

TNC Male Right Angle Connector Crimp/Crimp Attachment for RG58, RG303, RG141, PE-C195, PE-P195, LMR-195, 0.195 inch



RF Connectors Technical Data Sheet

PE4451

Configuration

- TNC Male Connector
- MIL-STD-348A
- 50 Ohms
- Right Angle Body Geometry

- RG58, RG303, RG141, PE-C195, PE-P195, LMR-195, 0.195 inch Interface Type
- Crimp/Crimp Attachment

Features

- Max. Operating Frequency 11 GHz
- Gold Plated Brass Contact

- 30 μ in minimum contact plating

Applications

- General Purpose Test
- Custom Cable Assemblies

Description

Pasternack's PE4451 TNC male right angle connector with crimp/crimp attachment for RG58, RG303, RG141, PE-C195, PE-P195, LMR-195 and 0.195 inch is part of our full line of RF components available for same-day shipping. Our TNC male connector operates up to a maximum frequency of 11 GHz. Its right angle body geometry allows for easier connections in tight spaces.

Our TNC male right angle connector PE4451 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		11	GHz
Operating Voltage (AC)			500	Vrms

Performance by Frequency

Description	F1	F2	F3	F4	F5	Units
Frequency Range	DC to 3					GHz
VSWR, Max	1.35:1					

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 Connector Crimp/Crimp Attachment for RG58, RG303, RG141, PE-C195, PE-P195, LMR-195, 0.195 inch PE4451](#)

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Mechanical Specifications

Size

Length	1.35 in [34.29 mm]
Width/Dia.	0.571 in [14.50 mm]
Height	1.146 in [29.11 mm]
Weight	0.068 lbs [30.84 g]

Material Specifications

Description	Material	Plating
Contact	Brass	Gold 30 μ in minimum
Insulation	PTFE	
Body	Brass	Nickel 100 μ in minimum
Coupling Nut	Brass	Nickel 100 μ in minimum

Environmental Specifications

Temperature

Operating Range

-65 to +165 deg C

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 Connector Crimp/Crimp Attachment for RG58, RG303, RG141, PE-C195, PE-P195, LMR-195, 0.195 inch PE4451](#)

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

Plotted and Other Data

Notes:

TNC Male Right Angle Connector Crimp/Crimp Attachment for RG58, RG303, RG141, PE-C195, PE-P195, LMR-195, 0.195 inch from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99% availability and are part of the broadest selection in the industry.

