



## TNC Male to TNC Male Right Angle Low Loss Cable Using PE-P160LL Coax

### RF Cable Assemblies Technical Data Sheet

PE3C5252

#### Configuration

- Connector 1: TNC Male
- Connector 2: TNC Male Right Angle
- Cable Type: PE-P160LL

#### Features

- Max Frequency 18 GHz
- Shielding Effectivity > 90 dB
- 82.5% Phase Velocity
- Triple Shielded
- FEP Jacket
- 0.8 inch Minimum Bend Radius
- Max VSWR of 1.35:1 to 18 GHz
- Same Day Shipment of Custom Lengths
- RoHS and REACH Compliant



#### Applications

- General Purpose
- Laboratory Use
- Automated Test Systems
- Airborne Systems
- Phased Arrays
- EW and Countermeasures

#### Description

The PE3C5252 TNC Male to TNC Male Right Angle Low Loss cable assembly is part of a series of cable assemblies that use our PE-P160LL double shielded coax. The PE-P160LL based cable assemblies are available in a variety of connector configurations operating to a maximum frequency for this cable series of 18 GHz. The PE3C5252 high performance cable assembly with a 82.5% phase velocity offers very low loss performance in a 0.16 inch coax up to 18 GHz. The shielding effectiveness of the PE-P160LL double shielded coax is greater than 95 dB. The durable stainless steel connectors and FEP cable jacket provide a cost effective design ideal for test environments where a rugged cable assembly is required. A heavy duty heat shrink booting provides improved strain relief and adds to the durability of the cable assembly.

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 TNC Male Right Angle Low Loss Cable Using PE-P160LL Coax PE3C5252](#)



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#### Electrical Specifications

| Description             | Minimum | Typical    | Maximum | Units        |
|-------------------------|---------|------------|---------|--------------|
| Frequency Range         | DC      |            | 18      | GHz          |
| VSWR                    |         |            | 1.35:1  |              |
| Velocity of Propagation |         | 82.5       |         | %            |
| RF Shielding            | 90      |            |         | dB           |
| Capacitance             |         | 25 [82.02] |         | pF/ft [pF/m] |

#### Specifications by Frequency

| Description           | F1   | F2   | F3   | F4   | F5   | Units |
|-----------------------|------|------|------|------|------|-------|
| Frequency             | 1    | 2    | 4.5  | 9    | 18   | GHz   |
| Insertion Loss (Typ.) | 0.1  | 0.14 | 0.22 | 0.32 | 0.46 | dB/ft |
|                       | 0.33 | 0.46 | 0.72 | 1.05 | 1.51 | dB/m  |

#### Electrical Specification Notes:

Insertion Loss does not include the loss of the connectors. Insertion Loss for the straight connector is estimated as  $0.04 \cdot \sqrt{F(\text{GHz})}$  dB maximum. Insertion Loss for the right angle connector is estimated as  $0.10 \cdot \sqrt{F(\text{GHz})}$  dB maximum.

#### Mechanical Specifications

##### Cable Assembly

##### Cable

|                                      |                      |
|--------------------------------------|----------------------|
| Cable Type                           | PE-P160LL            |
| Impedance                            | 50 Ohms              |
| Inner Conductor Type                 | Solid                |
| Inner Conductor Material and Plating | Copper, Silver       |
| Dielectric Type                      | Expanded PTFE Tape   |
| Number of Shields                    | 3                    |
| Shield Layer 1                       | Silver Plated Copper |
| Shield Layer 2                       | Aluminum Polyester   |
| Shield Layer 3                       | Silver Plated Copper |
| Jacket Material                      | FEP                  |
| Jacket Diameter                      | 0.16 in [4.06 mm]    |
| Repeated Minimum Bend Radius         | 0.8 in [20.32 mm]    |

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**Connectors**

| Description                       | Connector 1                | Connector 2                |
|-----------------------------------|----------------------------|----------------------------|
| Type                              | TNC Male                   | TNC Male Right Angle       |
| Impedance                         | 50 Ohms                    | 50 Ohms                    |
| Contact Material and Plating      | Beryllium Copper, Gold     | Beryllium Copper, Gold     |
| Contact Plating Specification     | ASTM-B488                  | ASTM-B488                  |
| Dielectric Type                   | PTFE                       | PTFE                       |
| Body Material and Plating         | Passivated Stainless Steel | Passivated Stainless Steel |
| Coupling Nut Material and Plating | Passivated Stainless Steel | Passivated Stainless Steel |

