



## N Male Right Angle Low PIM Connector Solder Attachment for TFT-402, TFT-402-LF

### RF Connectors Technical Data Sheet



TC-402-NM-RA-LP

### Times Microwave Systems Connector Specification

#### Configuration

- N Male Connector
- 50 Ohms
- Right Angle Body Geometry
- Connector Interface Types: TFT-402, TFT-402-LF
- Low PIM Design

#### Features

- Max. Operating Frequency 6 GHz
- Good VSWR of 1.3:1
- PIM levels lower than -160 dBc
- Silver Plated Brass Contact
- 5  $\mu$ m contact plating
- IP 67 Rated

#### Applications

- General Purpose Test
- Custom Cable Assemblies
- Distributed Antenna Systems (DAS)
- Wireless Communications
- Low PIM Applications

#### Description

Pasternack's TC-402-NM-RA-LP type N male right angle connector with solder/solder attachment for TFT-402 and TFT-402-LF is part of our full line of RF components available for same-day shipping. Our type N male connector operates up to a maximum frequency of 6 GHz and offers good VSWR of 1.3:1. The type N male connector also has low passive intermodulation of -160 dBc. Its right angle body geometry allows for easier connections in tight spaces. The connector has an IP67 rating to protect against dust and temporary moisture protection under immersion conditions.

Our type N male right angle connector TC-402-NM-RA-LP datasheet specifications and drawing with dimensions are shown below in this PDF. Pasternack's broad catalog of RF, microwave and millimeter wave connectors allows designers to configure and customize their signal connections however they like. Whether the need is to provide an I/O for a board design, or simply create a custom cable assembly configuration, Pasternack has the right connector for the job. Pasternack can also expertly build your custom cable assemblies for you and ship same-day.

#### Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Frequency Range	DC		6	GHz
VSWR			1.3:1	
Insertion Loss			0.1	dB
Passive Intermodulation			-160	dBc
Operating Voltage (DC)			1,000	Vdc
Inner Conductor DC Resistance			1	mOhms
Outer Conductor DC Resistance			1	mOhms
Insulation Resistance	5,000			MOhms

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [N Male Right Angle Low PIM Connector Solder Attachment for TFT-402, TFT-402-LF TC-402-NM-RA-LP](#)



N Male Right Angle Low PIM Connector Solder Attachment for TFT-402, TFT-402-LF

RF Connectors  
Technical Data Sheet

Electrical Specification Notes:  
Insertion Loss is  $0.1 \cdot \sqrt{FGHz}$

**Mechanical Specifications**

**Size**

Length 1.094 in [27.79 mm]  
Width/Dia. 0.37 in [9.40 mm]

Mating Torque 10 in-lbs [1.13 Nm]

**Material Specifications**

Description	Material	Plating
Contact	Brass	Silver 5 $\mu$ m
Insulation	PTFE	
Body	Brass	Tri-Metal 3 $\mu$ m
Coupling Nut	Brass	Tri-Metal 3 $\mu$ m
Gasket	Silicone Rubber	

**Environmental Specifications**

**Temperature**

Operating Range -55 to +155 deg C  
Ingress Protection (IP) Rating IP 67 Rated  
Shock US MIL-STD 202, Meth. 213, Cond. I  
Vibration US MIL-STD 202, Meth. 204, Cond. B  
Thermal Shock US MIL-STD 202, Meth. 107, Cond. B

Environmental Specification Notes:  
Weather Standard: TEC 60068 55/155/21

**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 Right Angle Low PIM Connector Solder Attachment for TFT-402, TFT-402-LF TC-402-NM-RA-LP](#)



