

## TNC Male Right Angle to TNC Male Right Angle Low Loss Cable Using LMR-195-UF Coax with HeatShrink, LF Solder



### PE3W12963LF/HS

#### Configuration

- Connector 1: TNC Male Right Angle
- Connector 2: TNC Male Right Angle
- Cable Type: LMR-195-UF
- Coax Flex Type: Flexible

#### Features

- Max Frequency 3 MHz
- Shielding Effectivity > 90 dB
- 74% Phase Velocity
- Double Shielded
- TPE Jacket

#### Applications

- General Purpose
- Laboratory Use

#### Description

Pasternack's PE3W12963LF/HS TNC male right angle to TNC male right angle cable using LMR-195-UF 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 TNC to TNC cable assembly has a male to male gender configuration with 50 ohm flexible LMR-195-UF coax. The PE3W12963LF/HS TNC male to TNC male cable assembly operates to 3 MHz. The right angle TNC interfaces on the LMR-195-UF cable allow for easier connections in tight spaces. 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.

#### Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Frequency Range	DC		3	GHz
VSWR			1.35:1	
Velocity of Propagation		74		%
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		9.5 [31.17]		Ohms/1000ft [Ohms/Km]
DC Resistance Outer Conductor		4.9 [16.08]		Ohms/1000ft [Ohms/Km]
Operating Voltage (AC)			500	Vrms

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**Electrical Specifications**

Description	Minimum	Typical	Maximum	Units
Jacket Spark			3,000	Vrms

**Specifications by Frequency**

Part Number	Length	Description	F1	F2	F3	F4	F5	Units	Weight (lbs)
			Frequency					MHz	
PE3W12963LF/HS	Custom Lengths Available	Insertion Loss (Typ.)	0.042	0.068	0.097	0.132	0.246	dB/ft	
			0.14	0.23	0.32	0.44	0.81	dB/m	
PE3W12963LF/HS-12	12 Inch	Insertion Loss (Typ.)	0.45	0.47	0.5	0.54	0.65	dB	0.145
PE3W12963LF/HS-24	24 Inch	Insertion Loss (Typ.)	0.49	0.54	0.6	0.67	0.9	dB	0.166
PE3W12963LF/HS-36	36 Inch	Insertion Loss (Typ.)	0.53	0.61	0.7	0.8	1.14	dB	0.187
PE3W12963LF/HS-60	60 Inch	Insertion Loss (Typ.)	0.61	0.74	0.89	1.06	1.63	dB	0.229
PE3W12963LF/HS-300	300 Inch	Insertion Loss (Typ.)	1.45	2.1	2.83	3.7	6.55	dB	0.649

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:	0.2 dB
Loss due to Connector 2:	0.2 dB
Base Weight:	0.145 pounds
Additional Weight per Inch:	0.00175 pounds

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

**Mechanical Specifications**

**Cable Assembly**

Width/Diameter	0.5 in [12.7 mm]
Weight	0.124 lbs [56.25 g]

**Cable**

Cable Type	LMR-195-UF
Impedance	50 Ohms
Inner Conductor Type	Stranded
Inner Conductor Material and Plating	Copper
Dielectric Type	Foam PE
Number of Shields	2
Shield Layer 1	Aluminum Tape
Shield Layer 2	Tinned Copper
Jacket Material	TPE, Black
Jacket Diameter	0.195 in [4.95 mm]
One Time Minimum Bend Radius	0.5 in [12.7 mm]
Repeated Minimum Bend Radius	2 in [50.8 mm]
Bending Moment	0.1 lbs-ft [0.14 N-m]
Flat Plate Crush	10 lbs/in [0.18 Kg/mm]
Tensile Strength	40 lbs [18.14 Kg]

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**Connectors**

Description	Connector 1	Connector 2
Type	TNC Male Right Angle	TNC Male Right Angle
Specification	MIL-STD-348A	MIL-STD-348A
Impedance	50 Ohms	50 Ohms
Configuration	Right Angle	Right Angle
Contact Material and Plating	Brass, Gold	Brass, Gold
Contact Plating Specification	30 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	Brass, Nickel
Coupling Nut Plating Specification	100 µin minimum	100 µin minimum

**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.

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**PE3W12963LF/HS**

**Typical Performance Data**

**How to Order**

Part Number Configuration:

**PE3W12963LF/HS - xx uu**



Example: PE3W12963LF/HS-12 = 12 inches long cable  
PE3W12963LF/HS-100cm = 100 cm long cable

TNC Male Right Angle to TNC Male Right Angle Low Loss Cable Using LMR-195-UF Coax with HeatShrink, LF Solder 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.

