

2.4mm Male to 2.4mm Female Low Loss Test Cable Using PE-TC177A Coax



PE3C100079

Configuration

- Connector 1: 2.4mm Male
- Connector 2: 2.4mm Female
- Cable Type: PE-TC177A
- Coax Flex Type: Flexible

Features

- Max Frequency 50 GHz
- 77% Phase Velocity
- Double Shielded
- Ruggedized Aramid yarn Jacket
- Excellent Phase and Loss Stability with Flexure
- Low Loss Performance

Applications

- General Purpose
- Test & Measurement
- Laboratory Use
- VNA Test Port Extenders
- Semiconductor Probe Testing
- Precise Bench-Top Testing
- Lab and Production Testing

Description

Pasternack's PE3C100079 2.4mm male to 2.4mm female cable using PE-TC177A 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 2.4mm to 2.4mm cable assembly has a male to female gender configuration with 50 ohm flexible PE-TC177A coax. The PE3C100079 2.4mm male to 2.4mm female cable assembly operates to 50 GHz. The double 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.

Electrical Specifications

| Description | Minimum | Typical | Maximum | Units |
|------------------------------|---------|---------|---------|---------|
| Frequency Range | DC | | 50 | GHz |
| VSWR | | | 1.45:1 | |
| Velocity of Propagation | | 77 | | % |
| Phase Stability with Flexure | | 15 | | Degrees |
| Loss Stability with Flexure | | 0.1 | | dB |

Specifications by Frequency

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| Part Number | Length | Description | F1 | F2 | F3 | F4 | F5 | Units | Weight (lbs) |
|------------------|--------------------------|-----------------------|-----------|-------|-------|-------|-------|-------|--------------|
| | | | Frequency | | 2500 | 5000 | 10000 | 20000 | |
| PE3C100079 | Custom Lengths Available | Insertion Loss (Typ.) | 0.224 | 0.326 | 0.473 | 0.686 | 1.178 | dB/ft | |
| | | | 0.74 | 1.07 | 1.56 | 2.26 | 3.87 | dB/m | |
| PE3C100079-12 | 12 In | Insertion Loss (Typ.) | 0.39 | 0.55 | 0.79 | 1.14 | 1.89 | dB | 0.422 |
| PE3C100079-24 | 24 In | Insertion Loss (Typ.) | 0.61 | 0.88 | 1.27 | 1.82 | 3.07 | dB | 0.444 |
| PE3C100079-36 | 36 In | Insertion Loss (Typ.) | 0.84 | 1.21 | 1.74 | 2.51 | 4.25 | dB | 0.466 |
| PE3C100079-100CM | 100 CM | Insertion Loss (Typ.) | 0.9 | 1.3 | 1.87 | 2.7 | 4.58 | dB | 0.421 |
| PE3C100079-150CM | 150 CM | Insertion Loss (Typ.) | 1.27 | 1.83 | 2.65 | 3.83 | 6.51 | dB | 0.508 |

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: 0.05*SQRT(FGHz) dB

Loss due to Connector 2: 0.05*SQRT(FGHz) dB

Base Weight: 0.422 pounds

Additional Weight per Inch: 0.00183 pounds

Mechanical Specifications

Cable Assembly

Width/Diameter 0.5 in [12.7 mm]
Weight 0.422 lbs [191.42 g]

Cable

Cable Type PE-TC177A
Impedance 50 Ohms
Inner Conductor Type Stranded
Inner Conductor Material and Plating Copper, Silver
Dielectric Type PTFE
Number of Shields 2
Shield Layer 1 Silver Plated Copper
Shield Layer 2 Silver Plated Copper Braid
Jacket Material Ruggedized Aramid yarn
Jacket Diameter 0.177 in [4.5 mm]
Repeated Minimum Bend Radius 0.98 in [24.89 mm]

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Connectors

| Description | Connector 1 | Connector 2 |
|--------------------------------------|----------------------------|----------------------------|
| Type | 2.4mm Male | 2.4mm Female |
| Impedance | 50 Ohms | 50 Ohms |
| Configuration | Straight | Straight |
| Contact Material and Plating | Beryllium Copper, Gold | Beryllium Copper, Gold |
| Dielectric Type | Polystyrene | Polystyrene |
| Outer Conductor Material and Plating | | Passivated Stainless Steel |
| Body Material and Plating | Passivated Stainless Steel | Passivated Stainless Steel |
| Coupling Nut Material and Plating | Passivated Stainless Steel | |

Environmental Specifications

Operating Range Temperature -40 to +100 deg C

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

Plotted and Other Data

Notes:

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PE3C100079

Typical Performance Data

How to Order

Part Number Configuration:

PE3C100079

- **xx**

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Unit of Measure:

cm = Centimeters

<blank> = Inches

Length

Base Number

Example: PE3C100079-12 = 12 inches long cable
PE3C100079-100cm = 100 cm long cable

2.4mm Male to 2.4mm Female Low Loss Test Cable Using PE-TC177A 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: [2.4mm Male to 2.4mm Female Low Loss Test Cable Using PE-TC177A Coax PE3C100079](#)

URL: <https://www.pasternack.com/2.4mm-male-to-2.4mm-female-low-loss-test-cable-using-pe-tc177a-pe3c100079-p.aspx>

The information contained within 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 Enterprises reserves the right to make such changes as required. Unless otherwise stated, all specifications are nominal. Pasternack Enterprises does not make any representation or warranty regarding the suitability of the part described herein for any particular purpose, and Pasternack Enterprises does not assume liability arising out of the use of any part or document.

PE3C100079 CAD Drawing

2.4mm Male to 2.4mm Female Low Loss Test Cable Using PE-TC177A Coax

