



**TNC Male to Reverse Polarity TNC Male Low Loss  
Cable 50 CM Length Using LMR-195 Coax**

**RF Cable Assemblies Technical Data Sheet**

**PE3W09029-50CM**

**Configuration**

- Connector 1: TNC Male
- Connector 2: TNC Male Reverse Polarity
- Cable Type: LMR-195

**Features**

- Max Frequency 5.8 GHz
- Shielding Effectivity > 90 dB
- 80% Phase Velocity
- Double Shielded
- PE Jacket

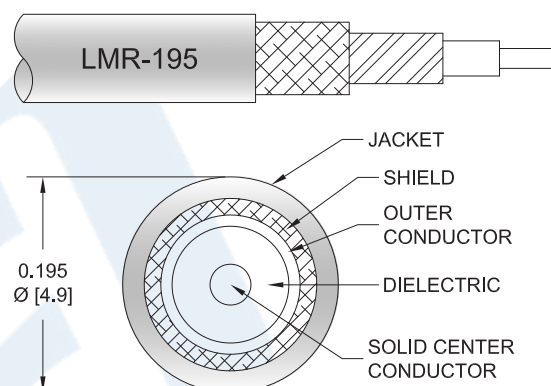
**Applications**

- General Purpose
- Laboratory Use

**Description**

Pasternack's PE3W09029-50CM TNC male to reverse polarity TNC male 50 cm cable using LMR-195 coax is part of our full line of RF components available for same-day shipping. Pasternack's flexible RF cable assemblies are ideal for applications where tight bends and flexure are required. This Pasternack TNC to reverse polarity TNC cable assembly has a male to male gender configuration with 50 ohm flexible LMR-195 coax. The PE3W09029-50CM TNC male to reverse polarity TNC male cable assembly operates to 5.8 GHz. The double shielding of this Pasternack cable assembly provides excellent shielding effectiveness of better than 90 dB.

Custom versions of most RF cable assemblies can be built and shipped same day. Custom cable assembly lengths can be obtained by specifying the desired length on the web site at time of order or by contacting a sales representative. Other available RF cable assembly value added services include connector orientation or clocking, heat shrink booting and custom labeling. RF testing can also be performed to document the electrical performance of your cable assembly.



Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [TNC Male to Reverse Polarity TNC Male Low Loss Cable 50 CM Length Using LMR-195 Coax PE3W09029-50CM](#)



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#### Electrical Specifications

| Description                   | Minimum | Typical      | Maximum | Units           |
|-------------------------------|---------|--------------|---------|-----------------|
| Frequency Range               | DC      |              | 5.8     | GHz             |
| Velocity of Propagation       |         | 80           |         | %               |
| RF Shielding                  | 90      |              |         | dB              |
| Group Delay                   |         | 1.27 [4.17]  |         | ns/ft [ns/m]    |
| Capacitance                   |         | 25.4 [83.33] |         | pF/ft [pF/m]    |
| Inductance                    |         | 0.064 [0.21] |         | uH/ft [uH/m]    |
| DC Resistance Inner Conductor |         | 7.6 [24.93]  |         | Ω/1000ft [Ω/Km] |
| DC Resistance Outer Conductor |         | 4.9 [16.08]  |         | Ω/1000ft [Ω/Km] |
| Jacket Spark                  |         |              | 3,000   | Vrms            |

#### Specifications by Frequency

| Description           | F1   | F2   | F3   | F4   | F5   | Units |
|-----------------------|------|------|------|------|------|-------|
| Frequency             | 0.25 | 0.5  | 1    | 2.5  | 5.8  | GHz   |
| Insertion Loss (Typ.) | 0.29 | 0.33 | 0.39 | 0.51 | 0.69 | dB    |

#### Electrical Specification Notes:

The Insertion Loss data above is based on the performance specifications of the coax cable and connectors used in this assembly. The Insertion Loss includes an estimated insertion loss of 0.1 dB for the straight connector and 0.2 dB for the right angle connector.

