



SMPS Female to 1.85mm Female Cable Using PE-P047HF Coax

TECHNICAL DATA SHEET

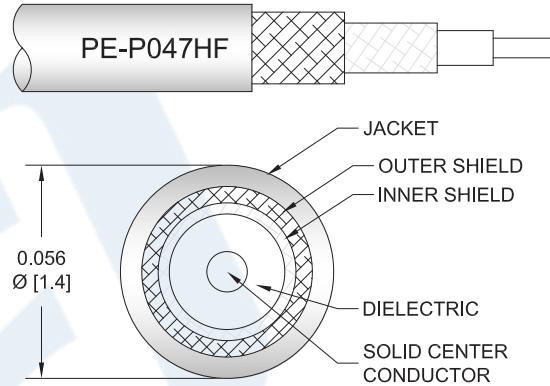
PE3C9957

Configuration

- Connector 1: SMPS Female
- Connector 2: 1.85mm Female
- Cable Type: PE-P047HF
- Coax Flex Type: Flexible

Features

- Max Frequency 40 GHz
- Shielding Effectivity > 90 dB
- 70% Phase Velocity
- Double Shielded
- FEP Jacket



Applications

- General Purpose
- Laboratory Use
- Scientific research
- High-reliability, high-density for aerospace & defense application
- Ground base station & communication systems, avionics, radar systems

Description

Pasternack's PE3C9957 SMPS female to 1.85mm female cable using PE-P047HF 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 SMPS to 1.85mm cable assembly has a female to female gender configuration with 50 ohm flexible PE-P047HF coax. The PE3C9957 SMPS female to 1.85mm female cable assembly operates to 40 GHz. The double shielding of this Pasternack cable assembly provides excellent shielding effectiveness of better than 90 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.

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [SMPS Female to 1.85mm Female Cable Using PE-P047HF Coax PE3C9957](#)



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Electrical Specifications

| Description | Minimum | Typical | Maximum | Units |
|-------------------------|---------|------------|---------|--------------|
| Frequency Range | DC | | 40 | GHz |
| VSWR | | | 1.5:1 | |
| Velocity of Propagation | | 70 | | % |
| RF Shielding | 90 | | | dB |
| Capacitance | | 29 [95.14] | | pF/ft [pF/m] |

Specifications by Frequency

| Part Number | Length | Description | F1 | F2 | F3 | F4 | F5 | Units | Weight (lbs) |
|-------------|--------------------------|-----------------------|-----------|------|------|-------|-------|-------|--------------|
| | | | Frequency | 2500 | 5000 | 10000 | 20000 | 40000 | MHz |
| PE3C9957 | Custom Lengths Available | Insertion Loss (Typ.) | 0.55 | 0.8 | 1.17 | 1.78 | 2.77 | dB/ft | |
| | | | 1.81 | 2.63 | 3.84 | 5.84 | 9.09 | dB/m | |
| PE3C9957-6 | 6 inch | Insertion Loss (Typ.) | 0.54 | 0.73 | 1.01 | 1.44 | 2.12 | dB | 0.014 |
| PE3C9957-12 | 12 inch | Insertion Loss (Typ.) | 0.81 | 1.13 | 1.59 | 2.33 | 3.51 | dB | 0.016 |
| PE3C9957-18 | 18 inch | Insertion Loss (Typ.) | 1.09 | 1.53 | 2.18 | 3.22 | 4.89 | dB | 0.018 |

The insertion loss data for the base model does not include loss due to the connectors. Each length includes insertion loss due to the connectors.

Loss due to Connector 1: $0.1 * \text{SQRT}(F \text{GHz})$ dB

Loss due to Connector 2: 0.1 dB

Base Weight: 0.016 pounds

Additional Weight per Inch: 0.00033 pounds

Mechanical Specifications

Cable Assembly

Weight 0.01711 lbs [7.76 g]

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Cable

| | |
|--------------------------------------|----------------------------|
| Cable Type | PE-P047HF |
| Impedance | 50 Ohms |
| Inner Conductor Type | Solid |
| Inner Conductor Material and Plating | Copper, 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 | 0.06 in [1.52 mm] |
| Repeated Minimum Bend Radius | 0.1 in [2.54 mm] |

Connectors

| Description | Connector 1 | Connector 2 |
|---------------------------------------|------------------------|----------------------------|
| Type | SMPS Female Push-on | 1.85mm Female Threaded |
| Impedance | 50 Ohms | 50 Ohms |
| Contact Material and Plating | Beryllium Copper, Gold | Beryllium Copper, Gold |
| Contact Plating Specification | 50 μ in minimum | 50 μ in minimum |
| Dielectric Type | PTFE | |
| Outer Conductor Material and Plating | Beryllium Copper, Gold | Passivated Stainless Steel |
| Outer Conductor Plating Specification | 50 μ in minimum | SAE-AMS-2700 |
| Body Material and Plating | Beryllium Copper, Gold | Passivated Stainless Steel |
| Body Plating Specification | 30 μ in minimum | SAE-AMS-2700 |

Environmental Specifications

Temperature

Operating Range

-55 to +165 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:

PE3C9957- **xx****uu**

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

Example: PE3C9957-12 = 12 inches long cable
PE3C9957-100cm = 100 cm long cable

SMPS Female to 1.85mm Female Cable Using PE-P047HF 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.

