

## 2.4mm Male to 2.4mm Female 50GHz Phase & Amplitude Stable Cable Assembly

### PECN3TC0008

#### Configuration

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

#### Features

- Max Frequency 50 GHz
- Shielding Effectivity > 90 dB
- 76% Phase Velocity
- Double Shielded
- Designed for use as VNA test port extenders
- Highly flexible armored cable construction
- 1.30:1 VSWR to 50 GHz
- Excellent amplitude and phase stability with flexure
- Non-conductive protective Nomex outer sleeve
- Each serialized assembly comes with test data
- In-stock and ready to ship same-day

#### Applications

- General Purpose
- Laboratory Use
- Vector Network analyzer test port extenders
- Semiconductor probe testing
- Precise bench-top testing
- Lab and production testing

#### Description

Pasternack's PECN3TC0008 2.4mm male to 2.4mm female cable using 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 coax. The PECN3TC0008 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 of better than 90 dB. Pasternack high performance high flex VNA test cables are designed to provide customers repeatable and accurate VNA measurements. These Test cables have excellent electrical properties including low Insertion Loss, low VSWR and phase stability of +/- 10µ with flexure. The flexibility of these cables makes it easier and safer to test your Device Under Test (DUT).? When used with the appropriate calibration kit, these test cables effectively extend the test port of the VNA allowing for accurate measurements of devices that cannot be directly connected to a network analyzer test port.

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                    |         |         | 1.3:1   |       |
| Velocity of Propagation |         | 76      |         | %     |

## 2.4mm Male to 2.4mm Female 50GHz Phase & Amplitude Stable Cable Assembly

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#### Electrical Specifications

| Description                      | Minimum | Typical      | Maximum | Units        |
|----------------------------------|---------|--------------|---------|--------------|
| RF Shielding                     | 90      |              |         | dB           |
| Group Delay                      |         | 1.335 [4.38] |         | ns/ft [ns/m] |
| Operating Voltage (AC)           |         |              | 170     | Vrms         |
| Input Power (Average)            |         |              | 55      | Watts        |
| Phase Stability with Flexure     |         | 10           |         | Degrees      |
| Amplitude Stability with Flexure |         | 0.12         |         | dB           |

#### Specifications by Frequency

| Description           | F1   | F2   | F3    | F4    | F5    | Units |
|-----------------------|------|------|-------|-------|-------|-------|
| Frequency             | 5    | 10   | 20    | 40    | 50    | GHz   |
| Insertion Loss (Max.) | 1.85 | 2.63 | 3.77  | 5.41  | 6.09  | dB/ft |
|                       | 6.07 | 8.63 | 12.37 | 17.75 | 19.98 | dB/m  |
| Power Handling (Max.) | 210  | 127  | 80    | 61    | 55    | Watts |

Electrical Specification Notes:  
Values at 25°C, sea level.

#### Mechanical Specifications

##### Cable Assembly

##### Cable

|                                      |                    |
|--------------------------------------|--------------------|
| Impedance                            | 50 Ohms            |
| Inner Conductor Type                 | Solid              |
| Inner Conductor Material and Plating | Copper, Silver     |
| Dielectric Type                      | PTFE               |
| Number of Shields                    | 2                  |
| Jacket Diameter                      | 0.236 in [5.99 mm] |
| One Time Minimum Bend Radius         | 1.18 in [29.97 mm] |
| Repeated Minimum Bend Radius         | 2.36 in [59.94 mm] |

#### 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                   | PEEK&PEI                   | PEEK&PEI                   |
| Body Material and Plating         | Passivated Stainless Steel | Passivated Stainless Steel |
| Coupling Nut Material and Plating | Passivated Stainless Steel | Passivated Stainless Steel |

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### PECN3TC0008

#### Environmental Specifications

Operating Range Temperature -40 to +85 deg C

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

#### Plotted and Other Data

Notes:  
Values at 25°C, sea level.

#### Typical Performance Data

#### How to Order

Part Number Configuration: **PECN3TC0008 - xx uu**

The diagram shows the part number configuration **PECN3TC0008 - xx uu**. Brackets and lines connect the components to their meanings: **PECN3TC0008** is the Base Number, **- xx** is the Length, and **uu** is the Unit of Measure. A legend defines the Unit of Measure: **cm = Centimeters** and **<blank> = Inches**.

Example: PECN3TC0008-12 = 12 inches long cable  
PECN3TC0008-100cm = 100 cm long cable

2.4mm Male to 2.4mm Female 50GHz Phase & Amplitude Stable Cable Assembly 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.