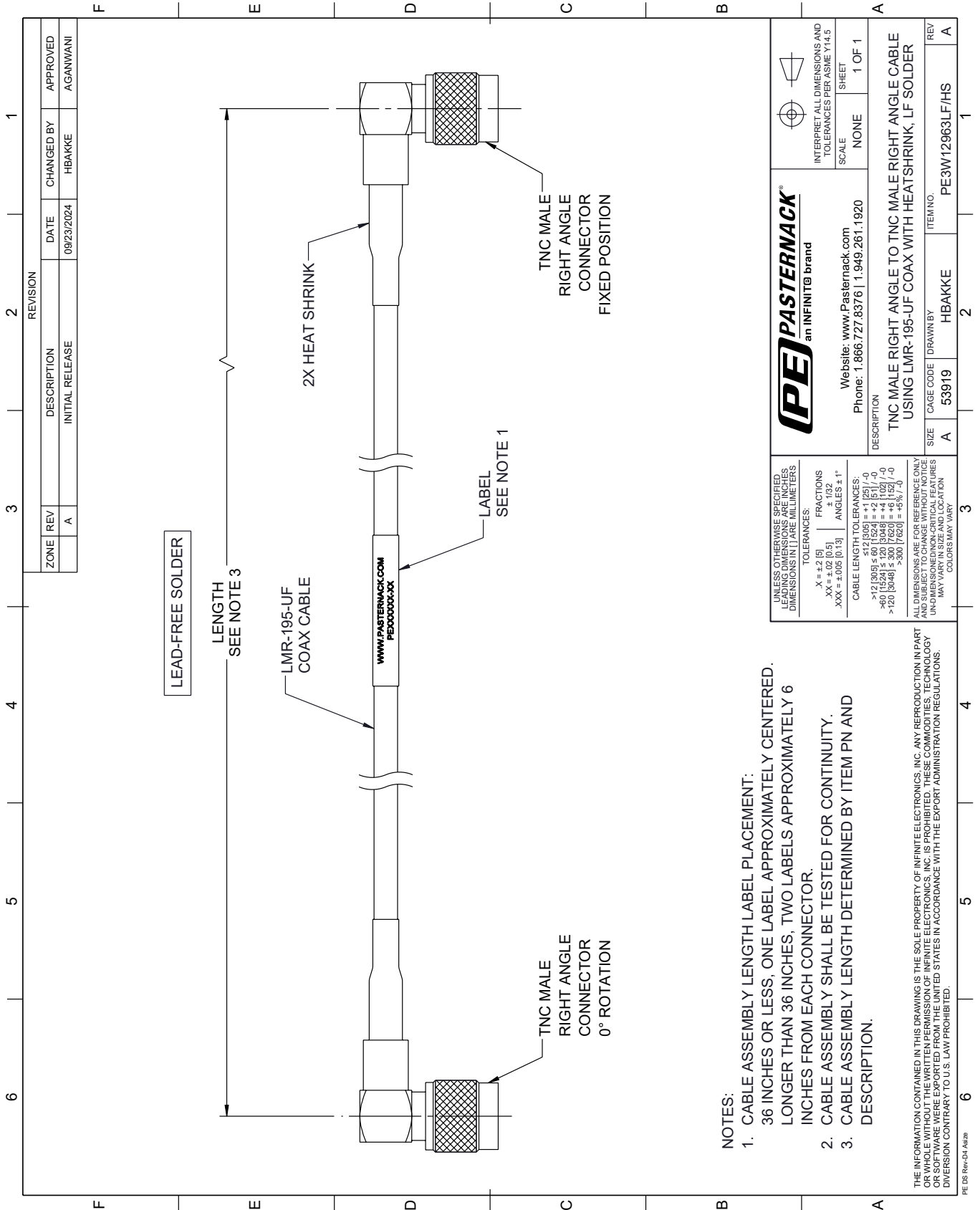
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [TNC Male Right Angle to TNC Male Right Angle Low Loss Cable Using LMR-195-UF Coax with HeatShrink, LF Solder PE3W12963LF/HS](#)

URL: <https://www.pasternack.com/tnc-male-right-angle-to-tnc-male-low-loss-cable-using-lmr-195-uf-with-heatshrink-lf-solder-pe3w12963lf-hs-p.aspx>

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# PE3W12963LF/HS CAD Drawing

TNC Male Right Angle to TNC Male Right Angle Low Loss Cable  
Using LMR-195-UF Coax with HeatShrink, LF Solder



REVISION		DATE	CHANGED BY	APPROVED
ZONE	REV			
	A	09/23/2024	HBAKKE	AGANWANI
DESCRIPTION				
INITIAL RELEASE				

DESCRIPTION	SIZE	CAGE CODE	DRAWN BY	ITEM NO.	REV
TNC MALE RIGHT ANGLE TO TNC MALE RIGHT ANGLE CABLE USING LMR-195-UF COAX WITH HEATSHRINK, LF SOLDER	A	53919	HBAKKE	PE3W12963LF/HS	A

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

TOLERANCES:  
 .X = ±.2 [5]  
 .XX = ±.02 [0.5]  
 .XXX = ±.005 [0.13]

FRACTIONS  
 ± 1/32  
 ANGLES ± 1°

CABLE LENGTH TOLERANCES:  
 <math>12 [305] \le L \le 60 [1524]</math> = ±.1 [25] / -0  
 <math>60 [1524] \le L \le 120 [3048]</math> = ±.4 [102] / -0  
 >120 [3048] = ±.8 [203] / -0  
 <math>300 [7620]</math> = ±.8% / 0

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

NOTES:

- CABLE ASSEMBLY LENGTH LABEL PLACEMENT: 36 INCHES OR LESS, ONE LABEL APPROXIMATELY CENTERED, LONGER THAN 36 INCHES, TWO LABELS APPROXIMATELY 6 INCHES FROM EACH CONNECTOR.
- CABLE ASSEMBLY SHALL BE TESTED FOR CONTINUITY.
- CABLE ASSEMBLY LENGTH DETERMINED BY ITEM PN AND DESCRIPTION.

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