



TNC Male to TNC Female Bulkhead Low Loss Cable 48 Inch Length Using PE-P160LL Coax

RF Cable Assemblies Technical Data Sheet

PE3C5253-48

Configuration

- Connector 1: TNC Male
- Connector 2: TNC Female Bulkhead
- 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 PE3C5253-48 TNC Male to TNC Female Bulkhead 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 PE3C5253-48 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 Female Bulkhead Low Loss Cable 48 Inch Length Using PE-P160LL Coax PE3C5253-48](#)



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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.) | 0.48 | 0.69 | 1.04 | 1.5 | 2.18 | dB |

Electrical Specification Notes:

The Insertion Loss data above is based on the performance specifications of the coax cable used in this assembly. The Insertion Loss includes an estimated insertion loss of $0.04 \cdot \sqrt{F(\text{GHz})}$ dB maximum per connector.

Mechanical Specifications

Cable Assembly

Length* 48 in [121.92 cm]

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 Female Bulkhead |
| 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 |
| Outer Conductor Material and Plating | | Passivated Stainless Steel |
| Body Material and Plating | Passivated Stainless Steel | Passivated Stainless Steel |
| Coupling Nut Material and Plating | Passivated Stainless Steel | |

Environmental Specifications

Temperature

Operating Range

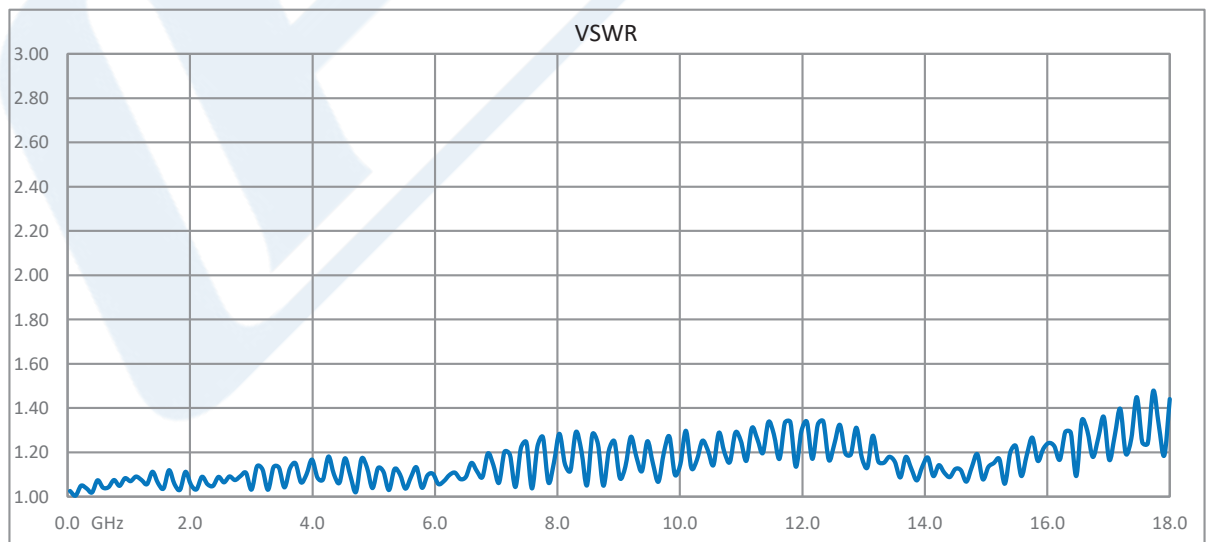
-55 to +165 deg C

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

Plotted and Other Data

Notes:

Typical Performance Data



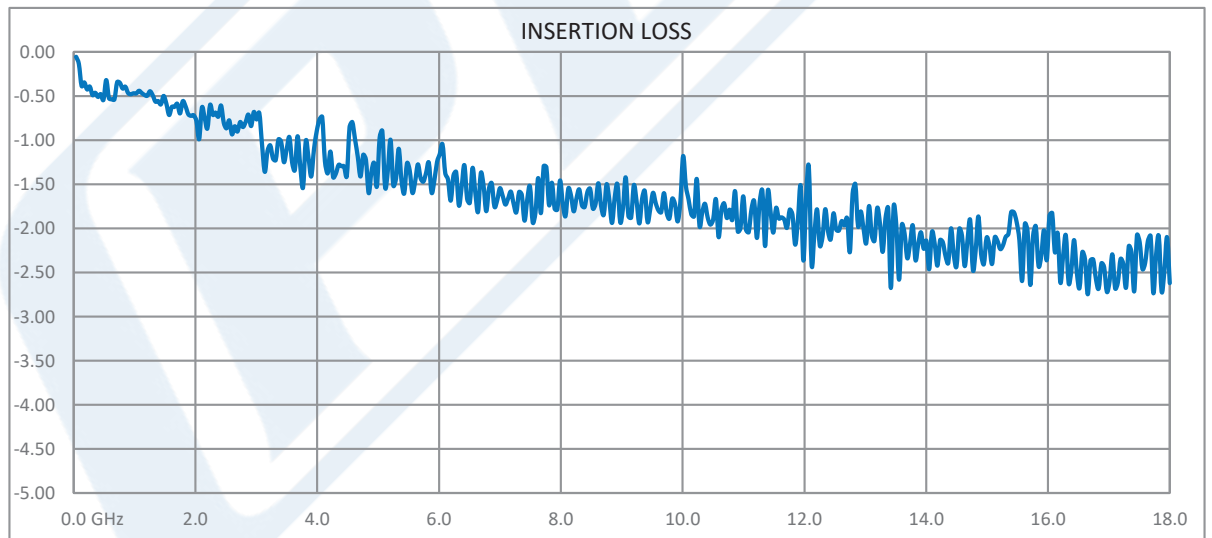
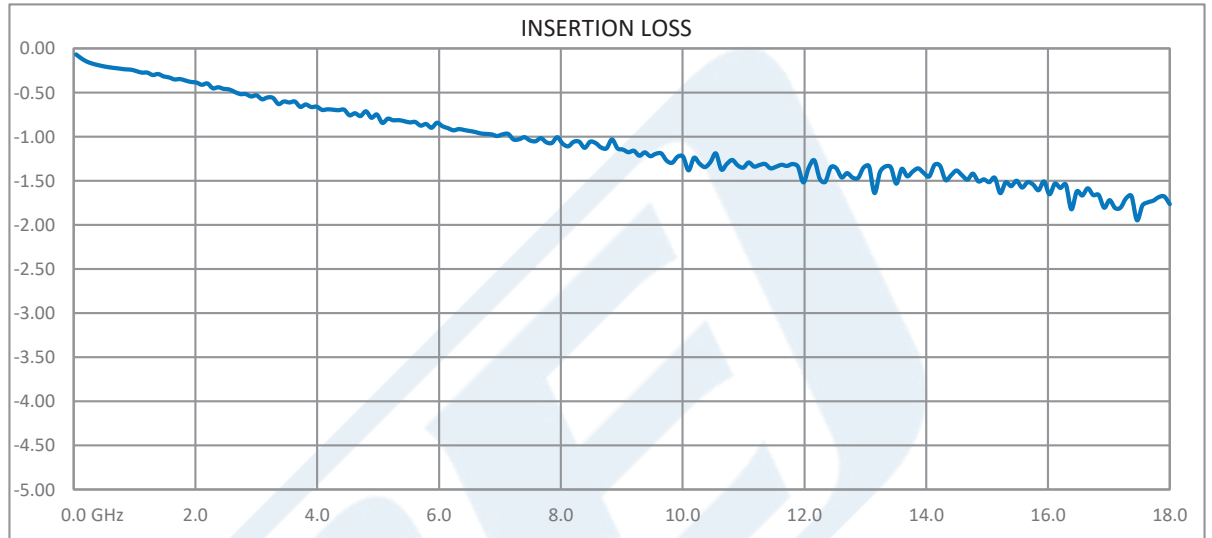
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How to Order

Part Number Configuration:

PE3C5253

- **xx**

uu

Unit of Measure:

cm = Centimeters

<blank> = Inches

Length

Base Number

Example: PE3C5253-12 = 12 inches long cable
PE3C5253-100cm = 100 cm long cable

TNC Male to TNC Female Bulkhead Low Loss Cable 48 Inch Length 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.