## N Male Right Angle Low PIM Connector Solder Attachment for TFT-402, TFT-402-LF

### RF Connectors Technical Data Sheet



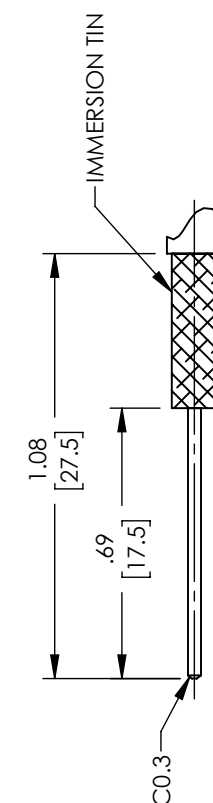
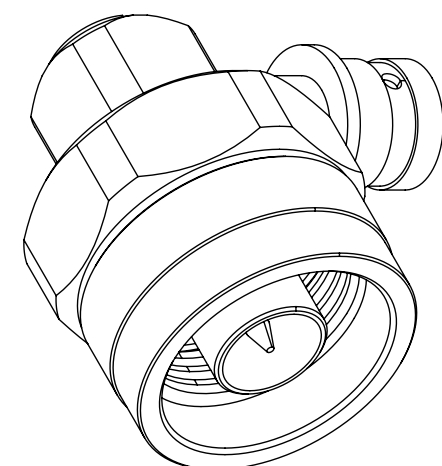
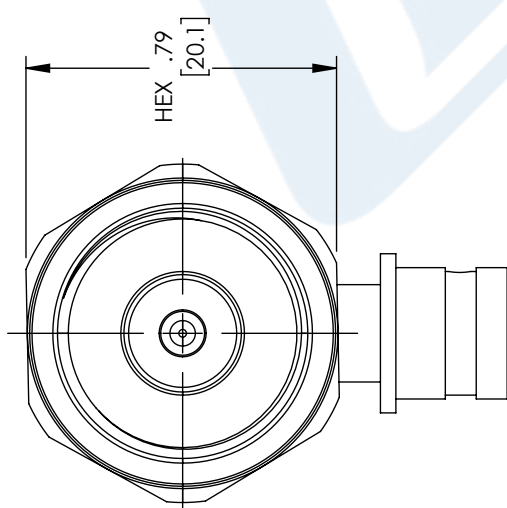
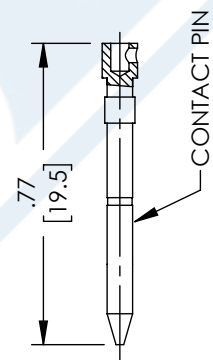
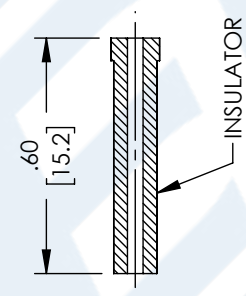
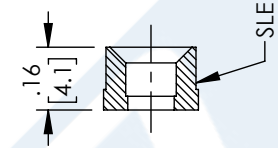
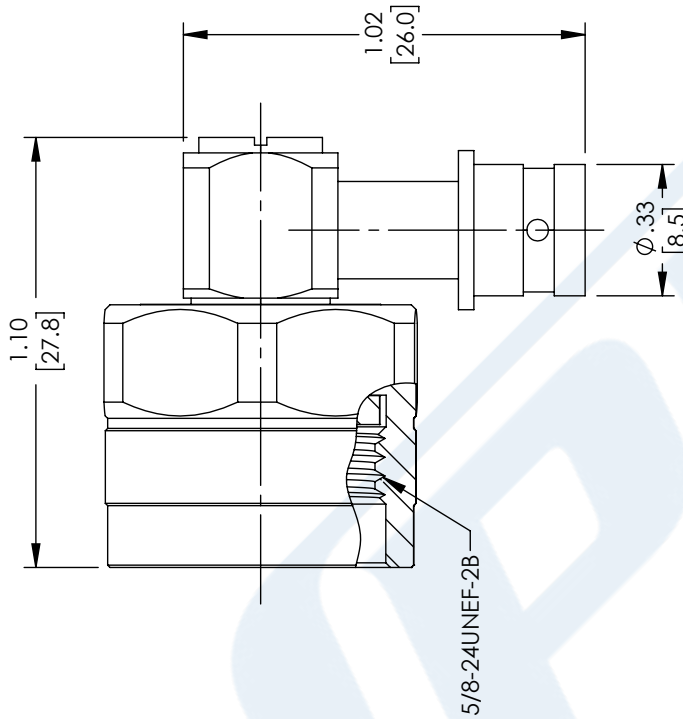
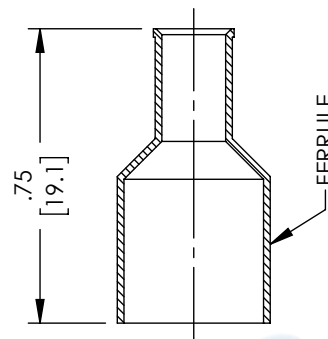
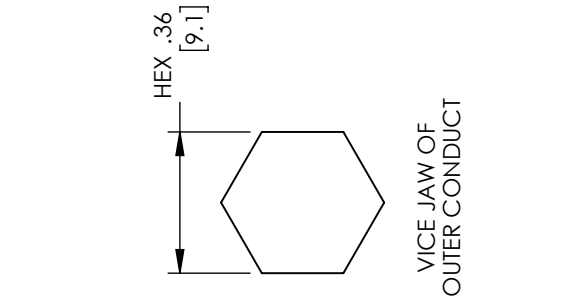
TC-402-NM-RA-LP

