



SMA Female Connector Clamp/Solder Attachment  
for RG55, RG58, RG141, RG142, RG223, RG303,  
RG400, PE-C195, PE-P195, LMR-195

## RF Connectors Technical Data Sheet

PE4031

### Configuration

- SMA Female Connector
- MIL-STD-348
- 50 Ohms
- Straight Body Geometry
- RG55, RG58, RG141, RG142, RG223, RG303, RG400, PE-C195, PE-P195, LMR-195 Interface Type
- Clamp/Solder Attachment

### Features

- Gold Plated Contact
- Contact plating according to MIL-G-45204

### Applications

- General Purpose Test
- Custom Cable Assemblies

### Description

Pasternack's PE4031 SMA female connector with clamp/solder attachment for RG55, RG58, RG141, RG142, RG223, RG303, RG400, PE-C195, PE-P195 and LMR-195 is part of our full line of RF components available for same-day shipping.

Our SMA female connector PE4031 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.

### Mechanical Specifications

|             |                     |
|-------------|---------------------|
| <b>Size</b> |                     |
| Length      | 0.705 in [17.91 mm] |
| Width/Dia.  | 0.312 in [7.92 mm]  |
| Weight      | 0.009 lbs [4.08 g]  |

### Material Specifications

| Description | Material | Plating             |
|-------------|----------|---------------------|
| Contact     |          | Gold<br>MIL-G-45204 |
| Insulation  | PTFE     |                     |
| Body        | Brass    | Nickel<br>QQ-N-290  |

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [SMA Female Connector Clamp/Solder Attachment for RG55, RG58, RG141, RG142, RG223, RG303, RG400, PE-C195, PE-P195, LMR-195 PE4031](#)



SMA Female Connector Clamp/Solder Attachment  
for RG55, RG58, RG141, RG142, RG223, RG303,  
RG400, PE-C195, PE-P195, LMR-195

RF Connectors  
Technical Data Sheet

PE4031

**Environmental Specifications**

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

**Plotted and Other Data**

Notes:

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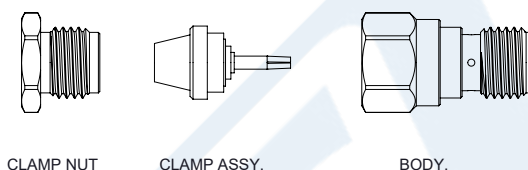


SMA Female Connector Clamp/Solder Attachment  
for RG55, RG58, RG141, RG142, RG223, RG303,  
RG400, PE-C195, PE-P195, LMR-195

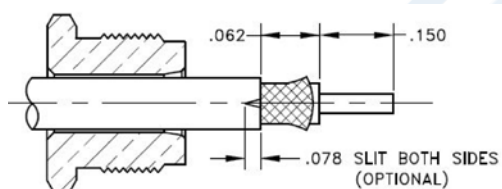
RF Connectors  
Technical Data Sheet

PE4031

Assembly Instruction

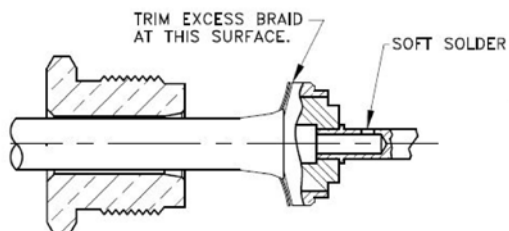


CABLE ASSEMBLY INSTRUCTIONS.

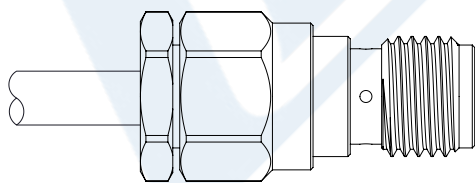


1. SLIDE NUT ONTO CABLE AS SHOWN. CUT CABLE SQUARE. TRIM CABLE TO DIMENSIONS SHOWN BEING CAREFUL NOT TO NICK THE BRAID OR CENTER CONDUCTOR. ROTATE DIELECTRIC TO FLARE BRAID.