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [SMPS Female to 1.85mm Female Cable Using PE-P047HF Coax PE3C9957](#)

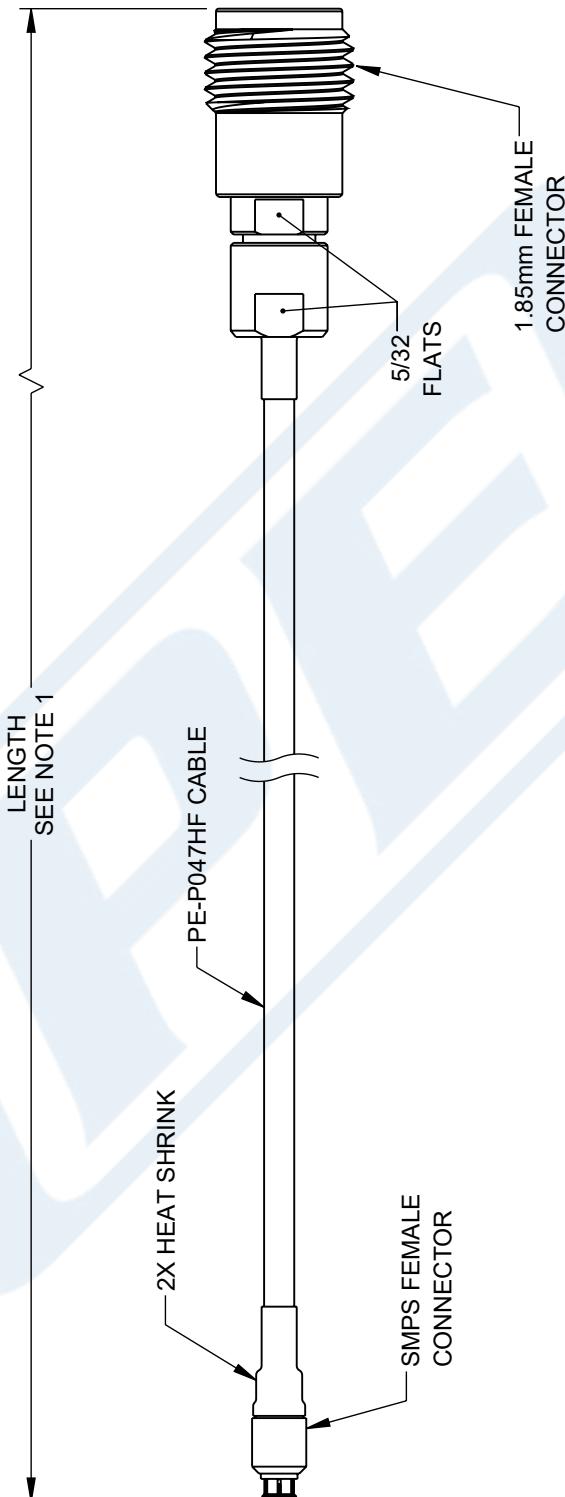
URL: <https://www.pasternack.com/smPS-female-to-1.85mm-female-cable-using-pe-p047hf-pe3c9957-p.aspx>

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.

PE3C9957 CAD Drawing

SMPS Female to 1.85mm Female Cable Using PE-P047HF Coax

| ZONE | REV. | DESCRIPTION | DATE | CHANGED BY | APPROVED BY |
|------|------|-----------------|------------|------------|-------------|
| | A | INITIAL RELEASE | 08/31/2023 | BPUCHASKI | AGANWANI |



NOTES:

1. CABLE ASSEMBLY LENGTH DETERMINED BY P/N AS ILLUSTRATED:
PE3C9957-XXX (-XXX = LENGTH IN INCHES)
CABLE ASSEMBLY [ES SHALL] BE TESTED FOR CONTINUITY

| UNLESS OTHERWISE SPECIFIED LEADING DIMENSIONS ARE INCHES DIMENSIONS IN [] ARE MILLIMETERS | TOLERANCES: |
|--|-------------------------|
| $X = \pm 2 [5]$ | FRACTIONS $\pm 1/32$ |
| $XX = \pm 0.02 [0.5]$ | ANGLE $\pm 1^\circ$ |
| $XXX = \pm 0.005 [0.13]$ | CABLE TOLERANCES: |

INFINITI an INFINITI brand

WEBSITE: www.Pasternack.com
PHONE: 1.866.727.8376 | 1.949.261.1920

INTERPRET ALL DIMENSIONS AND
TOLERANCES PER ASME Y14.5

| SCALE | SHEET |
|-------|--------|
| NONE | 1 OF 1 |

SCRIPTION

SMPS FEMALE TO 1.85mm FEMALE CABLE USING PE-

| TOLERANCES: | | FRACTIONS | |
|--|------|---|----------------------|
| 1/32 | 1/16 | ± 1/32 | ANGLES $\pm 1^\circ$ |
| 1/16 | | NINETH TOLERANCES: | |
| $\leq 1/2$ [30/5] $\leq 1/4$ [20/5] $\leq 1/8$ [10/5] $\leq 1/16$ [5/5] | | $\leq 1/2$ [30/5] = $+1/125$ / -0 $\leq 1/4$ [20/5] = $+1/51$ / -0 $\leq 1/8$ [10/5] = $+4/102$ / -0 $\leq 1/16$ [5/5] = $+6/152$ / -0 | |

.X = ±21
 .XX = ±021
 .XXX = ±.005
 CABLE LENGTH

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