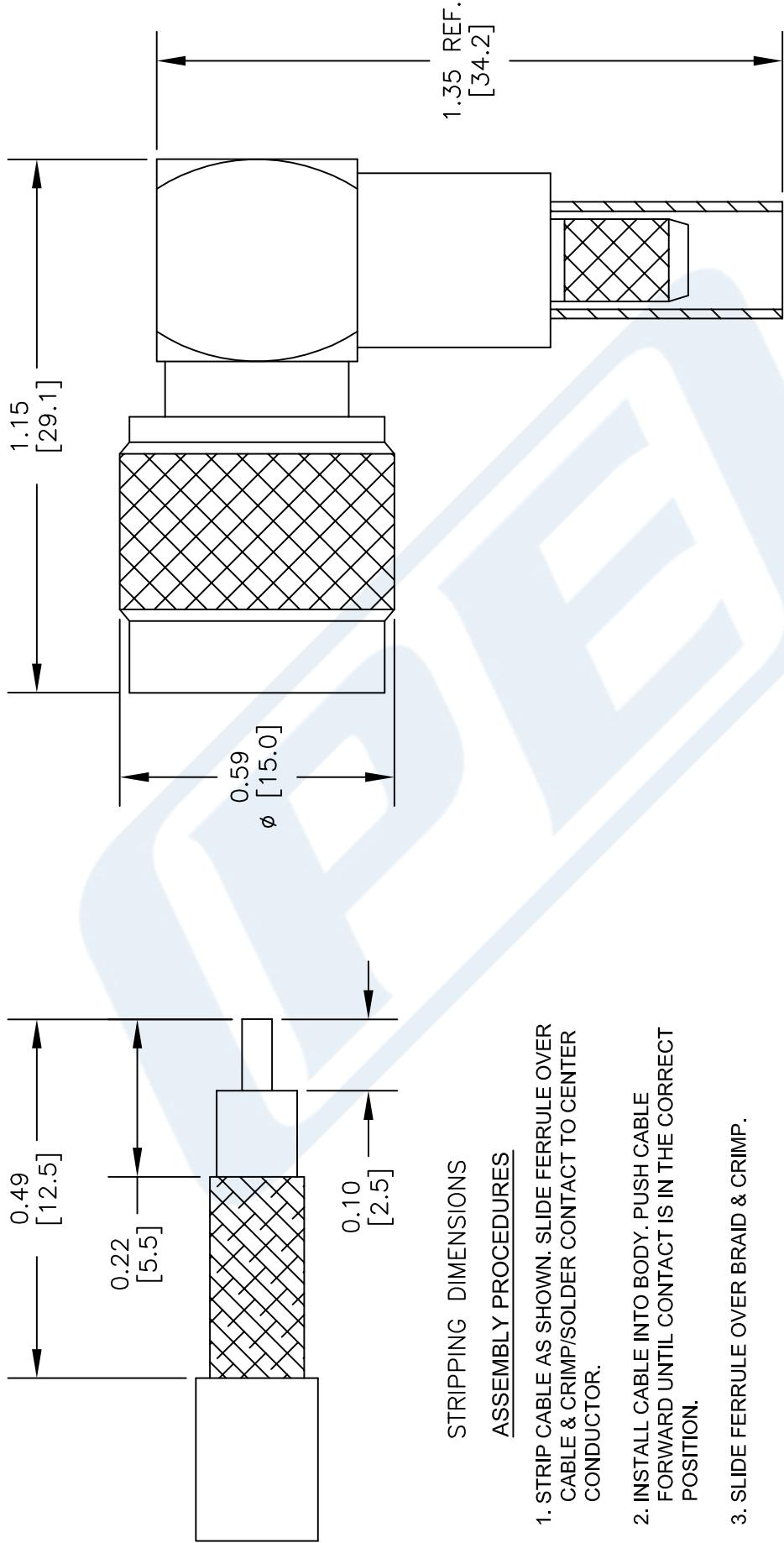
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URL: <https://www.pasternack.com/tnc-male-standard-rg58-connector-pe4451-p.aspx>

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.

PE4451 CAD Drawing

TNC Male Right Angle Connector Crimp/Crimp Attachment for RG58,
RG303, RG141, PE-C195, PE-P195, LMR-195, 0.195 inch



NOTES:
1. UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE NOMINAL.
2. ALL SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE AT ANY TIME.
3. DIMENSIONS ARE IN INCHES (mm).
4. FITS MIL-C-17 AND EQUIVALENT CABLES.

DWG TITLE
PE4451

PE
THE ENGINEER'S RF SOURCE

Pasternack Enterprises, Inc.

P.O. Box 16759 | Irvine | CA | 92623

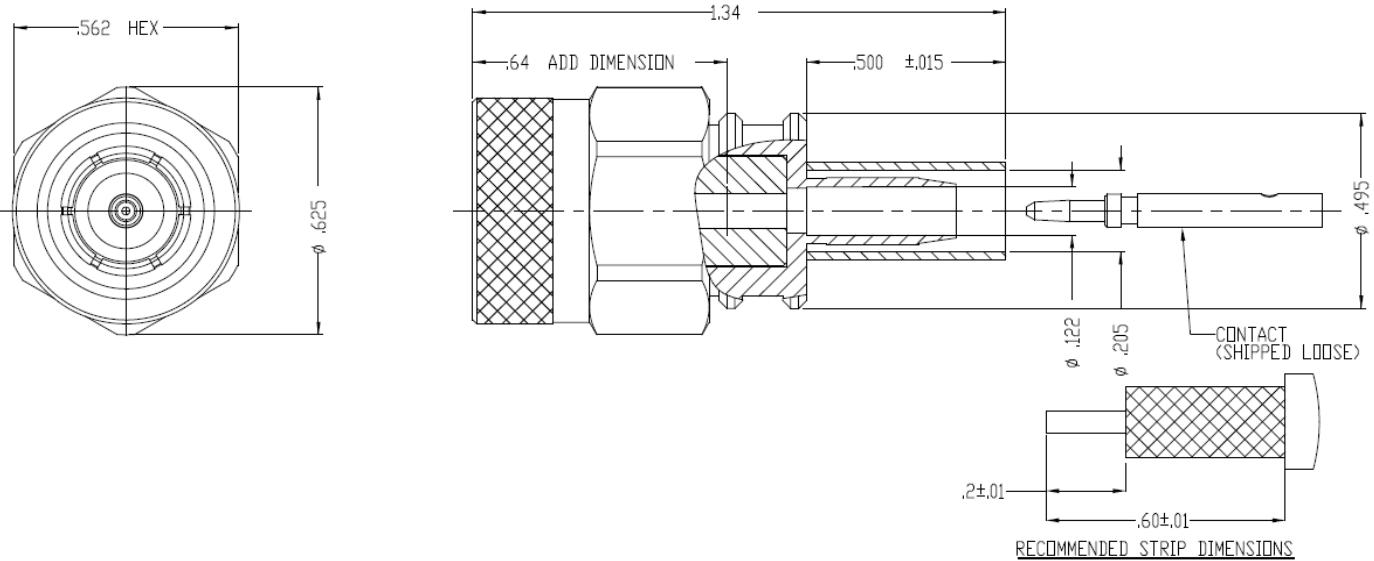
Phone: (949) 261-1920 | Fax: (949) 261-7451