NOTE: TWO SLITS IN THE JACKET 180° APART AS SHOWN MAY BE NEEDED TO PRESS JACKET TO SHOULDER.



2. SLIDE CLAMP ASSY OVER DIELECTRIC AND UNDER BRAID UNTIL THE DIELECTRIC BOTTOMS OUT IN CLAMP AND THE CENTER CONDUCTOR IS VISIBLE INSIDE HOLE OF CONTACT. SOLDER THE CONTACT ONTO THE CENTER CONDUCTOR. DO NOT OVERHEAT!.



3. INSERT THE ASSEMBLY INTO THE REAR BODY. HOLD THE NUT STATIONARY AND TIGHTEN THE BODY TO 15 IN LBS.

TIGHTEN

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [SMA Female Connector Clamp/Solder Attachment for RG55, RG58, RG141, RG142, RG223, RG303, RG400, PE-C195, PE-P195, LMR-195 PE4031](#)



SMA Female Connector Clamp/Solder Attachment  
for RG55, RG58, RG141, RG142, RG223, RG303,  
RG400, PE-C195, PE-P195, LMR-195

## RF Connectors Technical Data Sheet

PE4031

SMA Female Connector Clamp/Solder Attachment for RG55, RG58, RG141, RG142, RG223, RG303, RG400, PE-C195, PE-P195, LMR-195 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.

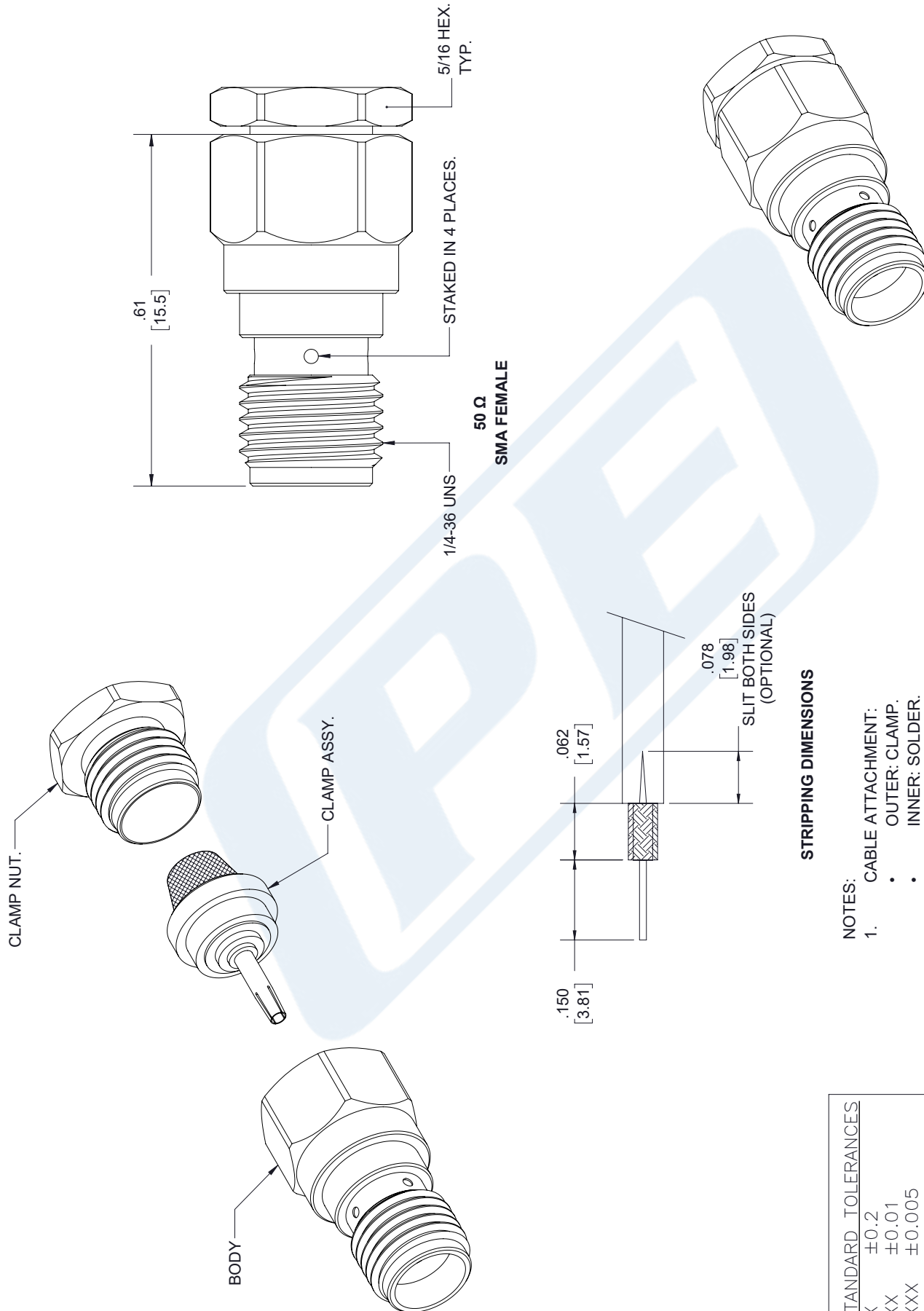
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URL: <https://www.pasternack.com/sma-female-standard-rg58-rg55-rg142-rg223-rg400-connector-pe4031-p.aspx>

