



## SMA Male to N Male Low Loss Cable 48 Inch Length Using PE-P142LL Coax, RoHS

### RF Cable Assemblies Technical Data Sheet

**PE3C0689-48**

#### Configuration

- Connector 1: SMA Male
- Connector 2: N Male
- Cable Type: PE-P142LL

#### Features

- 83% Velocity of Propagation
- Shielding effectiveness >95 dB
- Maximum VSWR is < 1.35:1 to 18 GHz
- Minimum Bend Radius of 1 inch
- Operating Temperature range of -55 to +125 °C
- RoHS and REACH Compliant
- Same day shipment and customs lengths
- 100% Continuity, Hi-Pot, and RF tested



#### Description

The PE3C0689 series high performance test cable's 0.195 inch diameter and 83% phase velocity offer very low loss performance up to 18 GHz. The durable stainless steel connectors and FEP jacket provide a cost effective design ideal for test environments where a rugged cable assembly is required. The series is offered with Type N, TNC, and SMA connectors all rated to 18 GHz. A heavy duty boot provides improved strain relief and adds to the durability of the cable assemblies. These cable assemblies are built using a double shielded flexible cable, providing excellent shielding effectiveness of greater than 95 dB. All PE3C0689 cable assemblies are 100% Continuity, Hi-POT, and RF tested to published specifications. Custom lengths are built to order and shipped same day.

#### Electrical Specifications

| Description             | Minimum | Typical    | Maximum | Units        |
|-------------------------|---------|------------|---------|--------------|
| Frequency Range         | DC      |            | 18      | GHz          |
| VSWR                    |         |            | 1.35:1  |              |
| Return Loss             | 16.54   |            |         | dB           |
| Velocity of Propagation |         | 83         |         | %            |
| RF Shielding            | 95      |            |         | dB           |
| Capacitance             |         | 25 [82.02] |         | 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: [SMA Male to N Male Low Loss Cable 48 Inch Length Using PE-P142LL Coax, RoHS PE3C0689-48](#)



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### Specifications by Frequency

| Description           | F1   | F2   | F3   | F4   | F5   | Units |
|-----------------------|------|------|------|------|------|-------|
| Frequency             | 1    | 2    | 4.5  | 9    | 18   | GHz   |
| Insertion Loss (Max.) | 0.82 | 0.98 | 1.22 | 1.58 | 2.02 | dB    |
| Insertion Loss (Typ.) | 0.7  | 0.82 | 1.06 | 1.34 | 1.74 | dB    |

### Mechanical Specifications

#### Cable Assembly

|          |                     |
|----------|---------------------|
| Length   | 48 in [121.92 cm]   |
| Diameter | 0.822 in [20.88 mm] |
| Weight   | 0.34 lbs [154.22 g] |

#### Cable

|                                      |                           |
|--------------------------------------|---------------------------|
| Cable Type                           | PE-P142LL                 |
| Impedance                            | 50 Ohms                   |
| Inner Conductor Type                 | Solid                     |
| Inner Conductor Material and Plating | Copper, Silver            |
| Dielectric Type                      | PTFE                      |
| 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, Green                |
| Jacket Diameter                      | 0.195 in [4.95 mm]        |
| One Time Minimum Bend Radius         | 1 in [25.4 mm]            |

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### Connectors

| Description                           | Connector 1                | Connector 2                |
|---------------------------------------|----------------------------|----------------------------|
| Type                                  | SMA Male                   | N Male                     |
| Specification                         | MIL-STD-348                |                            |
| Impedance                             | 50 Ohms                    | 50 Ohms                    |
| Contact Material and Plating          | Beryllium Copper, Gold     | Beryllium Copper, Gold     |
| Contact Plating Specification         | ASTM-B488 50µ In. Minimum  | ASTM-B488, 50µ in. minimum |
| Dielectric Type                       | PTFE                       | PTFE                       |
| Outer Conductor Material and Plating  |                            | Passivated Stainless Steel |
| Outer Conductor Plating Specification |                            | SAE-AMS-2700               |
| Coupling Nut Material and Plating     | Passivated Stainless Steel | Passivated Stainless Steel |
| Coupling Nut Plating Specification    | SAE-AMS-2700               | SAE-AMS-2700               |
| Hex Size                              | 5/16 Inch                  | 3/4 Inch                   |
| Torque                                | 8 in-lbs [0.9 Nm]          | 14 in-lbs [1.58 Nm]        |
| Body Material and Plating             | Passivated Stainless Steel | Passivated Stainless Steel |
| Body Plating Specification            | SAE-AMS-2700               | SAE-AMS-2700               |

### Environmental Specifications

#### Temperature

Operating Range -55 to +125 deg C

### Compliance Certifications (visit [www.Pasternack.com](http://www.Pasternack.com) for current document)

RoHS Compliant Yes  
REACH Compliant 12/17/2015

### Plotted and Other Data

Notes:

- Values at 25°C, sea level.