Website: www.pasternack.com | E-Mail: sales@pasternack.com

FSCM NO.	CAD FILE	SCALE	SIZE	A
53919	031414			150

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SYM	REVISION DESCRIPTION	DFTM	DATE	APPD	DATE
A	RELEASED FOR PRODUCTION	N.N.N	1/13/14	J.D.B.	1/13/14



NOTES:

1. ASSEMBLED CONNECTOR INTERFACE IS DESIGNED TO MATE WITH STANDARD QMA JACK.

2. MATERIAL:

BODY, CONTACT, COUPLING SLEEVE - BRASS PER ASTM B16, C36000 ALLOY, TEMPER H02
 INSULATOR - TEFLON PER ASTM D1710, TYPE 1, GRADE 1, CLASS A
 SHRINK SLEEVE - HEAT SHRINKABLE ATUM PER MIL-I-23053/4 (NOT SHOWN)
 CRIMP SLEEVE - D.H.P. COPPER CDA, ALLOY #122, TEMPER HARD
 FINGERS - BERYLLIUM COPPER PER ASTM B196, C17300 ALLOY, CONDITION HT

3. FINISH:

CONTACT - GOLD PLATE PER ASTM B488

ALL OTHER METAL PARTS - SILVER PLATE PER ASTM B700

MATERIALS	UNLESS OTHERWISE SPECIFIED		DFTM	N. N. N	TIMES MICROWAVE SYSTEMS
	ALL DIMENSIONS ARE IN INCHES	MACHINED SURFACES FINISH 63 RMS MAX.	DATE	1/13/14	
USED ON: A	REMOVE ALL BURRS .004 MAX.	BREAK MACHINE CORNERS .005 MAX.	CHKD.	J. D. B.	TC-195-TM-X
	TOLERANCES ON DECIMALS XX ± .01	XXX ± .005	DATE	1/13/14	CONNECTOR ASSEMBLY
SCALE: NONE	DWG SIZE A	ANGLES ± 1°	APPD.	J. D. B.	TNCM for LMR-195
	DO NOT SCALE DRAWING	FRACTIONS ± 1/64	DATE	1/13/14	SD3190-2879 REV A
			SH.	1 of 1	

LMR®-195

Flexible Low Loss Communications Coax

Ideal for...

- Jumper Assemblies in Wireless Communications Systems
- Short Antenna Feeder runs
- Any application (e.g. WLL, GPS, LMR, WLAN, WISP, WiMax, SCADA, Mobile Antennas) requiring an easily routed, low loss RF cable
- Drop-in replacement for RG-58 and RG-142

• **LMR®** standard is a UV Resistant Polyethylene jacketed cable designed for 20-year service outdoor use. The bending and handling characteristics are significantly better than air-dielectric and corrugated hard-line cables.

• **LMR®-DB** is identical to standard LMR plus has the advantage of being watertight. The addition of waterproofing compound in and around the foil/braid insures continuous reliable service should the jacket be inadvertently damaged during installation or in the future.

