



Reverse Polarity MCX Male Right Angle Push-On Connector  
Crimp/Solder Attachment for RG316, RG188, RG174

TECHNICAL DATA SHEET

PE45050

**Configuration**

|                                    |                                    |
|------------------------------------|------------------------------------|
| Connector                          | MCX Male Reverse Polarity, Push-On |
| Connector Interface Type           | RG316, RG188, RG174                |
| Attachment Method (Shield/Contact) | Crimp/Solder                       |
| Body Style                         | Right Angle                        |

**Electrical Specifications**

|                                 |             |
|---------------------------------|-------------|
| Frequency Range                 | DC to 6 GHz |
| Impedance                       | 50 Ohms     |
| Maximum VSWR                    | 1.3:1       |
| Maximum Operating Voltage       | 335 Volts   |
| Dielectric Withstanding Voltage | 1,000 Vrms  |

**Mechanical Specifications**

**Size**

|            |                    |
|------------|--------------------|
| Length     | 0.34 in [8.64 mm]  |
| Width/Dia. | 0.2 in [5.08 mm]   |
| Height     | 0.56 in [14.22 mm] |

**Connector**

|                                      |                           |
|--------------------------------------|---------------------------|
| Type                                 | MCX Male Reverse Polarity |
| Contact Material and Plating         | Beryllium Copper, Gold    |
| Outer Conductor Material and Plating | Brass, Gold               |
| Body Material and Plating            | Beryllium Copper, Gold    |
| Dielectric Type                      | PTFE                      |

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

RoHS Compliant

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [Reverse Polarity MCX Male Right Angle Push-On Connector Crimp/Solder Attachment for RG316, RG188, RG174 PE45050](#)



## Reverse Polarity MCX Male Right Angle Push-On Connector Crimp/Solder Attachment for RG316, RG188, RG174

### TECHNICAL DATA SHEET

PE45050

#### Plotted and Other Data

Notes:

- Values at +25 °C, sea level

Reverse Polarity MCX Male Right Angle Push-On Connector Crimp/Solder Attachment for RG316, RG188, RG174 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.

