



N Female to SMA Male Low PIM Cable Using 1/4 inch Superflexible Coax in 12 Inch

RF Cable Assemblies Technical Data Sheet

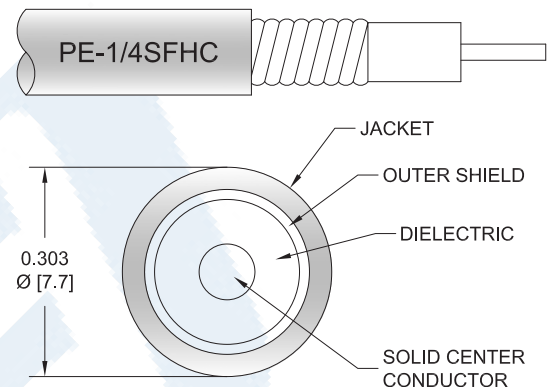
PE3W14156-12

Configuration

- Connector 1: N Female
- Connector 2: SMA Male
- Cable Type: 1/4" Superflexible

Features

- Max Frequency 3 GHz
- Shielding Effectivity > 120 dB
- 82% Phase Velocity
- PE Jacket



Applications

- General Purpose
- Laboratory Use
- Low PIM Applications

Description

Pasternack's PE3W14156-12 type N female to SMA male 12 inch cable using 1/4 inch superflexible coax is part of our full line of RF components available for same-day shipping. Pasternack's corrugated RF cable assemblies are ideal for applications where durability and high power are needed. This Pasternack type N to SMA cable assembly has a female to male gender configuration with 50 ohm corrugated 1/4" superflexible coax. The PE3W14156-12 type N female to SMA male cable assembly operates to 3 GHz. Our low PIM design also offers excellent passive intermodulation performance.

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: [N Female to SMA Male Low PIM Cable Using 1/4 inch Superflexible Coax in 12 Inch PE3W14156-12](#)



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Electrical Specifications

| Description | Minimum | Typical | Maximum | Units |
|-------------------------------|---------|--------------|---------|-----------------|
| Frequency Range | DC | | 3 | GHz |
| VSWR | | | 1.5:1 | |
| Velocity of Propagation | | 82 | | % |
| RF Shielding | 120 | | | dB |
| Capacitance | | 24.4 [80.05] | | pF/ft [pF/m] |
| Inductance | | 0.059 [0.19] | | uH/ft [uH/m] |
| DC Resistance Inner Conductor | | 3.2 [10.5] | | Ω/1000ft [Ω/Km] |
| DC Resistance Outer Conductor | | 2.53 [8.3] | | Ω/1000ft [Ω/Km] |
| Jacket Spark | | | 2,000 | Vrms |

Specifications by Frequency

| Description | F1 | F2 | F3 | F4 | F5 | Units |
|-----------------------|------|------|------|------|------|-------|
| Frequency | 0.1 | 0.25 | 0.5 | 1 | 3 | GHz |
| Insertion Loss (Typ.) | 0.22 | 0.23 | 0.24 | 0.26 | 0.31 | dB |

Electrical Specification Notes:

The Insertion Loss data above is based on the performance specifications of the coax and connectors used in this assembly. The Insertion Loss includes an estimated insertion loss of 0.1 dB per connector.

Mechanical Specifications

Cable Assembly

| | |
|---------|---------------------|
| Length* | 12 in [304.8 mm] |
| Weight | 0.184 lbs [83.46 g] |

Cable

| | |
|--------------------------------------|----------------------------------|
| Cable Type | 1/4" Superflexible |
| Impedance | 50 Ohms |
| Inner Conductor Type | Solid |
| Inner Conductor Material and Plating | Copper Clad Aluminum |
| Dielectric Type | PE (F) |
| Number of Shields | 1 |
| Shield Layer 1 | Helically Corrugated Copper Tube |
| Jacket Material | PE, Black |
| Jacket Diameter | 0.303 in [7.7 mm] |

| | |
|------------------------------|------------------|
| One Time Minimum Bend Radius | 0.5 in [12.7 mm] |
| Repeated Minimum Bend Radius | 1 in [25.4 mm] |

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Typical Flex Cycles 20
Tensile Strength 79 lbs [35.83 Kg]

Connectors

| Description | Connector 1 | Connector 2 |
|---------------------------------------|-----------------------|------------------|
| Type | N Female | SMA Male |
| Specification | IEC 60169-16 | |
| Impedance | 50 Ohms | 50 Ohms |
| Mating Cycles | 500 | |
| Contact Material and Plating | Spring Copper, Silver | Brass, Silver |
| Contact Plating Specification | 5 µm minimum | |
| Dielectric Type | PTFE | PTFE |
| Outer Conductor Material and Plating | Brass, Nickel | |
| Outer Conductor Plating Specification | 5 µm minimum | |
| Body Material and Plating | Brass, Tri-Metal | Brass, Tri-Metal |
| Body Plating Specification | 2 µm minimum | |
| Coupling Nut Material and Plating | | Brass, Tri-Metal |

Environmental Specifications

Temperature

Operating Range -40 to +85 deg C

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

Plotted and Other Data

Notes:

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How to Order

Part Number Configuration:

