



SMA Male to TNC Female Bulkhead Low Loss Cable Using LMR-195 Coax

RF Cable Assemblies Technical Data Sheet

PE3W02172

Configuration

- Connector 1: SMA Male
- Connector 2: TNC Female Bulkhead
- Cable Type: LMR-195

Features

- Max Frequency 5.8 GHz
- Shielding Effectivity > 90 dB
- 80% Phase Velocity
- Double Shielded
- PE Jacket

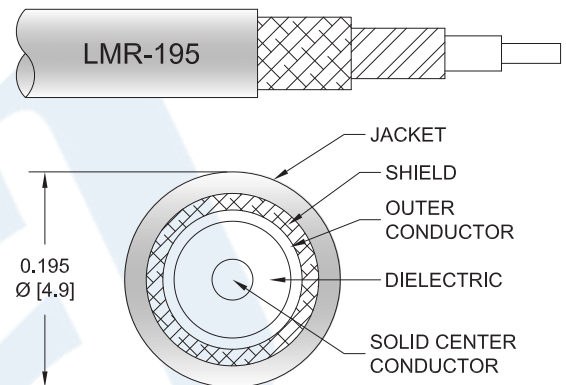
Applications

- General Purpose
- Laboratory Use

Description

Pasternack's PE3W02172 SMA male to TNC female bulkhead cable using LMR-195 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 SMA to TNC cable assembly has a male to female gender configuration with 50 ohm flexible LMR-195 coax. The PE3W02172 SMA male to TNC female cable assembly operates to 5.8 GHz. Our RF cable assembly with TNC 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 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: [SMA Male to TNC Female Bulkhead Low Loss Cable Using LMR-195 Coax PE3W02172](#)



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Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Frequency Range	DC		5.8	GHz
VSWR			1.4:1	
Velocity of Propagation		80		%
RF Shielding	90			dB
Group Delay		1.27 [4.17]		ns/ft [ns/m]
Capacitance		25.4 [83.33]		pF/ft [pF/m]
Inductance		0.064 [0.21]		uH/ft [uH/m]
DC Resistance Inner Conductor		7.6 [24.93]		Ω /1000ft [Ω /Km]
DC Resistance Outer Conductor		4.9 [16.08]		Ω /1000ft [Ω /Km]
Jacket Spark			3,000	Vrms

Specifications by Frequency

Description	F1	F2	F3	F4	F5	Units
Frequency	0.1	0.25	0.5	1	5.8	GHz
Insertion Loss (Typ.)	0.03	0.05	0.08	0.11	0.29	dB/ft
	0.1	0.16	0.26	0.36	0.95	dB/m

Electrical Specification Notes:

Insertion Loss does not include the loss of the connectors. Insertion Loss is estimated as 0.1 dB per connector

Mechanical Specifications

Cable Assembly

Diameter 0.689 in [17.5 mm]

Cable

Cable Type LMR-195
 Impedance 50 Ohms
 Inner Conductor Type Solid
 Inner Conductor Material and Plating Copper
 Dielectric Type PE (F)
 Number of Shields 2
 Shield Layer 1 Aluminum Tape
 Shield Layer 2 Tinned Copper Braid
 Jacket Material PE, Black
 Jacket Diameter 0.195 in [4.95 mm]

One Time Minimum Bend Radius 0.5 in [12.7 mm]

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Repeated Minimum Bend Radius	2 in [50.8 mm]
Bending Moment	0.2 lbs-ft [0.27 N-m]
Flat Plate Crush	15 lbs/in [0.27 Kg/mm]
Tensile Strength	40 lbs [18.14 Kg]

Connectors

Description	Connector 1	Connector 2
Type	SMA Male	TNC Female Bulkhead
Specification	MIL-STD-348A	MIL-STD-348A
Impedance	50 Ohms	50 Ohms
Contact Material and Plating	Brass, Gold	Brass, Gold
Contact Plating Specification	50 µin minimum	30 µin minimum
Dielectric Type	PTFE	PTFE
Body Material and Plating	Brass, Nickel	Brass, Nickel
Body Plating Specification	100 µin minimum	100 µin minimum
Coupling Nut Material and Plating	Brass, Nickel	
Coupling Nut Plating Specification	100 µin minimum	
Hex Size	5/16 inch	
Torque	3 in-lbs [0.34 Nm]	

Environmental Specifications

Temperature

Operating Range	-40 to +85 deg C
Storage Range	-70 to +85 deg C

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

Plotted and Other Data

Notes:

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PE3W02172

How to Order

Part Number Configuration:

PE3W02172

- **xx**

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

Example: PE3W02172-12 = 12 inches long cable
PE3W02172-100cm = 100 cm long cable

SMA Male to TNC Female Bulkhead Low Loss Cable Using LMR-195 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: [SMA Male to TNC Female Bulkhead Low Loss Cable Using LMR-195 Coax PE3W02172](#)

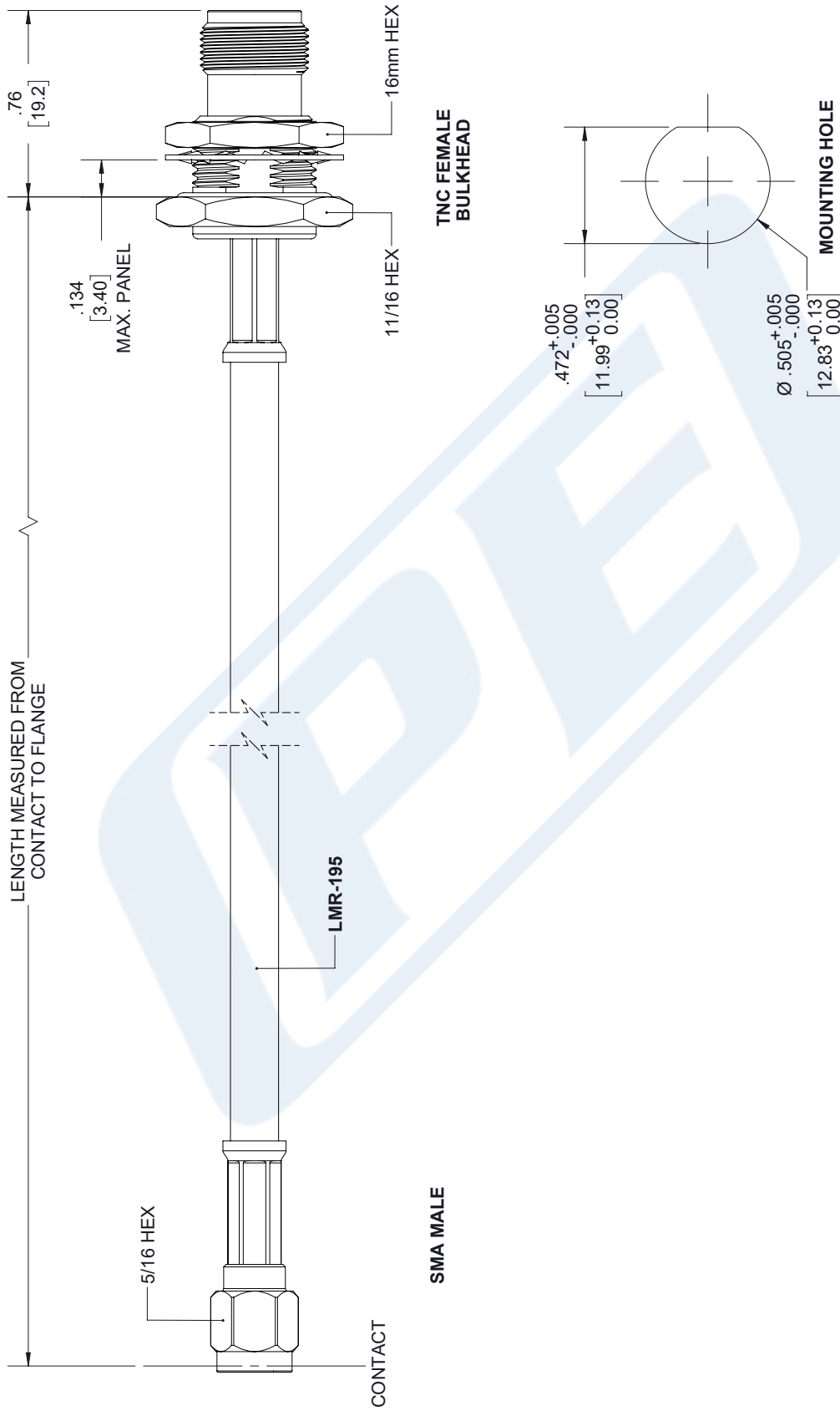
URL: <https://www.pasternack.com/sma-male-tnc-female-lmr195-cable-assembly-pe3w02172-p.aspx>

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.

PE3W02172 CAD Drawing

SMA Male to TNC Female Bulkhead Low Loss Cable Using LMR-195 Coax

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	3/9/2020	S. ELLIS



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.

THIRD-ANGLE PROJECTION

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SCALE N/A

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	CAGE CODE	DRAWN BY	ITEM NO
A	53919	K. DANG	PE3W02172
REV			A

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