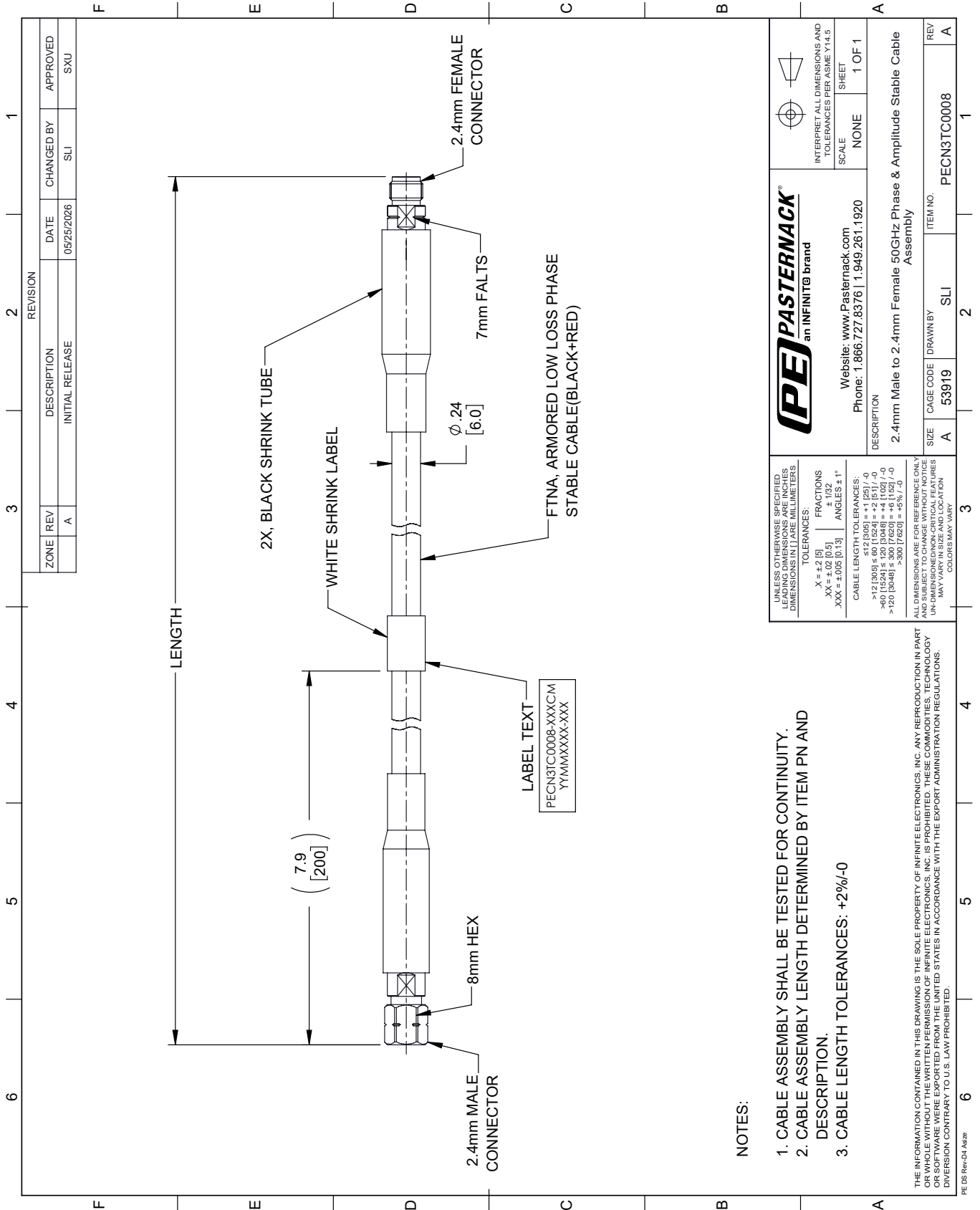
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [2.4mm Male to 2.4mm Female 50GHz Phase & Amplitude Stable Cable Assembly PECN3TC0008](#)

URL: <https://www.pasternack.com/2.4mm-male-2.4mm-female-vna-cable-cable-assembly-PECN3TC0008-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.

# PECN3TC0008 CAD Drawing

## 2.4mm Male to 2.4mm Female 50GHz Phase & Amplitude Stable Cable Assembly



| REVISION |     | DATE            | CHANGED BY | APPROVED |
|----------|-----|-----------------|------------|----------|
| ZONE     | REV | DESCRIPTION     | SLI        | SXU      |
|          | A   | INITIAL RELEASE |            |          |

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an INFINITE brand

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Phone: 1.866.727.8376 | 1.949.261.1920

INTERPRET ALL DIMENSIONS AND TOLERANCES PER ASME Y14.5

SCALE: NONE  
SHEET: 1 OF 1

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DESCRIPTION  
2.4mm Male to 2.4mm Female 50GHz Phase & Amplitude Stable Cable Assembly

|      |           |          |             |
|------|-----------|----------|-------------|
| SIZE | CAGE CODE | DRAWN BY | ITEM NO.    |
| A    | 53919     | SLI      | PECN3TC0008 |

UNLESS OTHERWISE SPECIFIED, LEADING DIMENSIONS ARE IN INCHES, DIMENSIONS IN [ ] ARE MILLIMETERS.

TOLERANCES:  
 .X = ±.2 [5]      FRACTIONS ± 1/32  
 .XX = ±.02 [0.5]      ANGLES ± 1°  
 .XXX = ±.005 [0.13]

CABLE LENGTH TOLERANCES:  
 < 12 [305] ± 1.0 [25] / -0  
 > 12 [305] ≤ 60 [1524] = +2 [51] / -0  
 > 60 [1524] ≤ 120 [3048] = +4 [102] / -0  
 > 120 [3048] ≤ 300 [7620] = +1 [25] / -0  
 > 300 [7620] = +5% / -0

ALL DIMENSIONS ARE FOR REFERENCE ONLY. UNDIMENSIONED NON-CRITICAL FEATURES MAY VARY IN SIZE AND LOCATION. COLORS MAY VARY.

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PECN3TC0008-XXXXCM  
YYMMXXXX-XXX

**NOTES:**

- CABLE ASSEMBLY SHALL BE TESTED FOR CONTINUITY.
- CABLE ASSEMBLY LENGTH DETERMINED BY ITEM PN AND DESCRIPTION.
- CABLE LENGTH TOLERANCES: +2%/-0