PE3W14156

- **xx**

uu

Unit of Measure:

cm = Centimeters

<blank> = Inches

Length

Base Number

Example: PE3W14156-12 = 12 inches long cable
PE3W14156-100cm = 100 cm long cable

N Female to SMA Male Low PIM Cable Using 1/4 inch Superflexible Coax in 12 Inch 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: [N Female to SMA Male Low PIM Cable Using 1/4 inch Superflexible Coax in 12 Inch PE3W14156-12](https://www.pasternack.com/n-female-to-sma-male-low-pim-cable-using-1-4-inch-superflexible-pe3w14156-12-p.aspx)

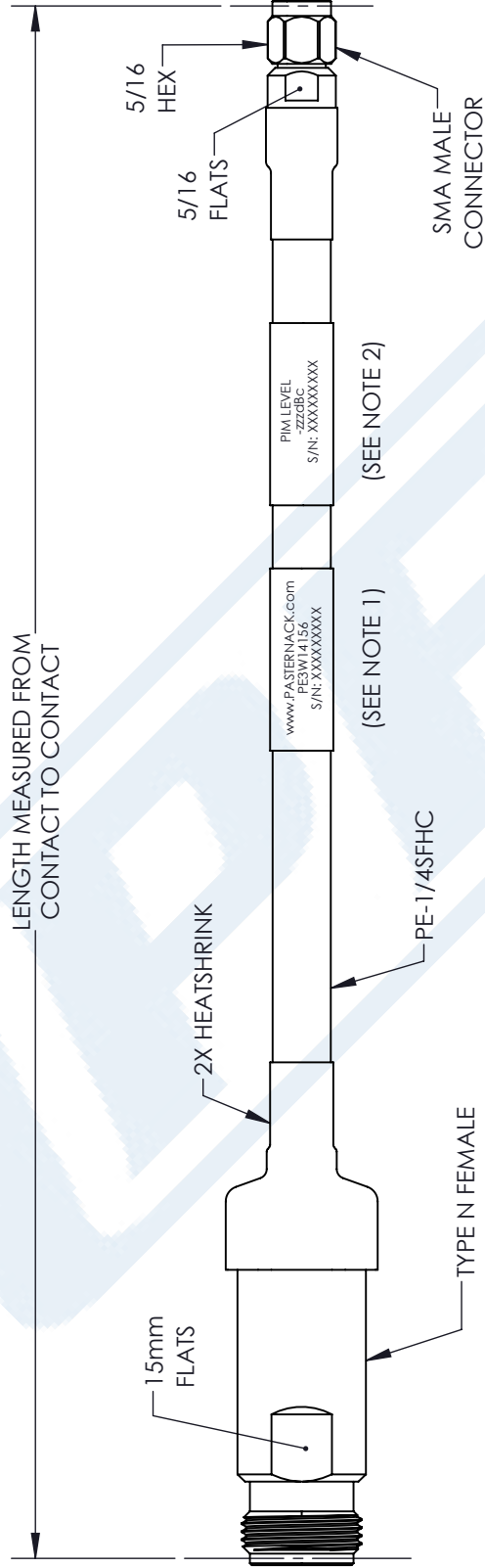
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PE3W14156-12 CAD Drawing

N Female to SMA Male Low PIM Cable Using 1/4 inch Superflexible Coax in 12 Inch

| REVISIONS | | |
|-----------|-----------------|------------|
| REV. | DESCRIPTION | DATE |
| A | INITIAL RELEASE | 08/10/2022 |
| | | APPROVED |
| | | AGANWANI |



| | | |
|--|---|---|
| <p>UNLESS OTHERWISE SPECIFIED LEADING DIMENSIONS ARE INCHES DIMENSIONS IN [] ARE MILLIMETERS</p> <p>TOLERANCES:</p> <p>.X = ±.2 [.008] FRACTIONS ±.1/32</p> <p>.XX = ±.02 [.51] ANGLES ± 1°</p> <p>.XXX = ±.005 [.13]</p> <p>CABLE LENGTH (L) TOLERANCES:</p> <p>L ≤ 12 [305] = +1 [25] / -0</p> <p>12 [305] < L ≤ 60 [1524] = +2 [51] / -0</p> <p>60 [1524] < L ≤ 120 [3048] = +4 [102] / -0</p> <p>120 [3048] < L ≤ 300 [7620] = +6 [152] / -0</p> <p>300 [7620] < L = +5% / -0</p> <p>ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.</p> | <p>PE PASTERNAK an INFINITI brand</p> <p>Pasternack Enterprises, Inc. P. O. Box 16759, Irvine, CA 92623. Phone: 1.949.261.1920 1.866.727.8376 Fax: 1.949.261.7451 Website: www.pasternack.com E-mail: sales@pasternack.com</p> | <p>THIRD-ANGLE PROJECTION</p> <p>THE INFORMATION AND DESIGN IN THIS DOCUMENT IS THE PROPERTY OF PASTERNAK CORPORATION ALL RIGHTS RESERVED.</p> <p>SHEET 1 OF 1</p> <p>SCALE N/A</p> |
| | <p>SIZE A</p> <p>CAGE CODE 53919</p> <p>DRAWN BY BPUCHASKI</p> <p>ITEM NO. PE3W14156</p> | <p>REV A</p> |

- NOTES:
- CABLES 84" AND UNDER HAVE 1 LABEL CENTERED. CABLES OVER 84" HAVE 2 LABELS, ONE AT EACH END 12.0" FROM END OF CONNECTOR.
 - 6" FROM CABLE END, 1 PLACE, FOR ALL LENGTHS OF CABLE.
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