N Male Right Angle Low PIM Connector Solder Attachment for TFT-402, TFT-402-LF 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 Right Angle Low PIM Connector Solder Attachment for TFT-402, TFT-402-LF TC-402-NM-RA-LP](https://www.pasternack.com/n-male-tft-402-connector-tc-402-nm-ra-lp-p.aspx)

URL: <https://www.pasternack.com/n-male-tft-402-connector-tc-402-nm-ra-lp-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.



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

TOLERANCES:

.X = ±.2 [5.08] FRACTIONS ±.1032  
 .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% / -0

ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.

THIRD-ANGLE PROJECTION

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

SHEET 1 OF 1

SCALE 2:1

**PE PASTERNAK**  
an INFINITI brand

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

ITEM NO. TC-402-NM-RA-LP

SIZE A CAGE CODE 53919 DRAWN BY DMAY

THESE COMMODITIES, TECHNOLOGY OR SOFTWARE WERE EXPORTED FROM THE UNITED STATES IN ACCORDANCE WITH THE EXPORT ADMINISTRATION REGULATIONS. DIVERSION CONTRARY TO U.S. LAW PROHIBITED.



## N Female Bulkhead Mount Low PIM Connector Solder Attachment for TFT-402, TFT-402-LF

### RF Connectors Technical Data Sheet



TC-402-NF-BH-LP

### Times Microwave Systems Connector Specification

#### Configuration

- N Female Connector
- 50 Ohms
- Straight Body Geometry
- Connector Interface Types: TFT-402, TFT-402-LF
- Bulkhead
- Low PIM Design

#### Features

- Max. Operating Frequency 6 GHz
- Excellent VSWR of 1.25:1
- PIM levels lower than -160 dBc
- Silver Plated Brass Contact
- 5  $\mu$ m contact plating
- IP 67 Rated

#### Applications

- General Purpose Test
- Rack and Panel Mount Applications
- Wireless Communications
- Custom Cable Assemblies
- Low PIM Applications
- Distributed Antenna Systems (DAS)

#### Description

Pasternack's TC-402-NF-BH-LP type N female bulkhead connector with solder/solder attachment for TFT-402 and TFT-402-LF is part of our full line of RF components available for same-day shipping. Our type N female connector operates up to a maximum frequency of 6 GHz and offers excellent VSWR of 1.25:1. The type N female connector also has low passive intermodulation of -160 dBc. This type N bulkhead connector 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 connector has an IP67 rating to protect against dust and temporary moisture protection under immersion conditions.

Our type N female bulkhead connector TC-402-NF-BH-LP datasheet specifications and drawing with dimensions are shown below in this PDF. Pasternack's broad catalog of RF, microwave and millimeter wave connectors allows designers to configure and customize their signal connections however they like. Whether the need is to provide an I/O for a board design, or simply create a custom cable assembly configuration, Pasternack has the right connector for the job. Pasternack can also expertly build your custom cable assemblies for you and ship same-day.

#### Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Frequency Range	DC		6	GHz
VSWR			1.25:1	
Insertion Loss			0.1	dB
Passive Intermodulation			-160	dBc
Operating Voltage (DC)			1,000	Vdc
Inner Conductor DC Resistance			1	mOhms
Outer Conductor DC Resistance			1	mOhms
Insulation Resistance	5,000			MOhms

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [N Female Bulkhead Mount Low PIM Connector Solder Attachment for TFT-402, TFT-402-LF TC-402-NF-BH-LP](#)



N Female Bulkhead Mount Low PIM Connector  
Solder Attachment for TFT-402, TFT-402-LF

RF Connectors  
Technical Data Sheet



TC-402-NF-BH-LP

Electrical Specification Notes:  
Insertion Loss is 0.1\*sqrt(FGHz)

**Mechanical Specifications**

<b>Size</b>	
Length	1.358 in [34.49 mm]
Width/Dia.	0.748 in [19.00 mm]
Mating Torque	10 in-lbs [1.13 Nm]

**Material Specifications**

Description	Material	Plating
Contact	Brass	Silver 5 µm
Insulation	PTFE	
Outer Conductor	Brass	Tri-Metal 3 µm
Body	Brass	Tri-Metal 3 µm
Gasket	Silicone Rubber	

**Environmental Specifications**

<b>Temperature</b>	
Operating Range	-55 to +155 deg C
Ingress Protection (IP) Rating	IP 67 Rated
Shock	US MIL-STD 202, Meth. 213, Cond. I
Vibration	US MIL-STD 202, Meth. 204, Cond. B
Thermal Shock	US MIL-STD 202, Meth. 107, Cond. B

Environmental Specification Notes:  
Weather Standard: TEC 60068 55/155/21

**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 Female Bulkhead Mount Low PIM Connector Solder Attachment for TFT-402, TFT-402-LF TC-402-NF-BH-LP](#)



## N Female Bulkhead Mount Low PIM Connector Solder Attachment for TFT-402, TFT-402-LF

### RF Connectors Technical Data Sheet



TC-402-NF-BH-LP

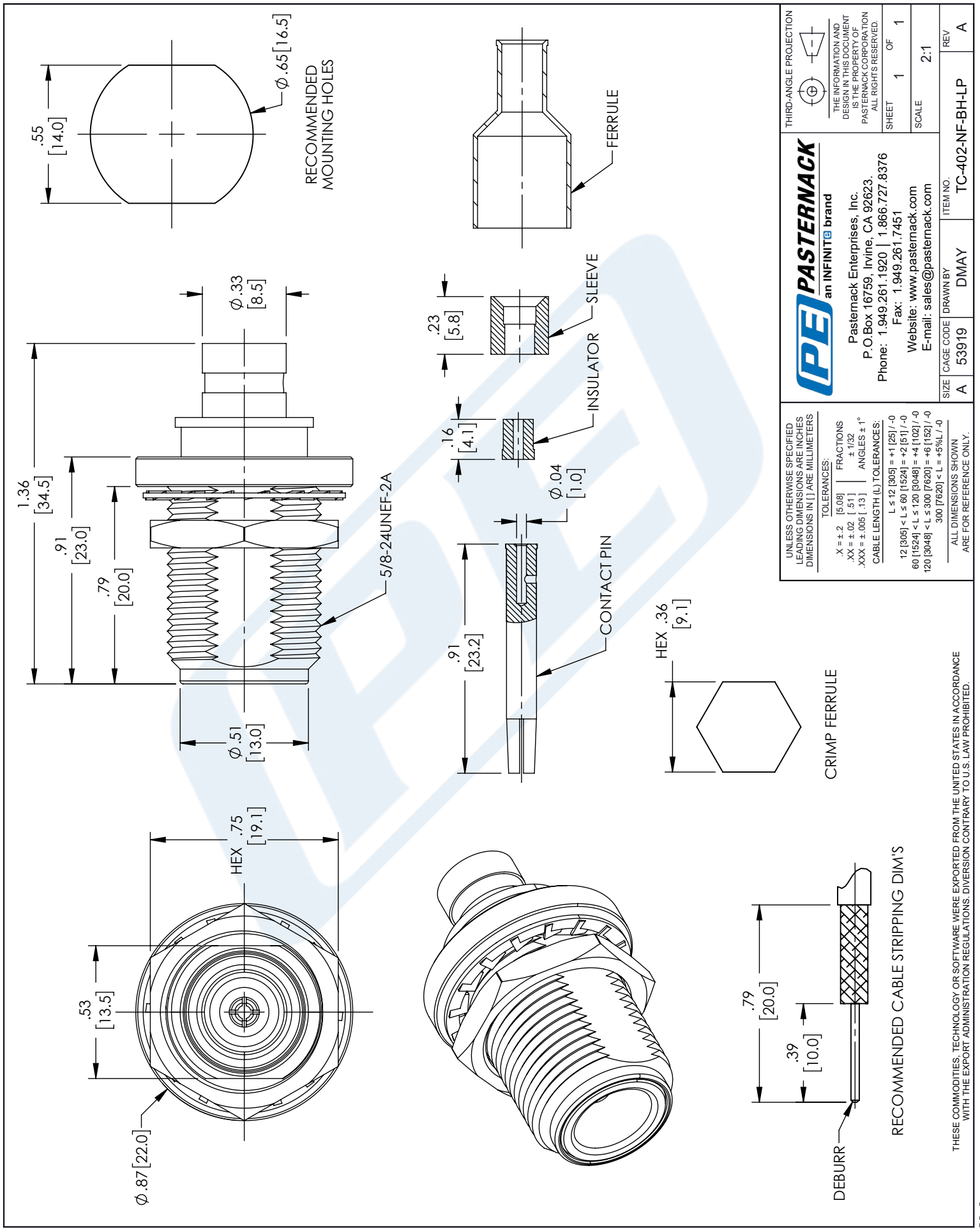
N Female Bulkhead Mount Low PIM Connector Solder Attachment for TFT-402, TFT-402-LF from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99.4% availability and are part of the broadest selection in the industry.