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.

# PE4031 CAD Drawing

SMA Female Connector Clamp/Solder Attachment for RG55, RG58, RG141, RG142, RG223, RG303, RG400, PE-C195, PE-P195, LMR-195



| STANDARD TOLERANCES |
|---------------------|
| .X ±0.2             |
| .XX ±0.01           |
| .XXX ±0.005         |

\*STANDARD TOLERANCES APPLY ONLY TO DIMENSIONS IN INCHES

- NOTES:
- CABLE ATTACHMENT:
    - OUTER: CLAMP.
    - INNER: SOLDER.

## STRIPPING DIMENSIONS

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].

DWG TITLE  
 PE4031

**CAGE CODE 53919**

CAD FILE 12/13/18

SCALE N/A

SIZE A

7361

**PASTERNAK®**  
 THE ENGINEER'S RF SOURCE  
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 Website: www.pasternack.com | E-Mail: sales@pasternack.com



BNC Male Connector Crimp/Crimp Attachment for RG58, RG303, RG141, PE-C195, PE-P195, LMR-195, 0.195 inch

## RF Connectors Technical Data Sheet

PE4016

### Configuration

- BNC Male Connector
- MIL-STD-348A
- 50 Ohms
- Straight Body Geometry
- RG58, RG303, RG141, PE-C195, PE-P195, LMR-195, .195 inch Interface Type
- Crimp/Crimp Attachment

### Features

- Max. Operating Frequency 4 GHz
- Good VSWR of 1.5:1
- Gold Plated Brass Contact
- 30 µin minimum contact plating

### Applications

- General Purpose Test
- Custom Cable Assemblies

### Description

Pasternack's PE4016 BNC male connector with crimp/crimp attachment for RG58, RG303, RG141, PE-C195, PE-P195, LMR-195 and .195 inch is part of our full line of RF components available for same-day shipping. Our BNC male connector operates up to a maximum frequency of 4 GHz and offers good VSWR of 1.5:1.

