



## N Male to N Female Bulkhead Low PIM Cable Using TFT-402 Coax Using Times Microwave Components

### RF Cable Assemblies Technical Data Sheet

**PE3C7970**

#### Configuration

- Connector 1: N Male
- Connector 2: N Female Bulkhead
- Cable Type: TFT-402

#### Features

- Max Frequency 5.8 GHz
- Low PIM: -160 dBc Max
- Shielding Effectivity > -80 dB
- 76% Phase Velocity
- Double Shielded
- FEP Jacket

#### Applications

- General Purpose
- Laboratory Use
- Low PIM Applications
- Indoor and Outdoor Use
- Plenum Rated Applications

#### Description

Pasternack's PE3C7970 type N male to type N female bulkhead cable using TFT-402 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 type N to type N cable assembly has a male to female gender configuration with 50 ohm flexible TFT-402 coax. The PE3C7970 type N male to type N female cable assembly operates to 5.8 GHz. Our low PIM design also offers excellent passive intermodulation performance with PIM levels better than -160 dBc. Our RF cable assembly with type N bulkhead interface allows designers to create external connections on their product enclosures, and can be used in a variety of other rack mount and panel mount applications. The double shielding of this Pasternack cable assembly provides excellent shielding effectiveness of better than -80 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.

#### Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Frequency Range	DC		5.8	GHz
VSWR			1.4:1	
Velocity of Propagation		76		%
RF Shielding	-80			dB
Passive Intermodulation			-160	dBc

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [N Male to N Female Bulkhead Low PIM Cable Using TFT-402 Coax Using Times Microwave Components PE3C7970](#)



## N Male to N Female Bulkhead Low PIM Cable Using TFT-402 Coax Using Times Microwave Components

### RF Cable Assemblies Technical Data Sheet

**PE3C7970**

Capacitance	26.7 [87.6]	pF/ft [pF/m]
DC Resistance Inner Conductor	8.5 [27.89]	$\Omega$ /1000ft [ $\Omega$ /Km]
DC Resistance Outer Conductor	5.6 [18.37]	$\Omega$ /1000ft [ $\Omega$ /Km]

#### Specifications by Frequency

Description	F1	F2	F3	F4	F5	Units
Frequency	0.25	0.5	1	2.5	5.8	GHz
Insertion Loss (Typ.)	0.05	0.07	0.1	0.17	0.26	dB/ft
	0.16	0.23	0.33	0.56	0.85	dB/m

#### Electrical Specification Notes:

Insertion Loss does not include the loss of the connectors. Insertion Loss is estimated as  $0.1 \cdot \sqrt{FGHz}$  dB for the male connector and 0.1 dB for the female connector.

#### Mechanical Specifications

##### Cable Assembly

##### Cable

Cable Type	TFT-402
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 Braid
Shield Layer 2	Tinned Copper Braid
Jacket Material	FEP, Blue
Jacket Diameter	0.16 in [4.06 mm]
One Time Minimum Bend Radius	0.75 in [19.05 mm]

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [N Male to N Female Bulkhead Low PIM Cable Using TFT-402 Coax Using Times Microwave Components PE3C7970](#)



N Male to N Female Bulkhead Low PIM Cable Using  
TFT-402 Coax Using Times Microwave Components

**RF Cable Assemblies Technical Data Sheet**

**PE3C7970**

**Connectors**

Description	Connector 1	Connector 2
Type	N Male	N Female Bulkhead
Impedance	50 Ohms	50 Ohms
Mating Cycles	500	
Contact Material and Plating	Brass, Silver	Brass, Copper Clad Aluminum
Contact Plating Specification	200 µin	3 µm
Dielectric Type	PTFE	PTFE
Outer Conductor Material and Plating		Brass, Copper Clad Aluminum
Outer Conductor Plating Specification		3 µm
Body Material and Plating	Brass, Tri-Metal	Brass, Copper Clad Aluminum
Body Plating Specification	80 µin	3 µm
Coupling Nut Material and Plating	Brass, Tri-Metal	
Coupling Nut Plating Specification	80 µin	
Torque	15 in-lbs [1.7 Nm]	10 in-lbs [1.13 Nm]

**Environmental Specifications**

**Temperature**

Operating Range -40 to +125 deg C

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

**Plotted and Other Data**

Notes:

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [N Male to N Female Bulkhead Low PIM Cable Using TFT-402 Coax Using Times Microwave Components PE3C7970](#)



N Male to N Female Bulkhead Low PIM Cable Using TFT-402 Coax Using Times Microwave Components

**RF Cable Assemblies Technical Data Sheet**

**PE3C7970**

**How to Order**

Part Number Configuration:

**PE3C7970**

- **xx**

**uu**

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

Example: PE3C7970-12 = 12 inches long cable  
PE3C7970-100cm = 100 cm long cable

N Male to N Female Bulkhead Low PIM Cable Using TFT-402 Coax Using Times Microwave Components 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 Male to N Female Bulkhead Low PIM Cable Using TFT-402 Coax Using Times Microwave Components PE3C7970](#)