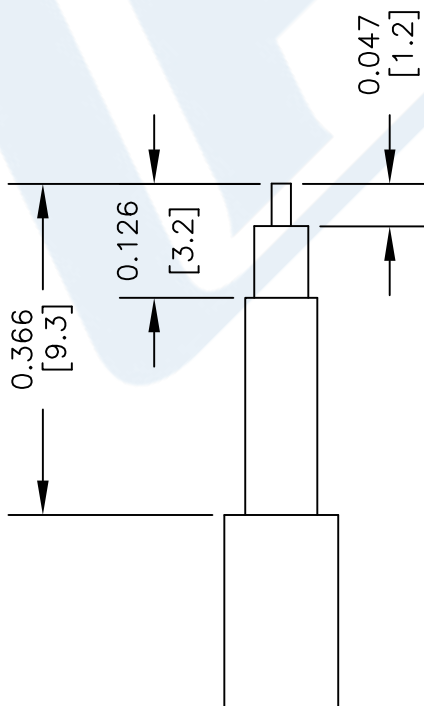
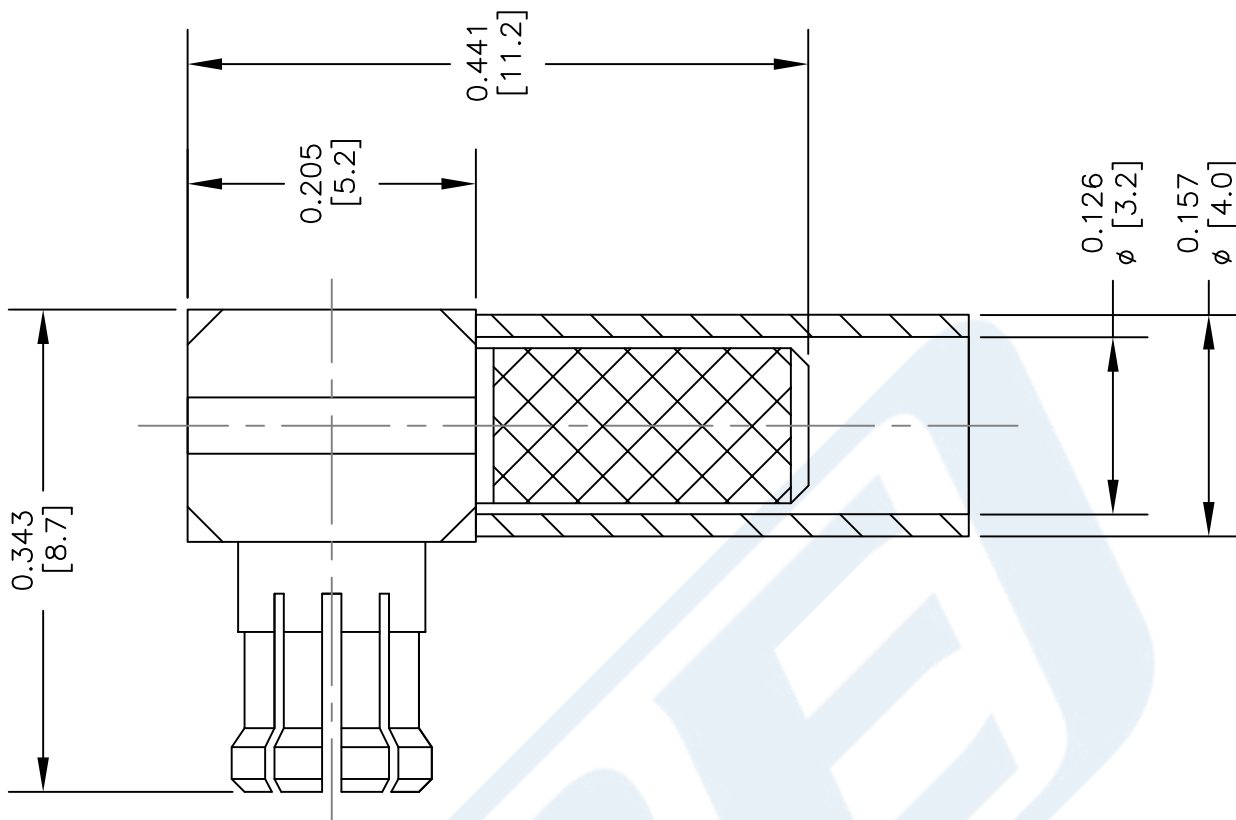
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URL: <http://www.pasternack.com/mcx-male-reverse-polarity-push-on-rg316-rg188-rg174-connector-pe45050-p.aspx>

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.

# PE45050 CAD Drawing

Reverse Polarity MCX Male Right Angle Push-On Connector  
Crimp/Solder Attachment for RG316, RG188, RG174



## STRIPPING DIMENSIONS

## ASSEMBLY PROCEDURES

1. STRIP CABLE AS SHOWN & TIN CENTER CONDUCTOR. SLIDE FERRULE OVER CABLE.
2. INSTALL CABLE INTO BODY OF CONNECTOR & SOFT SOLDER CENTER CONDUCTOR IN PLACE.
3. CRIMP FERRULE. INSERT PTFE & PRESS CAP DOWN.

## CRIMP SIZE REQUIRED

FERRULE: .128" HEX CRIMP TOOL



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Website: www.pasternack.com | E-Mail: sales@pasternack.com

DWG TITLE

**PE45050**

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.