Our BNC male connector PE4016 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   |
| VSWR                   |         |         | 1.5:1   |       |
| Operating Voltage (AC) |         |         | 500     | Vrms  |

### Mechanical Specifications

#### Size

|            |                     |
|------------|---------------------|
| Length     | 1.13 in [28.7 mm]   |
| Width/Dia. | 0.571 in [14.50 mm] |
| Weight     | 0.027 lbs [12.25 g] |

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [BNC Male Connector Crimp/Crimp Attachment for RG58, RG303, RG141, PE-C195, PE-P195, LMR-195, 0.195 inch PE4016](#)



BNC Male Connector Crimp/Crimp Attachment for RG58,  
RG303, RG141, PE-C195, PE-P195, LMR-195, 0.195 inch

## RF Connectors Technical Data Sheet

PE4016

### Material Specifications

| Description  | Material | Plating                   |
|--------------|----------|---------------------------|
| Contact      | Brass    | Gold<br>30 µin minimum    |
| Insulation   | PTFE     |                           |
| Body         | Brass    | Nickel<br>100 µin minimum |
| Coupling Nut | Brass    | Nickel<br>100 µin minimum |
| Gasket       | Silicone |                           |
| 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:

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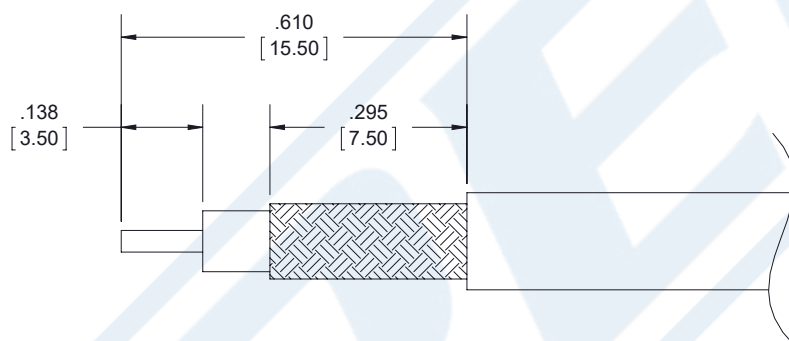


BNC Male Connector Crimp/Crimp Attachment for RG58,  
RG303, RG141, PE-C195, PE-P195, LMR-195, 0.195 inch

## RF Connectors Technical Data Sheet

PE4016

### Assembly Instruction



### ASSEMBLY PROCEDURES

1. STRIP CABLE TO THE DIMENSIONS SHOWN, DO NOT NICK CENTER CONDUCTOR OR BRAID.
2. PUSH CENTER CONDUCTOR FULLY INTO CONTACT AND CRIMP WITH CRIMP TOOL.
3. FLARE BRAID AND INSERT THE BODY UNTIL IT SEATS.
4. SLIDE FERRULE OVER BRAID AND CRIMP WITH CRIMP TOOL.

### CRIMP SIZE REQUIRED

- CONTACT: .071 [1.80] HEX CRIMP TOOL.
- FERRULE: .216 [5.50] HEX CRIMP TOOL.

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BNC Male Connector Crimp/Crimp Attachment for RG58,  
RG303, RG141, PE-C195, PE-P195, LMR-195, 0.195 inch

## RF Connectors Technical Data Sheet

PE4016

BNC Male Connector Crimp/Crimp Attachment for RG58, RG303, RG141, PE-C195, PE-P195, LMR-195, 0.195 inch 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.