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 Female Bulkhead Low Loss Cable 48 Inch Length Using PE-P160LL Coax PE3C5253-48](#)

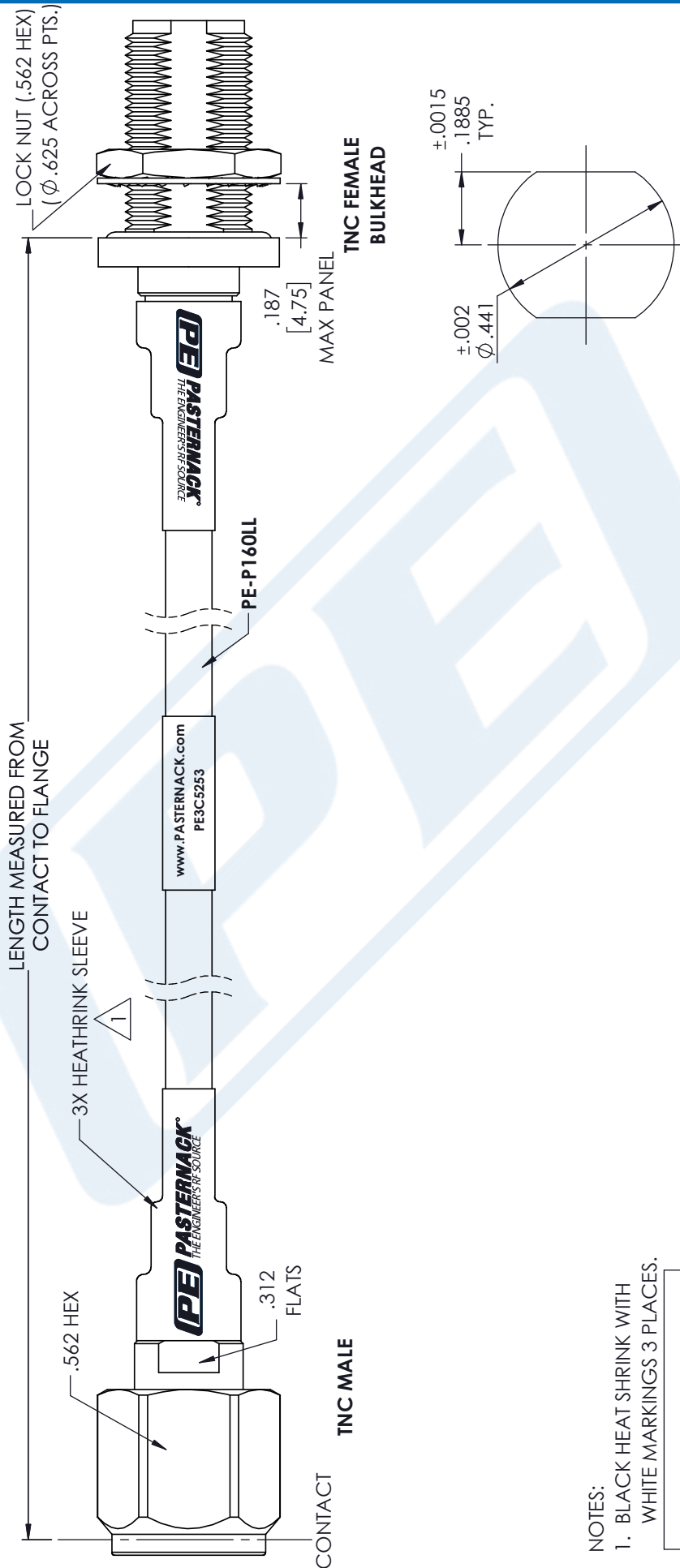
URL: <https://www.pasternack.com/tnc-male-tnc-female-pe-p160ll-cable-assembly-pe3c5253-48-p.aspx>

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.

PE3C5253-48 CAD Drawing

TNC Male to TNC Female Bulkhead Low Loss Cable

48 Inch Length 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

PE3C5253

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