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [N Female Bulkhead Mount Low PIM Connector Solder Attachment for TFT-402, TFT-402-LF TC-402-NF-BH-LP](https://www.pasternack.com/n-female-tft-402-connector-tc-402-nf-bh-lp-p.aspx)

URL: <https://www.pasternack.com/n-female-tft-402-connector-tc-402-nf-bh-lp-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.

**TIMES** MICROWAVE SYSTEMS **TC-402-NF-BH-LP CAD Drawing**  
 N Female Bulkhead Mount Low PIM Connector Solder  
 Attachment for TFT-402, TFT-402-LF



**THIRD-ANGLE PROJECTION**

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

SHEET 1 OF 1

SCALE 2:1

REV A

---

**PE PASTERNAK**  
 an INFINITI brand

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

ITEM NO. TC-402-NF-BH-LP

SIZE A CAGE CODE 53919 DRAWN BY DMAY

---

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

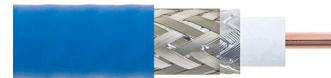
TOLEANCES:

.X = ±.2 [5.08] FRACTIONS ±.1/32  
 .XX = ±.02 [ .51] ±.1/32  
 .XXX = ±.005 [ .13] ANGLES ± 1°

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% / -0

ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.



## Low PIM Flexible TFT-5G-402 Coax Cable Double Shielded with Blue FEP Jacket

### RF Cables Technical Data Sheet

### TFT-5G-402

#### Times Microwave Systems Coax Cable Specification

##### Configuration

- Low PIM Flexible Cable
- 2 Shield(s)

##### Features

- PIM < -160 dBc
- UL910 Plenum Rated Cable
- Lightweight and Extremely Flexible
- Low Loss
- Good Shielding >80 dB
- UV Resistant Jacket

##### Applications

- Base Stations
- Antenna Pigtails
- Distributed Antenna Systems
- (DAS)
- Plenum Installations
- Small Cells
- Multi-Carrier Communication Systems

##### Description

TFT-5G-402 low pim flexible coax cable by Times Microwave is part of our full line of RF components available for same-day shipping. The TFT-5G-402 plenum rated coaxial cable features a taped PTFE dielectric, solid copper center conductor and a dual-braid outer conductor. These features combine to make the Times Microwave TFT-5G-402 an extremely flexible, low loss and low PIM coax cable that is well suited for Distributed Antenna Systems (DAS), plenum installations or small cells. The tough, FEP jacket provides moisture, UV protection and resistance to corrosive environments.