• **LMR®-FR** is a non-halogen (non-toxic), low smoke, fire retardant cable designed for in-building runs that can be routed anywhere except air handling plenums. LMR-FR is UL/NEC & CSA rated 'CMR' and 'FT4' respectively, meets FAA FAR25 requirements and is MSHA-P for mining applications.

• **LMR®-FR-PVC** is a general-purpose indoor cable and has a UL/NEC & CSA rating of 'CMR' and 'FT4' respectively. It is less expensive than LMR-FR, however it emits toxic fumes (HCL) and greater smoke density when burned.

• **LMR®-PVC** is designed for low loss general-purpose applications and is somewhat more flexible than the standard polyethylene jacketed LMR.

• **LMR®-PVC-W** is a white-jacketed version of LMR-PVC for marine and other applications where color compatibility is desired.

• **LMR®-MA** is a flexible cable designed specifically for mobile antenna applications. It has a PVC jacket and un-bonded aluminum tape to facilitate end stripping with automated equipment.

• **Flexibility** and bendability are hallmarks of the LMR-195 cable design. The flexible outer conductor enables the tightest bend radius available for any cable of similar size and performance.

• **Low Loss** is another hallmark feature of LMR-195. Size for size LMR has the lowest loss of any flexible cable and comparable loss to semirigid hard-line cables.

• **RF Shielding** is 50 dB greater than typical single shielded coax (40 dB). The multi-ply bonded foil outer conductor is rated conservatively at > 90 dB (i.e. >180 dB between two adjacent cables).

• **Weatherability**: LMR-195 cables designed for outdoor exposure incorporate the best materials for UV resistance and have life expectancy in excess of 20 years.

• **Connectors**: A wide variety of connectors are available for LMR-195 cable, including all common interface types, reverse polarity, and a choice of solder or non-solder center pins. Most LMR connectors employ crimp outer attachment using standard hex crimp sizes.

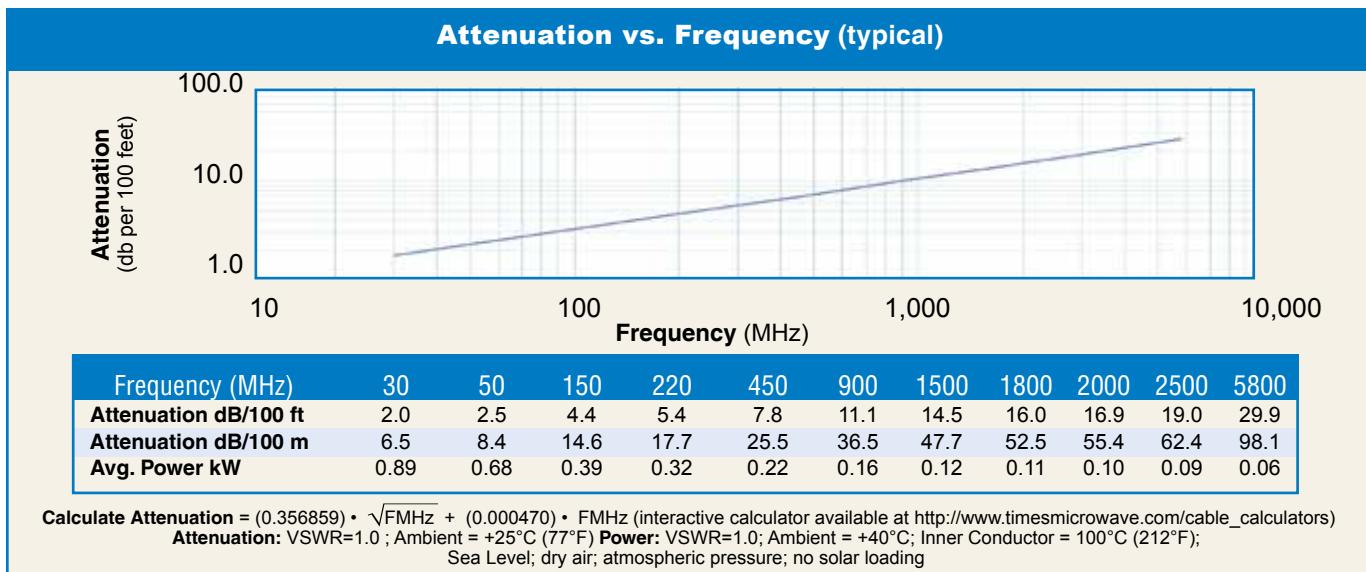
• **Cable Assemblies**: All LMR-195 cable types are available as pre-terminated cable assemblies. Refer to the section on FlexTech for further details.

