

Temperature Conditioned TNC Male to N Female Bulkhead
Low Loss Cable 48 Inch Length Using PE-P300LL Coax



RF Cable Assemblies Technical Data Sheet

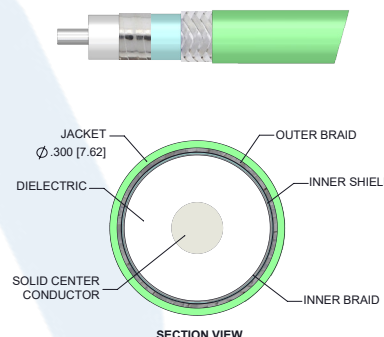
PE3M0241-48

Configuration

- Connector 1: TNC Male
- Connector 2: N Female Bulkhead
- Cable Type: PE-P300LL

Features

- Max Frequency 18 GHz
- 83% Phase Velocity
- Triple Shielded
- FEP Jacket
- Thermally Pre-Conditioned Cable
- Captivated Stainless Steel Connectors
- Expanded PTFE dielectric
- J-STD-Soldering
- Lot Traceability
- Test Report
- Ship same day



Applications

- General Purpose
- Laboratory Use
- High Reliability
- Extreme Temperatures
- Military Electronics
- Avionics
- IFF
- SATCOM
- ECM

Description

Pasternack's temperature conditioned low loss cable assemblies are part of our full line of reliable RF components available for shipment same day. These commercial-off-the-shelf (COTS), RF / microwave cable assemblies are designed and processed with high reliability in mind. Captivated stainless steel cable assembly connectors and thermally pre-conditioned triple-shielded coaxial cable are assembled using J-STD soldering processes and WHMA-A-620 workmanship criteria. The combination of stable materials, processing and acceptance testing work together to create a dependable cable assembly for applications where performance over time is important or the cost of failure is high. Each finished COTS temperature conditioned low loss cable assembly is traceable to its component lots and a test report is available for every lot produced.

Our highly reliable low loss conditioned RF cable assembly datasheet specifications and drawing with dimensions are shown below in this PDF. Pasternack's broad catalog of RF, microwave and millimeter wave cable assemblies allow designers to configure and customize their signal connections however they like. Whether the need is to provide reliable stable connections or fielding dependable RF cables, Pasternack has the right cable assemblies for the job. Pasternack can also expertly build your custom cable assemblies for you and ship them same day.

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [Temperature Conditioned TNC Male to N Female Bulkhead Low Loss Cable 48 Inch Length Using PE-P300LL Coax PE3M0241-48](#)



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Electrical Specifications

| Description | Minimum | Typical | Maximum | Units |
|--------------------------------------|---------|------------|---------|--------------|
| Frequency Range | DC | | 18 | GHz |
| VSWR | | | 1.37:1 | |
| Velocity of Propagation | | 83 | | % |
| Capacitance | | 25 [82.02] | | pF/ft [pF/m] |
| Dielectric Withstanding Voltage (AC) | | | 1,500 | Vrms |

Specifications by Frequency

| Description | F1 | F2 | F3 | F4 | F5 | Units |
|-----------------------|------|------|------|----|------|-------|
| Frequency | 1 | 2 | 4.5 | 9 | 18 | GHz |
| Insertion Loss (Max.) | 0.45 | 0.55 | 0.74 | 1 | 1.45 | 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*SQRT(FGHz) dB per connector.

Mechanical Specifications

Cable Assembly

| | |
|---------|-------------------|
| Length* | 49 in [124.46 cm] |
| Weight | 0.5 lbs [226.8 g] |

Cable

| | |
|--------------------------------------|---------------------------|
| Cable Type | PE-P300LL |
| 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 Tape |
| Shield Layer 2 | Aluminum Polyester |
| Shield Layer 3 | Silver Plated Copper Wire |
| Jacket Material | FEP |
| Jacket Diameter | 0.3 in [7.62 mm] |