#### Mechanical Specifications

##### Cable Assembly

|          |                      |
|----------|----------------------|
| Length*  | 19.68 in [499.87 mm] |
| Diameter | 0.591 in [15.01 mm]  |

##### Cable

|                                      |                     |
|--------------------------------------|---------------------|
| Cable Type                           | LMR-195             |
| Impedance                            | 50 Ohms             |
| Inner Conductor Type                 | Solid               |
| Inner Conductor Material and Plating | Copper              |
| Dielectric Type                      | PE (F)              |
| Number of Shields                    | 2                   |
| Shield Layer 1                       | Aluminum Tape       |
| Shield Layer 2                       | Tinned Copper Braid |
| Jacket Material                      | PE, Black           |
| Jacket Diameter                      | 0.195 in [4.95 mm]  |

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|                              |                        |
|------------------------------|------------------------|
| One Time Minimum Bend Radius | 0.5 in [12.7 mm]       |
| Repeated Minimum Bend Radius | 2 in [50.8 mm]         |
| Bending Moment               | 0.2 lbs-ft [0.27 N-m]  |
| Flat Plate Crush             | 15 lbs/in [0.27 Kg/mm] |
| Tensile Strength             | 40 lbs [18.14 Kg]      |

### Connectors

| Description                        | Connector 1     | Connector 2               |
|------------------------------------|-----------------|---------------------------|
| Type                               | TNC Male        | TNC Male Reverse Polarity |
| Impedance                          | 50 Ohms         | 50 Ohms                   |
| Contact Material and Plating       | Brass, Gold     | Brass, Gold               |
| Contact Plating Specification      | 30 µin minimum  | 30 µinches minimum        |
| Dielectric Type                    | PTFE            |                           |
| Body Material and Plating          | Brass, Nickel   | Brass, Nickel             |
| Body Plating Specification         | 100 µin minimum | 100 µinches minimum       |
| Coupling Nut Material and Plating  | Brass, Nickel   |                           |
| Coupling Nut Plating Specification | 100 µin minimum |                           |

### Environmental Specifications

#### Temperature

|                 |                  |
|-----------------|------------------|
| Operating Range | -40 to +85 deg C |
| Storage Range   | -70 to +85 deg C |

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

### Plotted and Other Data

Notes:

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## RF Cable Assemblies Technical Data Sheet

**PE3W09029-50CM**

### How to Order

Part Number Configuration:

**PE3W09029**

- **xx**

**uu**

Unit of Measure:  
cm = Centimeters  
<blank> = Inches  
Length  
Base Number

Example: PE3W09029-12 = 12 inches long cable  
PE3W09029-100cm = 100 cm long cable