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**PE3C0689-48**

### How to Order

Part Number Configuration:

**PE3C0689**

- **xx**

**uu**

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

Example: PE3C0689-12 = 12 inches long cable  
PE3C0689-100cm = 100 cm long cable

SMA Male to N Male Low Loss Cable 48 Inch Length Using PE-P142LL Coax, 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.

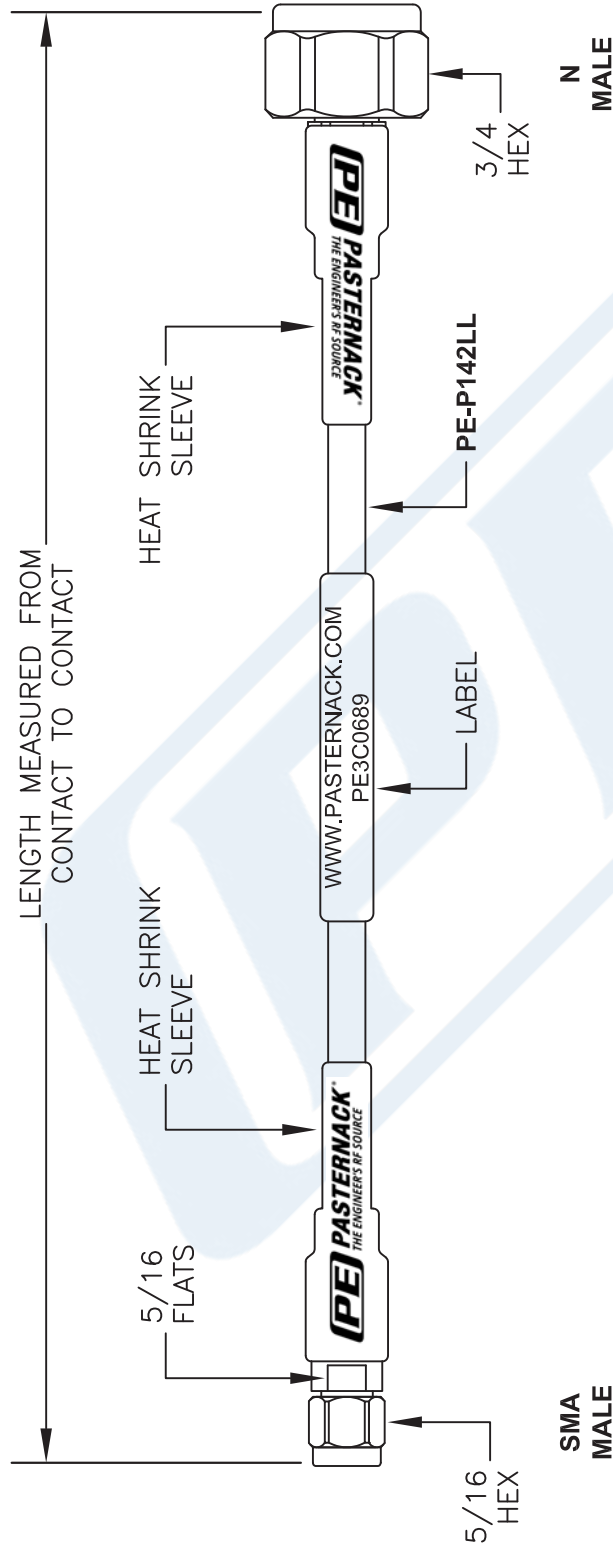
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [SMA Male to N Male Low Loss Cable 48 Inch Length Using PE-P142LL Coax, RoHS PE3C0689-48](#)

URL: <https://www.pasternack.com/sma-male-n-male-pe-p142ll-cable-assembly-pe3c0689-48-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.

# PE3C0689-48 CAD Drawing

SMA Male to N Male Low Loss Cable 48 Inch Length Using PE-P142LL Coax, RoHS



**NOTE:**  
LABEL FOR CABLE LENGTHS 48" OR SHORTER TO BE CENTERED. 48" OR LONGER WILL BE 12" AWAY FROM CONNECTOR.

DWG TITLE

**PE3C0689**

- 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).
  4. LENGTH TOLERANCE IS  $\pm 1.5\%$  OR  $3/8"$ , WHICHEVER IS GREATER.

**PE PASTERNAK®**  
THE ENGINEER'S RF SOURCE

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FSCM NO. 53919

CAD FILE 091815

SCALE N/A

SIZE A

2233