



PE-TC195 Series Phase Stable Test Cable SMA  
Male to SMA Female to 18 GHz ,RoHS

RF Cable Assemblies Technical Data Sheet

PE3TC0102

### Configuration

- Connector 1: SMA Male
- Connector 2: SMA Female
- Cable Type: PE-TC195

### Features

- Max Frequency 18 GHz
- Shielding Effectivity > 100 dB
- 70% Phase Velocity
- Triple Shielded
- FEP Jacket
- Phase and Amplitude stability with flexure
- Small Diameter Lighter weight lower profile for high density test applications
- Phase change with flexure +/-2° to 18 GHz
- Excellent for multi-port test equipment
- Very flexible and durable cable with a min bend radius of 1 inch
- Excellent VSWR and Insertion Loss
- Extra strain relief for extended connector body with booting enhance stability and longevity
- Each Serialized assembly come with matching Test data
- 5,000 mating cycles when properly matted
- IN STOCK and ready to ship

### Applications

- General Purpose
- Laboratory Use
- Automated RF Test Stations
- General Purpose Lab Testing
- High Connection Density Lab and Production testing

### Description

Pasternack's PE3TC0102 SMA male to SMA female cable using .80 coax is part of our full line of RF components available for same-day shipping. Pasternack's formable RF cable assemblies provide an alternative to costly pre-formed semi-rigid assemblies since they are hand formable. This Pasternack SMA to SMA cable assembly has a male to female gender configuration with 50 ohm formable PE-TC195 coax. The PE3TC0102 SMA male to SMA female cable assembly operates to 18 GHz. The triple shielding of this Pasternack cable assembly provides excellent shielding effectiveness of better than 100 dB. Pasternack's high performance PE-TC195 series Test Cables are designed to allow customers to perform repeatable accurate measurements. Because these cables are phase stable under flexure, +/- 2° at 18 GHz, they are an excellent option for testing where movement will occur during testing. The PE-TC195 test cables have low Insertion Loss and low VSWR in addition to having excellent phase stability properties. The rugged design provides for up to 5,000 matting cycles with proper care. The smaller diameter coax allows for high flexibility, lower profile and a lighter weight test cable. The PE-TC195 series test cables are an excellent choice for use in precision high density test environments

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

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [PE-TC195 Series Phase Stable Test Cable SMA Male to SMA Female to 18 GHz ,RoHS PE3TC0102](#)



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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		18	GHz
VSWR			1.25:1	
Velocity of Propagation		70		%
RF Shielding	100			dB
Capacitance		29.4 [96.46]		pF/ft [pF/m]
Phase Stability with Flexure		2		Degrees

**Specifications by Frequency**

Description	F1	F2	F3	F4	F5	Units
Frequency	3	12	18			GHz
Insertion Loss (Max.)	0.2	0.5	0.7			dB/ft
	0.72	1.71	2.23			dB/m
Power Handling (Max.)			70			W

**Mechanical Specifications**

**Cable Assembly**

**Cable**

Cable Type	PE-TC195
Impedance	50 Ohms
Inner Conductor Type	Solid
Inner Conductor Material and Plating	Copper, Silver
Dielectric Type	PTFE
Number of Shields	3
Shield Layer 1	Silver Plated Copper Braid
Shield Layer 2	Silver Plated Copper Tape
Shield Layer 3	Silver Plated Copper Braid
Jacket Material	FEP
Jacket Diameter	0.195 in [4.95 mm]
One Time Minimum Bend Radius	1 in [25.4 mm]

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**Connectors**

Description	Connector 1	Connector 2
Type	SMA Male	SMA Female
Impedance	50 Ohms	50 Ohms
Contact Material and Plating	Beryllium Copper, Gold	Beryllium Copper, Gold
Dielectric Type	PTFE	PTFE
Body Material and Plating	Passivated Stainless Steel	Passivated Stainless Steel
Coupling Nut Material and Plating	Passivated Stainless Steel	

**Environmental Specifications**

**Temperature**

Operating Range -65 to +125 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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**How to Order**

Part Number Configuration:

**PE3TC0102**

- **xx**

**uu**

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

Example: PE3TC0102-12 = 12 inches long cable  
PE3TC0102-100cm = 100 cm long cable

PE-TC195 Series Phase Stable Test Cable SMA Male to SMA Female to 18 GHz ,RoHS 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.