FSCM NO. 53919

CAD FILE 082514

SCALE N/A

SIZE A

2233



N Female Bulkhead Mount Connector Crimp/Solder Attachment for RG174, RG316, RG188, LMR-100, PE-B100, PE-C100, 0.100 inch, .640 inch DD Hole

RF Connectors  
Technical Data Sheet

PE4442

**Configuration**

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

**Features**

- Max. Operating Frequency 6 GHz
- Good VSWR of 1.5:1
- Gold Plated Brass Contact
- 30 µin minimum contact plating

**Applications**

- General Purpose Test
- Rack and Panel Mount Applications
- Custom Cable Assemblies

**Description**

Pasternack's PE4442 type N female bulkhead connector with crimp/solder attachment for RG174, RG316, RG188, LMR-100, PE-B100, PE-C100 and .100 inch (.640 inch DD hole) is part of our full line of RF components available for same-day shipping. Our type N female connector operates up to a maximum frequency of 6 GHz and offers good VSWR of 1.5:1. This type N bulkhead connector allows designers to create external connections on their product enclosures, and can be used in a variety of other rack mount and panel mount applications.

Our type N female bulkhead connector PE4442 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   |
| VSWR                   |         |         | 1.5:1   |       |
| Operating Voltage (AC) |         |         | 500     | Vrms  |

**Mechanical Specifications**

| Size          |                     |
|---------------|---------------------|
| Length        | 1.59 in [40.39 mm]  |
| Width/Dia.    | 0.807 in [20.50 mm] |
| Weight        | 0.083 lbs [37.65 g] |
| Mating Cycles | 100 Cycles          |

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [N Female Bulkhead Mount Connector Crimp/Solder Attachment for RG174, RG316, RG188, LMR-100, PE-B100, PE-C100, 0.100 inch, .640 inch DD Hole PE4442](#)



N Female Bulkhead Mount Connector Crimp/Solder Attachment for RG174, RG316, RG188, LMR-100, PE-B100, PE-C100, 0.100 inch, .640 inch DD Hole

RF Connectors  
Technical Data Sheet

PE4442

**Material Specifications**

| Description  | Material | Plating                   |
|--------------|----------|---------------------------|
| Contact      | Brass    | Gold<br>30 µin minimum    |
| Insulation   | PTFE     |                           |
| Body         | Brass    | Nickel<br>100 µin minimum |
| Crimp Sleeve | Brass    | Nickel                    |
| Washer       | 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:

N Female Bulkhead Mount Connector Crimp/Solder Attachment for RG174, RG316, RG188, LMR-100, PE-B100, PE-C100, 0.100 inch, .640 inch DD Hole 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: [N Female Bulkhead Mount Connector Crimp/Solder Attachment for RG174, RG316, RG188, LMR-100, PE-B100, PE-C100, 0.100 inch, .640 inch DD Hole PE4442](#)