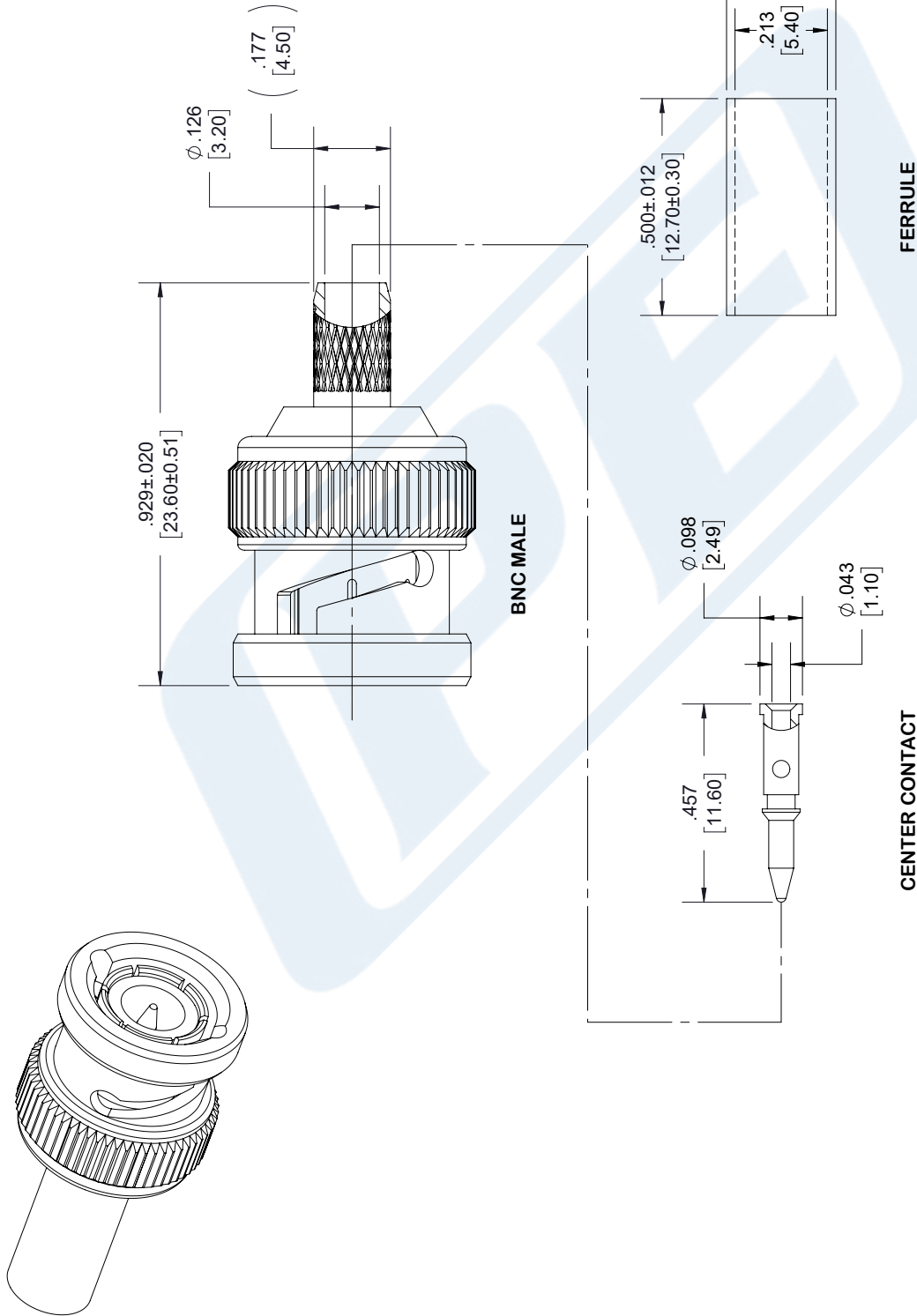
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# PE4016 CAD Drawing

BNC Male Connector Crimp/Crimp Attachment for RG58, RG303,  
RG141, PE-C195, PE-P195, LMR-195, 0.195 inch



## STANDARD TOLERANCES

.X  $\pm 0.2$   
.XX  $\pm 0.01$   
.XXX  $\pm 0.005$

\*STANDARD TOLERANCES APPLY  
ONLY TO DIMENSIONS IN INCHES



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DWG TITLE

PE4016

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CAGE CODE 53919

CAD FILE 010318

SCALE N/A

SIZE A

7361

# LMR®-195

## Flexible Low Loss Communications Coax

### Ideal for...

- 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
- Drop-in replacement for RG-58 and RG-142



• **LMR®** standard is a UV Resistant Polyethylene jacketed cable designed for 20-year service outdoor use. The bending and handling characteristics are significantly better than air-dielectric and corrugated hard-line cables.

• **LMR® - DB** is identical to standard LMR plus has the advantage of being watertight. The addition of waterproofing compound in and around the foil/braid insures continuous reliable service should the jacket be inadvertently damaged during installation or in the future.

