



SMA Male to QD SMA Male Precision Cable Using PE-P141 Coax , LF Solder

RF Cable Assemblies Technical Data Sheet

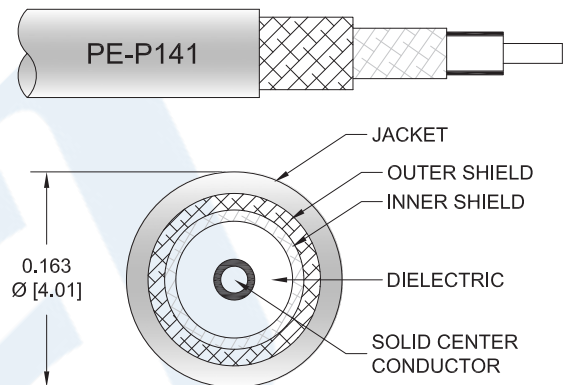
PE312

Configuration

- Connector 1: SMA Male
- Connector 2: QDSMA Male
- Cable Type: PE-P141

Features

- Max Frequency 18 GHz
- 70% Phase Velocity
- Triple Shielded
- FEP Jacket
- 500 Mating Cycles
- 160 series, PE-P141 Spiral Strip flexible coax



Applications

- General Purpose
- Laboratory Use

Description

Pasternack's PE312 SMA male to SMA male QD cable using PE-P141 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 SMA to SMA cable assembly has a male to male gender configuration with 50 ohm flexible PE-P141 coax. The PE312 SMA male to SMA male cable assembly operates to 18 GHz. The triple shielding of this Pasternack cable assembly provides excellent shielding effectiveness.

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: [SMA Male to QD SMA Male Precision Cable Using PE-P141 Coax , LF Solder PE312](#)



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Electrical Specifications

| Description | Minimum | Typical | Maximum | Units |
|--------------------------------------|---------|---------|---------|-------|
| Frequency Range | DC | | 18 | GHz |
| VSWR | | | 1.33:1 | |
| Return Loss | | | 17 | dB |
| Velocity of Propagation | | 70 | | % |
| Dielectric Withstanding Voltage (AC) | | | 1,000 | Vrms |

Specifications by Frequency

| Description | F1 | F2 | F3 | F4 | F5 | Units |
|-----------------------|--------|--------|--------|--------|----|-------|
| Frequency | 2 | 6 | 8 | 18 | | GHz |
| Insertion Loss (Typ.) | 0.17 | 0.42 | 0.48 | 0.76 | | dB/ft |
| | 0.56 | 1.38 | 1.57 | 2.49 | | dB/m |
| VSWR (Max.) | 1.09:1 | 1.12:1 | 1.12:1 | 1.33:1 | | |
| Return Loss (Max.) | 27 | 25 | 25 | 17 | | dB |

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

| | |
|----------|---------------------|
| Diameter | 0.17 in [4.32 mm] |
| Weight | 0.29 lbs [131.54 g] |

Cable

| | |
|-------------------|----------------------------|
| Cable Type | PE-P141 |
| Impedance | 50 Ohms |
| Dielectric Type | PTFE |
| Number of Shields | 3 |
| Shield Layer 1 | Silver Plated Copper Braid |
| Shield Layer 2 | Mylar Tape |
| Shield Layer 3 | Silver Plated Copper Tape |
| Jacket Material | FEP, Blue |
| Jacket Diameter | 0.163 in [4.14 mm] |

| | |
|------------------------------|----------------|
| Repeated Minimum Bend Radius | 1 in [25.4 mm] |
|------------------------------|----------------|

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Connectors

| Description | Connector 1 | Connector 2 |
|--------------------------------------|----------------------------|-------------|
| Type | SMA Male | SMA Male |
| Specification | MIL-STD-348 | |
| Impedance | 50 Ohms | 50 Ohms |
| Connection Method | | QD |
| Mating Cycles | 500 | 500 |
| Contact Material and Plating | Gold | Gold |
| Dielectric Type | PTFE | PTFE |
| Outer Conductor Material and Plating | | Gold |
| Body Material and Plating | Gold | Gold |
| Coupling Nut Material and Plating | Passivated Stainless Steel | |
| Hex Size | 5/16 in. | |
| Torque | 8 in-lbs [0.9 Nm] | |

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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How to Order

Part Number Configuration:

PE312

- xx

uu

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

Example: PE312-12 = 12 inches long cable
PE312-100cm = 100 cm long cable

SMA Male to QD SMA Male Precision Cable Using PE-P141 Coax , LF Solder 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.