Part Description					Stock
Part Number	Application	Jacket	Color	Code	
LMR-195	Outdoor	PE	Black	54110	
LMR-195-DB	Outdoor/Watertight	PE	Black	54113	
LMR-195-FR	Indoor/Outdoor Riser CMR	FRPE	Black	54111	
LMR-195-FR-W	Indoor/Outdoor Riser CMR	FRPE	White	54158	
LMR-195-FR-PVC	Indoor/Outdoor Riser CMR	FRPVC	Black	54105	
LMR-195-MA	Mobile Antennas	PVC	Black	54210	
LMR-195-PVC	General Purpose	PVC	Black	54215	
LMR-195-PVC-W	General Purpose	PVC	White	54199	

Construction Specifications			
Description	Material	In.	(mm)
Inner Conductor	Solid BC	0.037	(0.94)
Dielectric	Foam PE	0.110	(2.79)
Outer Conductor	Aluminum Tape	0.116	(2.95)
Overall Braid	Tinned Copper	0.139	(3.53)
Jacket	(see table above)	0.195	(4.95)

Mechanical Specifications				Electrical Specifications			
Performance Property	Units	US	(metric)	Performance Property	Units	US	(metric)
Bend Radius: installation	in. (mm)	0.5	(12.7)	Velocity of Propagation	%	76	
Bend Radius: repeated	in. (mm)	2.0	(50.8)	Dielectric Constant	NA	1.56	
Bending Moment	ft-lb (N-m)	0.2	(0.27)	Time Delay	nS/ft (nS/m)	1.27	(4.17)
Weight	lb/ft (kg/m)	0.021	(0.03)	Impedance	ohms	50	
Tensile Strength	lb (kg)	40	(18.2)	Capacitance	pF/ft (pF/m)	25.4	(83.3)
Flat Plate Crush	lb/in. (kg/mm)	15	(0.27)	Inductance	uH/ft (uH/m)	0.064	(0.21)

Environmental Specifications			
Performance Property	°F	°C	
Installation Temperature Range	-40/+185	-40/+85	
Storage Temperature Range	-94/+185	-70/+85	
Operating Temperature Range	-40/+185	-40/+85	



Connectors

Interface	Description	Part Number	Stock Code	VSWR** Freq. (GHz)	Coupling Nut	Inner Contact Attach	Outer Contact Attach	Finish* Body /Pin	Length in (mm)	Width in (mm)	Weight lb (g)
N male	Straight Plug	TC-195-NM	3190-1555	<1.25:1 (2.5)	Knurl	Solder	Crimp	S/G	1.5 (38.1)	0.75 (19.1)	0.073 (33.1)
N male	Right Angle	TC-195-NMH-RA-D	3190-2425	<1.35:1 (6)	Hex/Knurl	Solder	Crimp	A/G	1.3 (32.1)	1.19 (30.1)	0.083 (37.5)
SMA male	Straight Plug	TC-195-SM	3190-1553	<1.25:1 (2.5)	Hex	Solder	Crimp	SS/G	1.0 (25.4)	0.32 (8.1)	0.015 (6.8)
TNC male	Straight Plug	TC-195-TM	3190-1554	<1.25:1 (2.5)	Knurl	Solder	Crimp	S/G	1.4 (35.6)	0.59 (15.0)	0.045 (20.4)

* Finish metals: N=Nickel, S=Silver, G=Gold, SS=Stainless Steel, A=Alballoy **VSWR spec based on 3 foot cable with a connector pair

Install Tools

Type	Part Number	Stock Code	Description
Crimp Tool	CT-240/200/195/100	3190-667	Crimp tool for LMR-100,195, 200 and 240 connectors
Cutting Tool	CCT-01	3190-1544	Cable end flush cut tool
Deburr Tool	DBT-U	3192-001	Removes center conductor rough edges
Replacement Blade	RB-01	3190-1609	Replacement blade for cutting tool