Our datasheet specifications and drawing with dimensions for Times Microwave TFT-5G-402 coax cable are shown below in this PDF. Whether the need is to provide a low PIM jumper connection, low PIM antenna pigtails or simply create a custom cable assembly configuration, Pasternack has the right TFT-5G-402 cable assemblies for the job.

##### Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Frequency Range	DC		5.8	GHz
Impedance		50		Ohms
Velocity of Propagation		76		%
Shielding Effectiveness	80			dB
Passive Intermodulation			-160	dBc
Nominal Capacitance		26.7 [87.6]		pF/ft [pF/m]

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [Low PIM Flexible TFT-5G-402 Coax Cable Double Shielded with Blue FEP Jacket TFT-5G-402](#)



Low PIM Flexible TFT-5G-402 Coax Cable  
Double Shielded with Blue FEP Jacket

**RF Cables**  
**Technical Data Sheet**

**TFT-5G-402**

**Performance by Frequency Band**

Description	F1	F2	F3	F4	F5	Units
Frequency	0.45	1.9	2.3	4.9	5.8	GHz
Attenuation, Typ	7.9	16.4	18.2	27	29.5	dB/100ft
	25.92	53.81	59.71	88.58	96.78	dB/100m
Input Power (CW), Max	430	200	180	120	110	Watts

**Mechanical Specifications**

Diameter	0.16 in [4.06 mm]
Weight	0.028 lbs/ft [0.04 kg/m]
Min. Bend Radius (Installation)	0.75 in [19.05 mm]

**Construction Specifications**

Description	Material and Plating	Diameter
Inner Conductor	Copper, 1 Strand	0.037 in [0.94 mm]
Conductor Type	Solid	
Dielectric	PTFE	0.113 in [2.87 mm]
First Shield	Tin	0.121 in [3.07 mm]
Outer Conductor	Copper, Tin	0 in [0 mm]
Jacket	FEP, Blue	0.16 in [4.06 mm]

**Environmental Specifications**

<b>Temperature</b>	
Operating Range	-55 to +150 deg C

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [Low PIM Flexible TFT-5G-402 Coax Cable Double Shielded with Blue FEP Jacket TFT-5G-402](#)



Low PIM Flexible TFT-5G-402 Coax Cable  
Double Shielded with Blue FEP Jacket

**RF Cables**  
**Technical Data Sheet**

**TFT-5G-402**

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

**Plotted and Other Data**

Notes:

Low PIM Flexible TFT-5G-402 Coax Cable Double Shielded with Blue FEP Jacket 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: [Low PIM Flexible TFT-5G-402 Coax Cable Double Shielded with Blue FEP Jacket TFT-5G-402](#)

URL: <https://www.pasternack.com/low-pim-flexible-tft-5g-402-fep-jacket-tin-outer-conductor-double-shielded-tft-5g-402-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.

# TFT-5G-402 CAD Drawing

Low PIM Flexible TFT-5G-402 Coax Cable Double Shielded with Blue FEP Jacket

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	09/13/2022	A. GANWANI



Center Conductor	.037 [0.94]	Bare Copper
Dielectric	.113 [2.87]	Taped PTFE
Shield	.121 [3.07]	Tin Plated Flat Braid
Outer Braid	.138 [3.51]	Tin Plated Copper Braid
Jacket	.160 [4.06]	Blue FEP

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% / -0

ALL DIMENSIONS SHOWN  
ARE FOR REFERENCE ONLY.



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

SHEET 1 OF 1

SCALE N/A

REV A

**(PE) PASTERNAK®**  
 an INFINIT® brand

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 K.DANG    ITEM NO. TFT-5G-402

THESE COMMODITIES, TECHNOLOGY OR SOFTWARE WERE EXPORTED FROM THE UNITED STATES IN ACCORDANCE WITH THE EXPORT ADMINISTRATION REGULATIONS. DIVERSION CONTRARY TO U.S. LAW PROHIBITED.