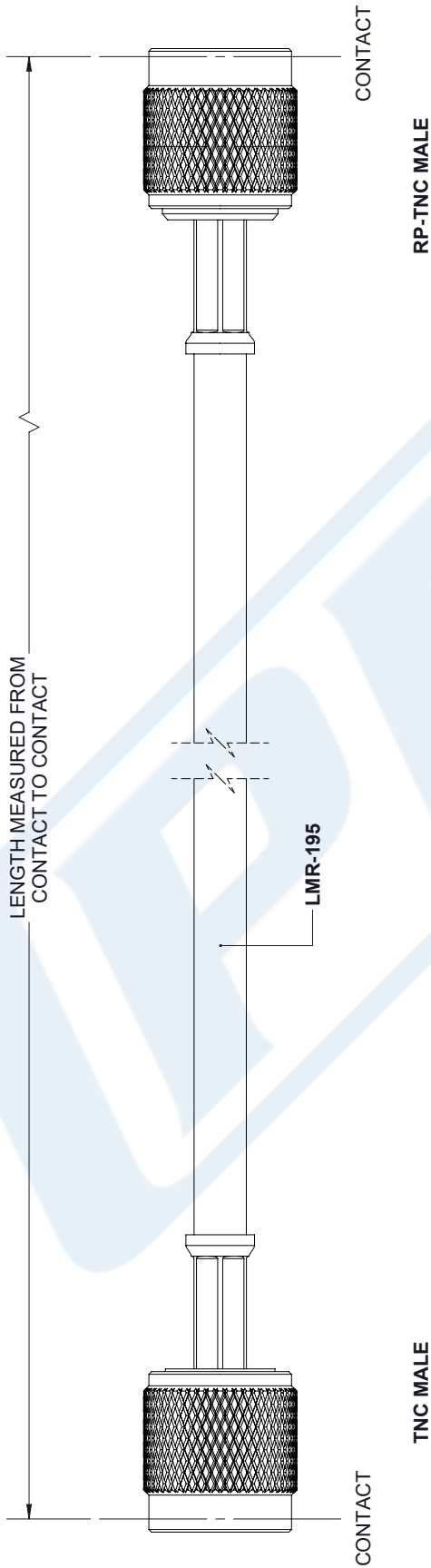
TNC Male to Reverse Polarity TNC Male Low Loss Cable 50 CM Length Using LMR-195 Coax from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99.4% availability and are part of the broadest selection in the industry.

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [TNC Male to Reverse Polarity TNC Male Low Loss Cable 50 CM Length Using LMR-195 Coax PE3W09029-50CM](https://www.pasternack.com/tnc-male-tnc-male-lmr195-cable-assembly-pe3w09029-50cm-p.aspx)

URL: <https://www.pasternack.com/tnc-male-tnc-male-lmr195-cable-assembly-pe3w09029-50cm-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.

**PE3W09029-50CM CAD Drawing**  
TNC Male to Reverse Polarity TNC Male Low Loss  
Cable 50 CM Length Using LMR-195 Coax



| REVISIONS |                 |          |          |
|-----------|-----------------|----------|----------|
| REV.      | DESCRIPTION     | DATE     | APPROVED |
| A         | INITIAL RELEASE | 3/9/2020 | SELLIS   |

|                                                                                                  |  |       |  |                                                                                     |  |                                                                                                                       |  |
|--------------------------------------------------------------------------------------------------|--|-------|--|-------------------------------------------------------------------------------------|--|-----------------------------------------------------------------------------------------------------------------------|--|
| UNLESS OTHERWISE SPECIFIED<br>LEADING DIMENSIONS ARE INCHES<br>DIMENSIONS IN [ ] ARE MILLIMETERS |  |       |  | THIRD-ANGLE PROJECTION                                                              |  |                                                                                                                       |  |
| TOLERANCES:                                                                                      |  |       |  |  |  |                                                                                                                       |  |
| X = ± .2                                                                                         |  | [.08] |  | FRACTIONS                                                                           |  | THE INFORMATION AND<br>DESIGN IN THIS DOCUMENT<br>IS THE PROPERTY OF<br>PASTERNAK CORPORATION<br>ALL RIGHTS RESERVED. |  |
| .XX = ± .02                                                                                      |  | [.51] |  | ± 1/32                                                                              |  | SHEET 1 OF 1                                                                                                          |  |
| .XXX = ± .005                                                                                    |  | [.13] |  | ANGLES ± 1°                                                                         |  | SCALE N/A                                                                                                             |  |
| 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<br>ARE FOR REFERENCE ONLY.                                                  |  |       |  | SIZE                                                                                |  | CAGE CODE                                                                                                             |  |
|                                                                                                  |  |       |  | A                                                                                   |  | 53919                                                                                                                 |  |
|                                                                                                  |  |       |  | DRAWN BY                                                                            |  | K.DANG                                                                                                                |  |
|                                                                                                  |  |       |  | ITEM NO.                                                                            |  | PE3W09029                                                                                                             |  |
|                                                                                                  |  |       |  | REV                                                                                 |  | A                                                                                                                     |  |

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