWN
2. SLIDE CRIMP FERRULE ONTO CABLE
3. CRIMP OR SOLDER BULLET CONTACT TO THE CENTER CONDUCTOR, INSERT CABLE WITH BULLET CONTACT INTO REAR FERRULE BODY, SLIDING FOIL INTO THE BODY AND THE BRAID OVER THE BODY
4. CRIMP FERRULE

#### CRIMP SIZE REQUIRED

CONTACT: CRIMP OR SOLDER  
FERRULE: .178" HEX CRIMP TOOL

STRIPPING DIMENSIONS

## FAIRVIEW MICROWAVE INC.

ALLEN, TX 75013 WWW.FAIRVIEWMICROWAVE.COM

#### 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].

#### TITLE

TNC Female Bulkhead Connector Crimp/Solder  
Attachment For RG316/U, RG174A/U, RG188 Cable IP  
67 Rated

#### DWG NO

SC4254

#### CAGE CODE

3FKR5

#### CAD FILE

082214

#### SHEET

#### SCALE

N/A

#### SIZE

A 2233

# 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



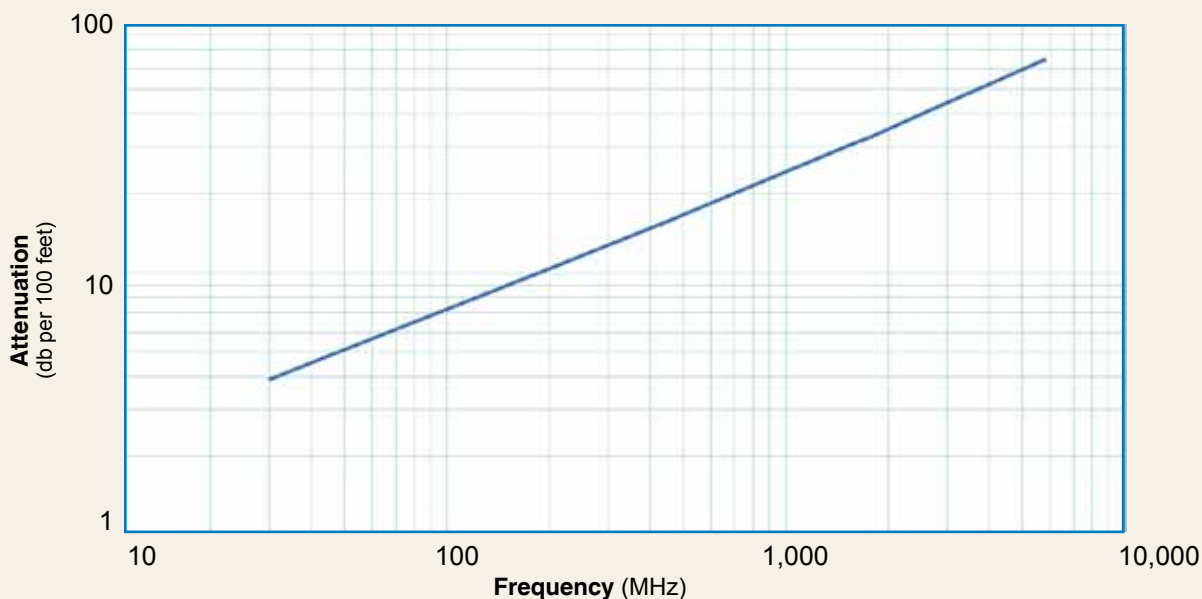
Construction Specifications			
Description	Material	In.	(mm)
Inner Conductor	Solid BCCS	0.018	(0.46)
Dielectric	Solid PE	0.060	(1.52)
Outer Conductor	Aluminum Tape	0.065	(1.65)
Overall Braid	Tinned Copper	0.083	(2.11)
Jacket	(see table above)	0.110	(2.79)

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	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