• **LMR® - FR** is a non-halogen (non-toxic), low smoke, fire retardant cable designed for in-building runs that can be routed anywhere except air handling plenums. LMR-FR is UL/NEC & CSA rated 'CMR' and 'FT4' respectively, meets FAA FAR25 requirements and is MSHA-P for mining applications.

• **LMR® - FR-PVC** is a general-purpose indoor cable and has a UL/NEC & CSA rating of 'CMR' and 'FT4' respectively. It is less expensive than LMR-FR, however it emits toxic fumes (HCL) and greater smoke density when burned.

• **LMR® - PVC** is designed for low loss general-purpose 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 applications where color compatibility is desired.

• **LMR® - MA** is a flexible cable designed specifically for mobile antenna applications. It has a PVC jacket and un-bonded aluminum tape to facilitate end stripping with automated equipment.

• **Flexibility** and bendability are hallmarks of the LMR-195 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-195. 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-195 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-195 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-195 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-195          | Outdoor                  | PE     | Black | 54110 |
| LMR-195-DB       | Outdoor/Watertight       | PE     | Black | 54113 |
| LMR-195-FR       | Indoor/Outdoor Riser CMR | FRPE   | Black | 54111 |
| LMR-195-FR-W     | Indoor/Outdoor Riser CMR | FRPE   | White | 54158 |
| LMR-195-FR-PVC   | Indoor/Outdoor Riser CMR | FRPVC  | Black | 54105 |
| LMR-195-MA       | Mobile Antennas          | PVC    | Black | 54210 |
| LMR-195-PVC      | General Purpose          | PVC    | Black | 54215 |
| LMR-195-PVC-W    | General Purpose          | PVC    | White | 54199 |

| Construction Specifications |                   |       |        |
|-----------------------------|-------------------|-------|--------|
| Description                 | Material          | In.   | (mm)   |
| Inner Conductor             | Solid BC          | 0.037 | (0.94) |
| Dielectric                  | Foam PE           | 0.110 | (2.79) |
| Outer Conductor             | Aluminum Tape     | 0.116 | (2.95) |
| Overall Braid               | Tinned Copper     | 0.139 | (3.53) |
| Jacket                      | (see table above) | 0.195 | (4.95) |

### Mechanical Specifications

| Performance Property      | Units          | US    | (metric) |
|---------------------------|----------------|-------|----------|
| Bend Radius: installation | in. (mm)       | 0.5   | (12.7)   |
| Bend Radius: repeated     | in. (mm)       | 2.0   | (50.8)   |
| Bending Moment            | ft-lb (N-m)    | 0.2   | (0.27)   |
| Weight                    | lb/ft (kg/m)   | 0.021 | (0.03)   |
| Tensile Strength          | lb (kg)        | 40    | (18.2)   |
| Flat Plate Crush          | lb/in. (kg/mm) | 15    | (0.27)   |