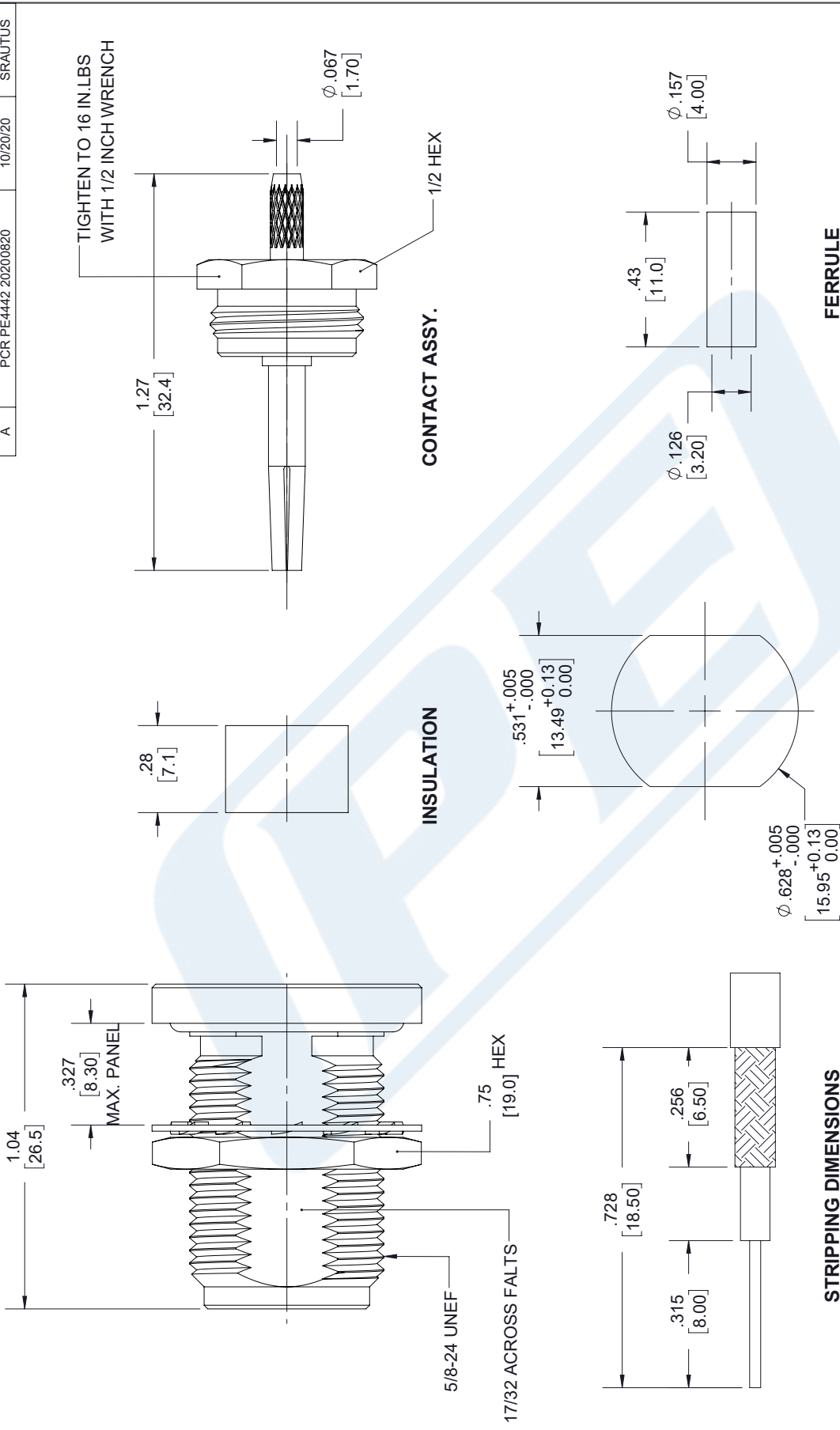
URL: <https://www.pasternack.com/n-female-standard-rg174-rg316-rg188-connector-pe4442-p.aspx>

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# PE4442 CAD Drawing

N Female Bulkhead Mount Connector Crimp/Solder Attachment for RG174, RG316, RG188, LMR-100, PE-B100, PE-C100, 0.100 inch, .640 inch DD Hole

| REVISIONS |                     |          |          |
|-----------|---------------------|----------|----------|
| REV.      | DESCRIPTION         | DATE     | APPROVED |
| A         | PCR PE4442 20200820 | 10/20/20 | SRAUTUS  |



**THIRD-ANGLE PROJECTION**

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an INFINITE brand

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

**TOLERANCES:**

.X = ±.2 [5.08] FRACTIONS ± 1/32  
 .XX = ±.02 [.51] ANGLES ± 1°  
 .XXX = ±.005 [.13]

**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% / -0

ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.

ITEM NO. PE4442

CAGE CODE 53919

DRAWN BY SLI

SCALE N/A

SHEET 1 OF 1

REV A

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**NOTES:**

- CABLE ATTACHMENT:  
OUTER: CRIMP.  
INNER: SOLDER.
- CRIMP SIZE REQUIRED  
FERRULE: .138[3.50] HEX CRIMP TOOL  
CONTACT: SOLDER

# 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                  |