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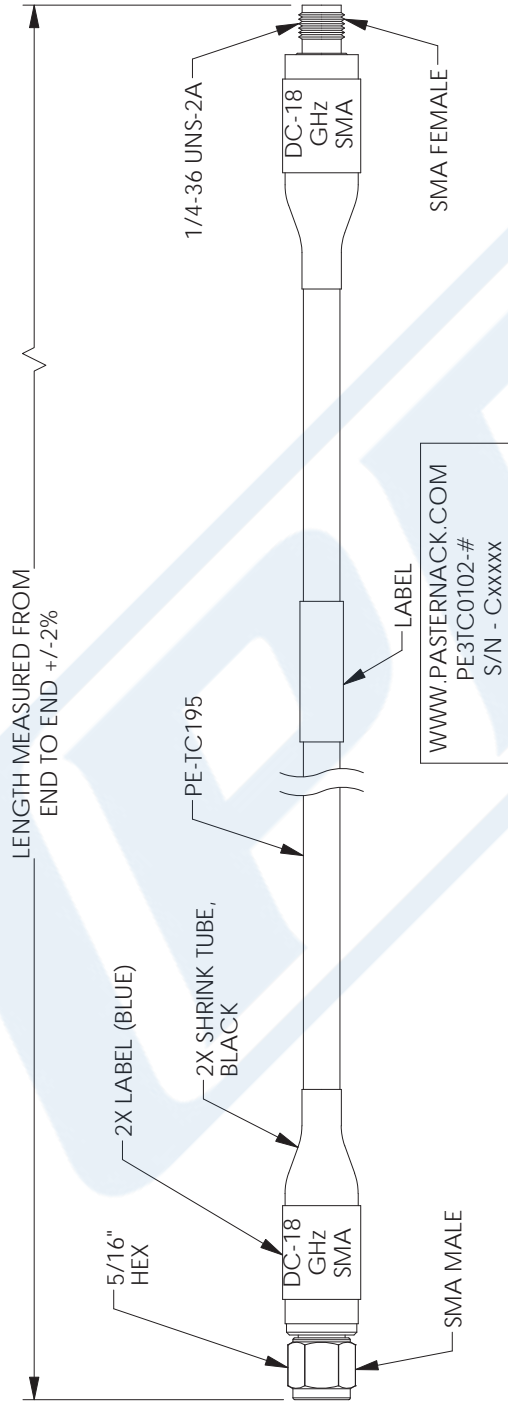
URL: <https://www.pasternack.com/sma-male-sma-female-.80-cable-assembly-pe3tc0102-p.aspx>

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.

# PE3TC0102 CAD Drawing

PE-TC195 Series Phase Stable Test Cable SMA Male to SMA Female to 18 GHz ,RoHS

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
B	INITIAL RELEASE	07/07/2021	SELLIS



WWW.PASTERNAK.COM  
PE3TC0102-#  
S/N - Cxxxxx

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

TOLERANCES:  
 X = +.2 [5.08]      FRACTIONS  
 .XX = +.02 [ .51]      +.132  
 .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.

THIRD-ANGLE PROJECTION

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SHEET 1 OF 1

SCALE N/A

REV B

ITEM NO. PE3TC0102

REV N/A

SIZE A

CAGE CODE 53919

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**PE PASTERNAK**  
an INFINITI brand

NOTE:  
1. DUST CAPS ARE INSTALLED PRIOR TO SHIPPING. (NOT SHOWN)

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