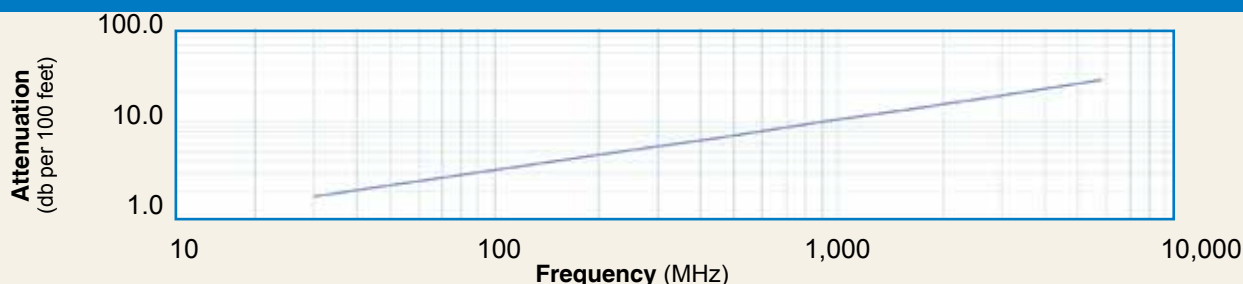
### Environmental Specifications

| 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 | %                 | 76    |          |
| Dielectric Constant     | NA                | 1.56  |          |
| Time Delay              | nS/ft (nS/m)      | 1.27  | (4.17)   |
| Impedance               | ohms              | 50    |          |
| Capacitance             | pF/ft (pF/m)      | 25.4  | (83.3)   |
| Inductance              | uH/ft (uH/m)      | 0.064 | (0.21)   |
| Shielding Effectiveness | dB                | >90   |          |
| DC Resistance           |                   |       |          |
| Inner Conductor         | ohms/1000ft (/km) | 7.6   | (24.9)   |
| Outer Conductor         | ohms/1000ft (/km) | 4.9   | (16.1)   |
| Voltage Withstand       | Volts DC          | 1000  |          |
| Jacket Spark            | Volts RMS         | 3000  |          |
| Peak Power              | kW                | 2.5   |          |

### Attenuation vs. Frequency (typical)



| Frequency (MHz)       | 30   | 50   | 150  | 220  | 450  | 900  | 1500 | 1800 | 2000 | 2500 | 5800 |
|-----------------------|------|------|------|------|------|------|------|------|------|------|------|
| Attenuation dB/100 ft | 2.0  | 2.5  | 4.4  | 5.4  | 7.8  | 11.1 | 14.5 | 16.0 | 16.9 | 19.0 | 29.9 |
| Attenuation dB/100 m  | 6.5  | 8.4  | 14.6 | 17.7 | 25.5 | 36.5 | 47.7 | 52.5 | 55.4 | 62.4 | 98.1 |
| Avg. Power kW         | 0.89 | 0.68 | 0.39 | 0.32 | 0.22 | 0.16 | 0.12 | 0.11 | 0.10 | 0.09 | 0.06 |

Calculate Attenuation =  $(0.356859) \cdot \sqrt{\text{FMHz}} + (0.000470) \cdot \text{FMHz}$  (interactive calculator available at [http://www.timesmicrowave.com/cable\\_calculators](http://www.timesmicrowave.com/cable_calculators))  
**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



TC-195-NM



TC-195-SM



TC-195-NM-RA-D



TC-195-TM

## Connectors

| Interface | Description   | Part Number     | Stock Code | VSWR**<br>Freq. (GHz) | Coupling<br>Nut | Inner<br>Contact<br>Attach | Outer<br>Contact<br>Attach | Finish*<br>Body /Pin | Length<br>in (mm) | Width<br>in (mm) | Weight<br>lb (g) |
|-----------|---------------|-----------------|------------|-----------------------|-----------------|----------------------------|----------------------------|----------------------|-------------------|------------------|------------------|
| N male    | Straight Plug | TC-195-NM       | 3190-1555  | <1.25:1 (2.5)         | Knurl           | Solder                     | Crimp                      | S/G                  | 1.5 (38.1)        | 0.75 (19.1)      | 0.073 (33.1)     |
| N male    | Right Angle   | TC-195-NMH-RA-D | 3190-2425  | <1.35:1 (6)           | Hex/Knurl       | Solder                     | Crimp                      | A/G                  | 1.3 (32.1)        | 1.19 (30.1)      | 0.083 (37.5)     |
| SMA male  | Straight Plug | TC-195-SM       | 3190-1553  | <1.25:1 (2.5)         | Hex             | Solder                     | Crimp                      | SS/G                 | 1.0 (25.4)        | 0.32 (8.1)       | 0.015 (6.8)      |
| TNC male  | Straight Plug | TC-195-TM       | 3190-1554  | <1.25:1 (2.5)         | 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=Alloy \*\*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                           |
| Deburr Tool       | DBT-U              | 3192-001   | Removes center conductor rough edges               |
| Replacement Blade | RB-01              | 3190-1609  | Replacement blade for cutting tool                 |



CT-240/200/195/100



DBT-U



CCT-01