



## N Male to N Male Cable Using 160 Series Coax with HeatShrink, LF Solder, RoHS

### RF Cable Assemblies Technical Data Sheet

PE302

#### Configuration

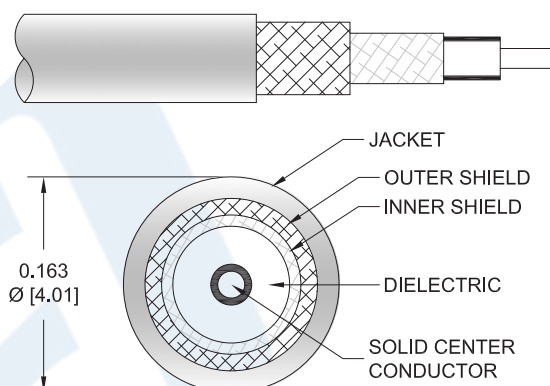
- Connector 1: N Male
- Connector 2: N Male
- Cable Type: 160 Series

#### Features

- Max Frequency 18 GHz
- Shielding Effectivity > 110 dB
- 70% Phase Velocity
- Double Shielded
- FEP Jacket

#### Applications

- General Purpose
- Laboratory Use



#### Description

Pasternack's PE302 type N male to type N male cable using 160 series 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 type N to type N cable assembly has a male to male gender configuration with 50 ohm flexible 160 series coax. The PE302 type N male to type N male cable assembly operates to 18 GHz. The double shielding of this Pasternack cable assembly provides excellent shielding effectiveness of better than 110 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.

#### Electrical Specifications

| Description             | Minimum | Typical      | Maximum | Units        |
|-------------------------|---------|--------------|---------|--------------|
| Frequency Range         | DC      |              | 18      | GHz          |
| VSWR                    |         |              | 1.35:1  |              |
| Velocity of Propagation |         | 70           |         | %            |
| RF Shielding            | 110     |              |         | dB           |
| Capacitance             |         | 29.4 [96.46] |         | pF/ft [pF/m] |

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [N Male to N Male Cable Using 160 Series Coax with HeatShrink, LF Solder, RoHS PE302](#)



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#### Specifications by Frequency

| Description           | F1             | F2            | F3             | F4            | F5            | Units           |
|-----------------------|----------------|---------------|----------------|---------------|---------------|-----------------|
| Frequency             | 1              | 3             | 5              | 10            | 18            | GHz             |
| Insertion Loss (Typ.) | 0.11<br>[0.36] | 0.2<br>[0.66] | 0.26<br>[0.85] | 0.4<br>[1.31] | 0.58<br>[1.9] | dB/ft<br>[dB/m] |

#### Electrical Specification Notes:

Insertion loss does not include the loss of the connectors.

Insertion loss is estimated as  $0.05 \times \sqrt{f(\text{GHz})}$  dB per connector.

Short lengths up to 24" long may exhibit VSWR measurements up to 9% higher.

Amplitude variation not to exceed 10% in a coiled vs uncoiled, a coil is defined as a 4% loop.

#### Mechanical Specifications

##### Cable Assembly

Weight 0.239 lbs [108.41 g]

##### Cable

Cable Type 160 Series  
Impedance 50 Ohms  
Inner Conductor Type Solid  
Inner Conductor Material and Plating Copper Clad Steel, Silver  
Dielectric Type PTFE  
Number of Shields 2  
Shield Layer 1 Silver Plated Copper Tape  
Shield Layer 2 Silver Plated Copper Braid  
Jacket Material FEP, Blue  
Jacket Diameter 0.163 in [4.14 mm]

Repeated Minimum Bend Radius 0.82 in [20.83 mm]

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#### Connectors

| Description                       | Connector 1                | Connector 2                |
|-----------------------------------|----------------------------|----------------------------|
| Type                              | N Male                     | N Male                     |
| Impedance                         | 50 Ohms                    | 50 Ohms                    |
| Contact Material and Plating      | Gold                       | Gold                       |
| 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 |
| Hex Size                          | 13/16 inch                 | 13/16 inch                 |
| Torque                            | 15 in-lbs [1.7 Nm]         | 15 in-lbs [1.7 Nm]         |

Mechanical Specification Notes:

\*All cable assemblies have a length tolerance of 1.5% or  $\pm 3/8"$ , whichever is greater.