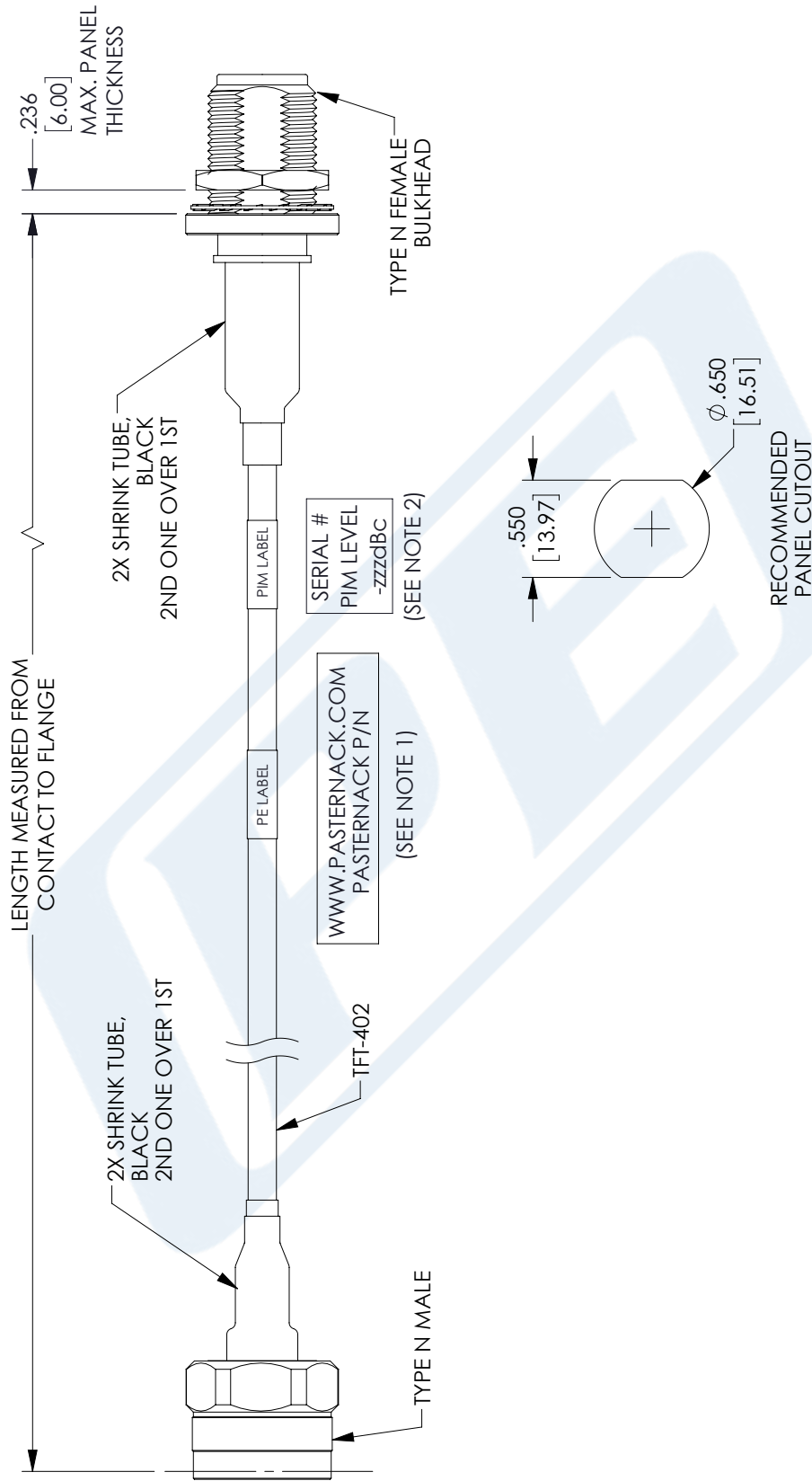
URL: <https://www.pasternack.com/n-male-n-female-tft-402-cable-assembly-pe3c7970-p.aspx>

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.

# PE3C7970 CAD Drawing

N Male to N Female Bulkhead Low PIM Cable Using  
TFT-402 Coax Using Times Microwave Components

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
B	PCR PE3C7959 20220517 AND PE3C7948 20210610	5/17/22	SRAUTUS



## NOTES:

- CABLES 84" AND UNDER HAVE 1 LABEL CENTERED. CABLES OVER 84" HAVE 2 LABELS, ONE AT EACH END 12" FROM THE FRONT OF THE CONNECTOR.
- PIM LABEL 6" FROM CABLE END 1 PLACE.

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

### TOLERANCES:

.X = ±.2 [5.08]      FRACTIONS ± 1/32  
 .XX = ±.02 [.51]      ANGLES ± 1°  
 .XXX = ±.005 [.13]  
 CABLE LENGTH (L) TOLERANCES:  
 L ≤ 12 [305] = +1 [25] / -0  
 12 [305] < L ≤ 60 [1524] = +2 [51] / -0  
 60 [1524] < L ≤ 120 [3048] = +4 [102] / -0  
 120 [3048] < L ≤ 300 [7620] = +6 [152] / -0  
 300 [7620] < L = +5%L / -0

ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.



THE INFORMATION AND DESIGN IN THIS DOCUMENT IS THE PROPERTY OF PASTERNAK CORPORATION ALL RIGHTS RESERVED.

SHEET 1 OF 1

SCALE N/A

REV B



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

SIZE A    CAGE CODE 53919    DRAWN BY DFRISIELLO    ITEM NO. PE3C7970