**Environmental Specifications**

**Temperature**

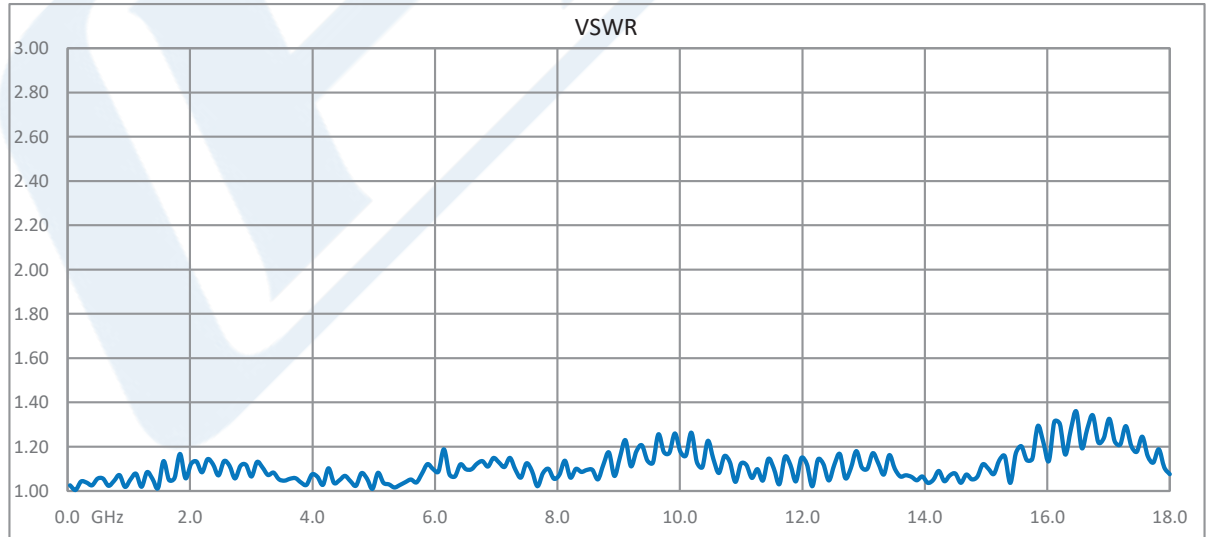
Operating Range -55 to +165 deg C

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

**Plotted and Other Data**

Notes:

**Typical Performance Data**



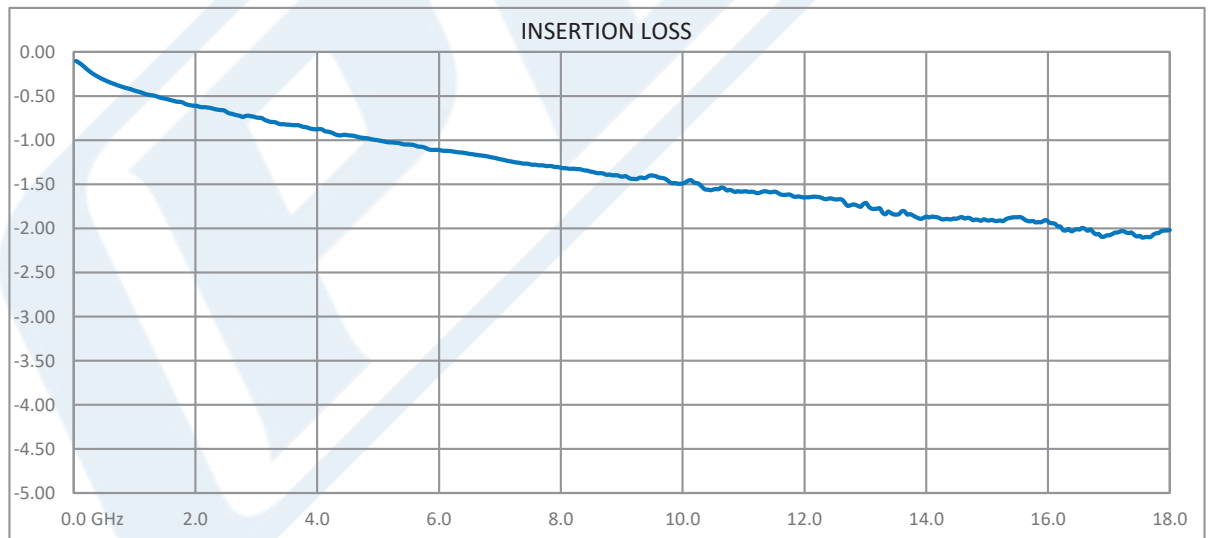
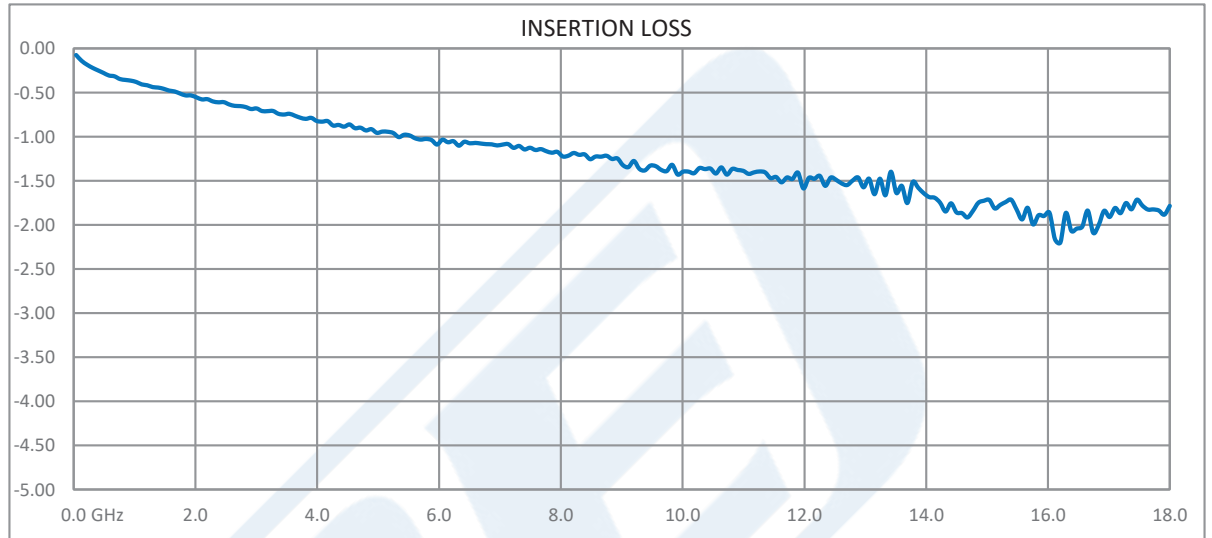
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**How to Order**