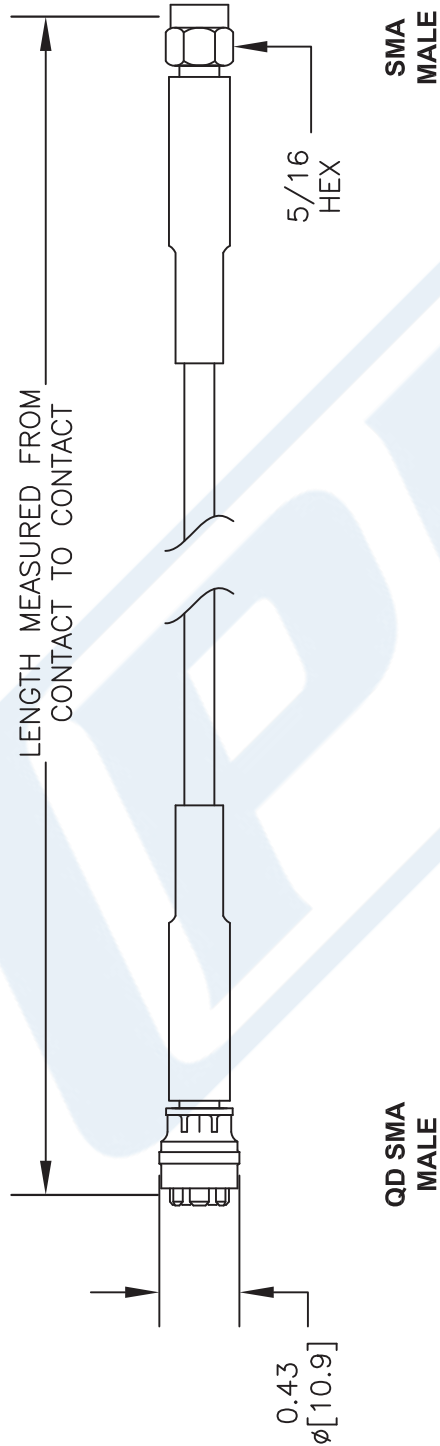
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URL: <https://www.pasternack.com/sma-male-sma-male-300-series-cable-assembly-pe312-p.aspx>

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.

PE312 CAD Drawing

SMA Male to QD SMA Male Precision Cable Using PE-P141 Coax , LF Solder



| How To Order | | Part # Ext. | Length In Inches | Part # Ext. | Length In Centimeters |
|------------------------------------|----------------|-------------|------------------|-------------|-----------------------|
| Part Number Configuration | | -12 | 12" | -25CM | 25Cm |
| PE3 | zzz yy - xx uu | -24 | 24" | -50CM | 50Cm |
| 00 - 99999 | | -36 | 36" | -75CM | 75Cm |
| LF = RoHS Compliant | | -48 | 48" | -100CM | 100Cm |
| < Blank > = Standard | | -60 | 60" | -125CM | 125Cm |
| Note: LF applies only to RF cables | | -XX | Custom Length | -xxCM | Custom Length |
| Examples | | | | | |
| PE3000LF-100 | | | | | |
| PE3000-100 | | | | | |
| PE3000LF-100CM | | | | | |
| PE3000-100CM | | | | | |

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 ± 1.5% OR 3/8", WHICHEVER IS GREATER.

DWG TITLE
PE312

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FSCM NO. 53919

CAD FILE 101111

SCALE N/A

SIZE A

2233