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

#### Plotted and Other Data

Notes:

- Values at 25°C, sea level.

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [N Male to N Male Cable Using 160 Series Coax with HeatShrink, LF Solder, RoHS PE302](#)



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### RF Cable Assemblies Technical Data Sheet

PE302

#### How to Order

Part Number Configuration:

PE302

- xx

uu

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

Example: PE302-12 = 12 inches long cable  
PE302-100cm = 100 cm long cable

N Male to N Male Cable Using 160 Series Coax with HeatShrink, LF Solder, RoHS from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99% availability and are part of the broadest selection in the industry.

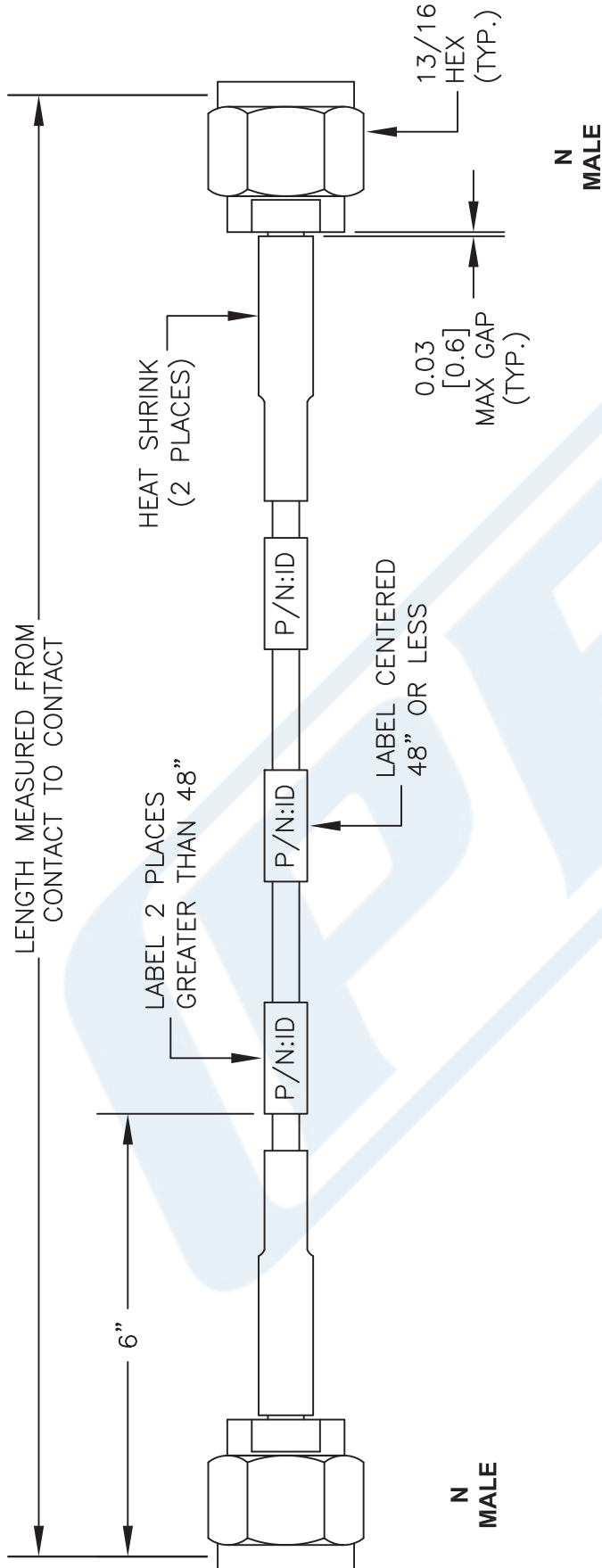
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URL: <https://www.pasternack.com/n-male-n-male-300-series-cable-assembly-pe302-p.aspx>

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.

# PE302 CAD Drawing

N Male to N Male Cable Using 160 Series Coax with HeatShrink, LF Solder, RoHS



## STANDARD TOLERANCES

.X ±0.2  
.XX ±0.1  
.XXX ±0.05

\*STANDARD TOLERANCES APPLY  
ONLY TO DIMENSIONS IN INCHES



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DWG TITLE

**PE302**

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 113016

SCALE N/A

SIZE A

41742