Part Number Configuration:

**PE3C5252**

- **xx**

**uu**

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

Example: PE3C5252-12 = 12 inches long cable  
PE3C5252-100cm = 100 cm long cable

TNC Male to TNC Male Right Angle Low Loss Cable Using PE-P160LL 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.

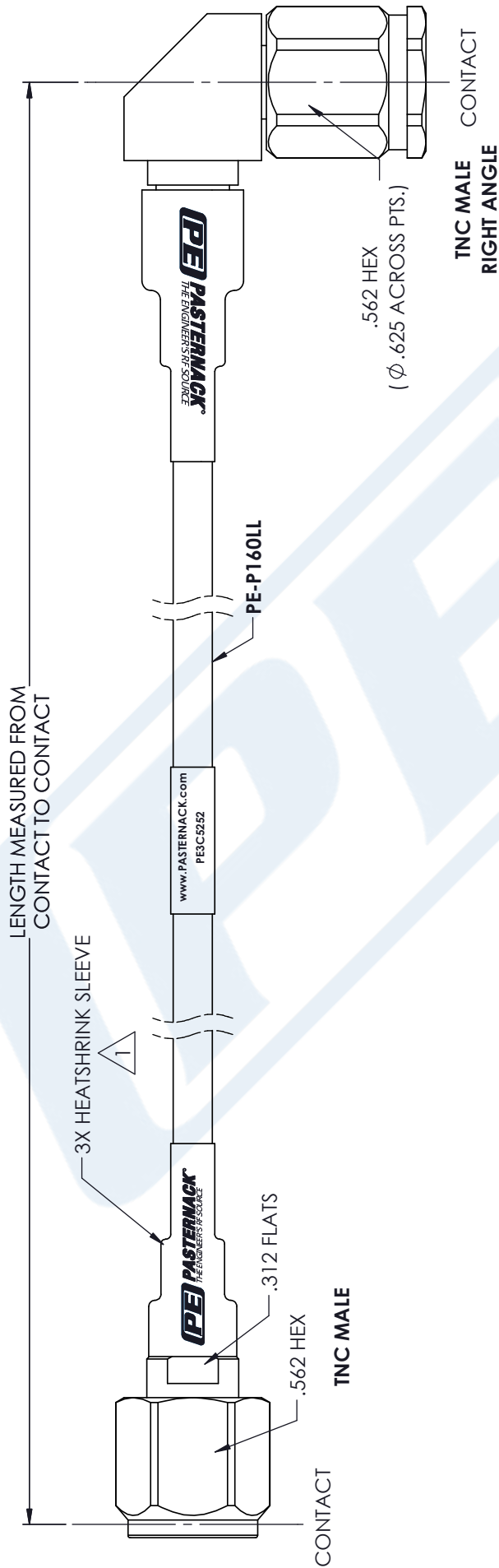
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URL: <https://www.pasternack.com/tnc-male-tnc-male-pe-p160ll-cable-assembly-pe3c5252-p.aspx>

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.

# PE3C5252 CAD Drawing

TNC Male to TNC Male Right Angle Low Loss Cable Using PE-P160LL Coax



**NOTES:**

- 1. BLACK HEAT SHRINK WITH WHITE MARKINGS 3 PLACES.

**STANDARD TOLERANCES**

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

\*STANDARD TOLERANCES APPLY ONLY TO DIMENSIONS IN INCHES



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DWG TITLE

PE3C5252

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].

CAGE CODE 53919

CAD FILE 07/13/18

SCALE N/A

SIZE A

CN2379