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Connectors

| Description | Connector 1 | Connector 2 |
|---------------------------------------|------------------------------------|------------------------------------|
| Type | TNC Male | N Female Bulkhead |
| Specification | MIL-STD-348 | MIL-STD-348 |
| Impedance | 50 Ohms | 50 Ohms |
| Contact Material and Plating | Beryllium Copper, Gold over Nickel | Beryllium Copper, Gold over Nickel |
| Contact Plating Specification | 50 µin minimum | 50 µin minimum |
| Dielectric Type | PTFE | PTFE |
| Outer Conductor Material and Plating | | Passivated Stainless Steel |
| Outer Conductor Plating Specification | | SAE-AMS-2700 |
| Body Material and Plating | Passivated Stainless Steel | Passivated Stainless Steel |
| Body Plating Specification | SAE-AMS-2700 | SAE-AMS-2700 |
| Coupling Nut Material and Plating | Passivated Stainless Steel | |
| Coupling Nut Plating Specification | SAE-AMS-2700 | |
| Hex Size | 9/16 inch | |
| Seal Gasket Material | Silicone Rubber | |

Environmental Specifications

Temperature

Operating Range -55 to +125 deg C

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

Plotted and Other Data

Notes:

- Values at 25°C, sea level.

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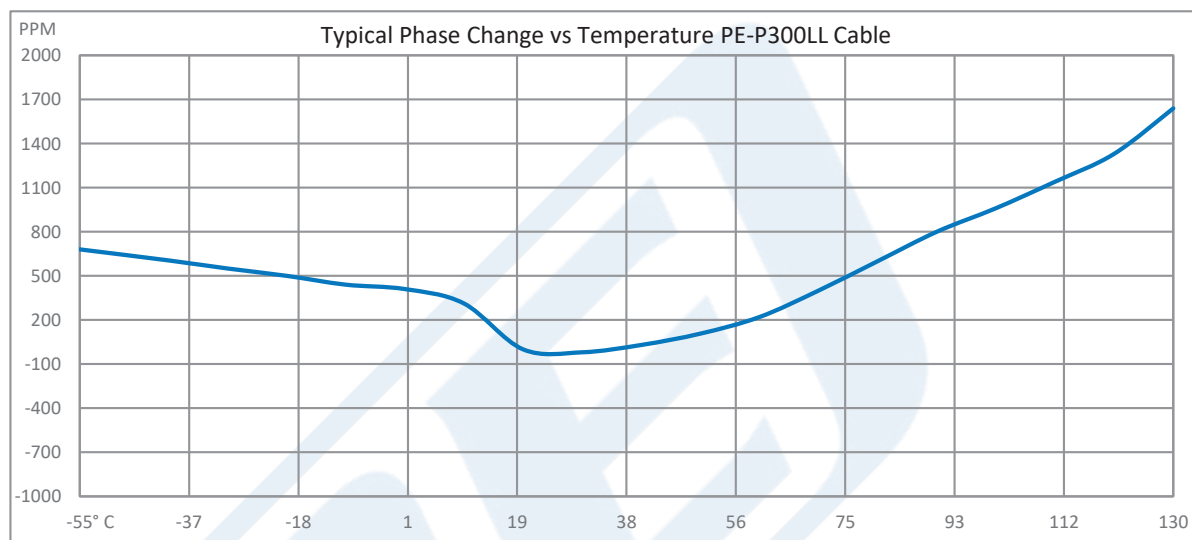


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Typical Performance Data



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How to Order

Part Number Configuration:

PE3M0241

- xx

uu

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

Example: PE3M0241-12 = 12 inches long cable
PE3M0241-100cm = 100 cm long cable

Temperature Conditioned TNC Male to N Female Bulkhead Low Loss Cable 48 Inch Length Using PE-P300LL 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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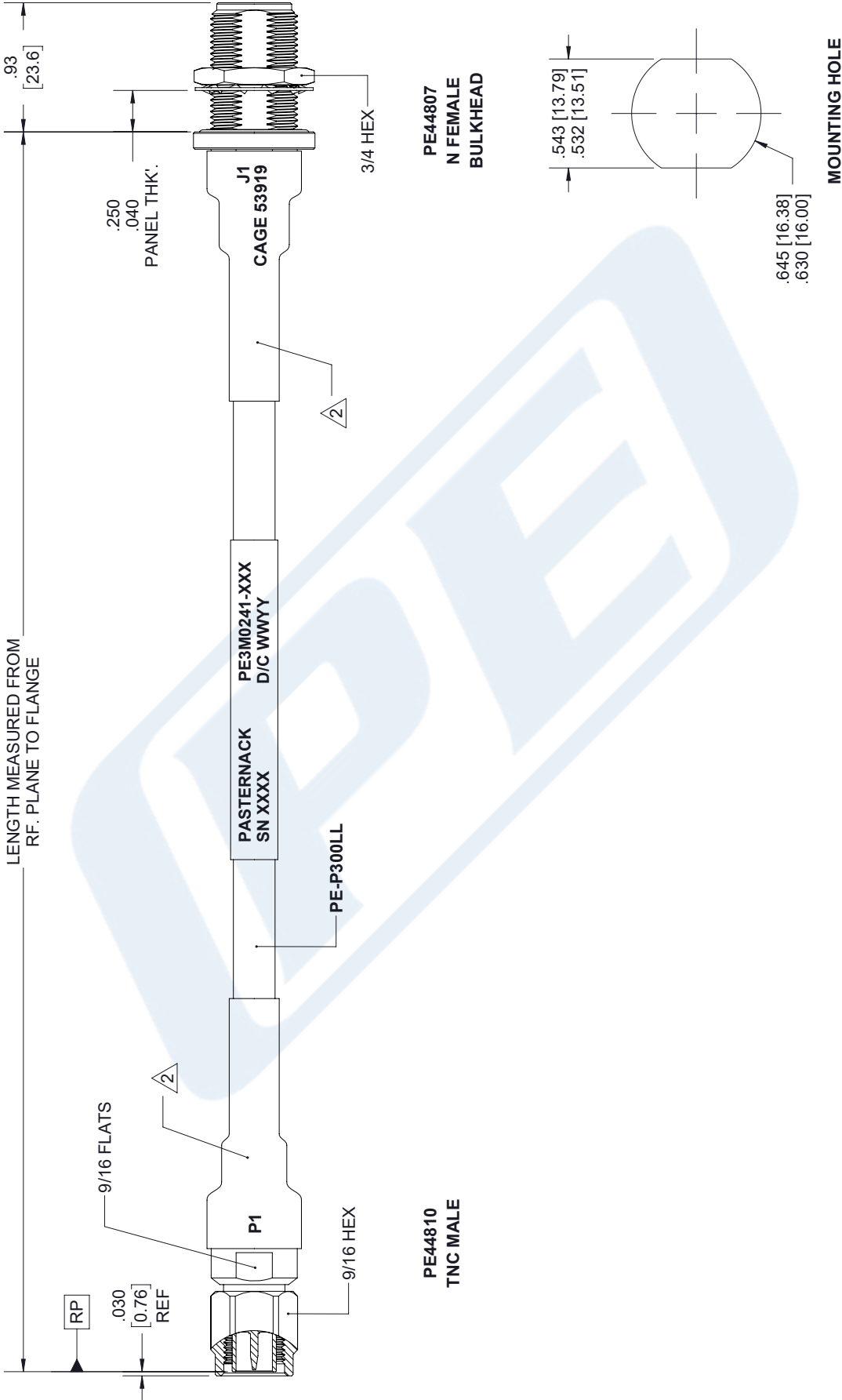
URL: <https://www.pasternack.com/temperature-conditioned-tnc-male-n-female-pe-p300ll-cable-assembly-pe3m0241-48-p.aspx>

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.

PE3M0241-48 CAD Drawing

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| REVISIONS | | | |
|-----------|-----------------|----------|----------|
| REV. | DESCRIPTION | DATE | APPROVED |
| A | INITIAL RELEASE | 02/08/19 | D.BIRCH |



NOTES:

- ALL BLACK HEAT SHRINK WITH WHITE MARKINGS.
- TOP LAYER: SUMITUBE W3B2 (4X) - SIZE 24/6.
BOTTOM LAYER: M23053/4-304-0.

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Pasternack Enterprises, Inc.
P.O. Box 16759, Irvine, CA 92623.
Phone: 1.949.261.1920 | 1.866.727.8376
Fax: 1.949.261.7451
www.pasternack.com | e-mail: sales@pasternack.com

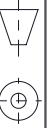
UNLESS OTHERWISE SPECIFIED
LEADING DIMENSIONS ARE IN INCHES
DIMENSIONS IN [] ARE MILLIMETERS

TOLERANCES:

| | | |
|----------|--------|-------------|
| X±.2 | [5.08] | FRACTIONS |
| XX±.01 | [.25] | ±.132 |
| XXX±.005 | [.13] | ANGLES ± 1° |

ALL DIMENSIONS SHOWN
ARE FOR REFERENCE ONLY.

THIRD-ANGLE PROJECTION



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SHEET 1 OF 1

SCALE N/A

REV A

DRAWN BY K.DANG
PART NUMBER PE3M0241

SIZE A
CAGE 53919