



PE-TC151 Series Phase Stable Test Cable SMA  
Male to SMA Male to 18 GHz ,RoHS

RF Cable Assemblies Technical Data Sheet

PE3TC0301

### Configuration

- Connector 1: SMA Male
- Connector 2: SMA Male
- Cable Type: PE-TC151

### Features

- Phase and Amplitude stability with flexure
- Small Diameter Lighter weight lower profile for high density test applications
- Phase change with flexure  $\pm 5^\circ$  to 18 GHz
- Excellent for multi-port test equipment
- Very flexible and durable cable with a min bend radius of 0.75 inches
- 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 mated
- IN STOCK and ready to ship

### Applications

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

### Description

Pasternack's high performance PE-TC151 series Test Cables are designed to allow customers to perform repeatable accurate measurements. Because these cables are phase stable under flexure,  $\pm 5^\circ$  at 18 GHz, they are an excellent option for testing where movement will occur during testing. The PE-TC151 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 mattings cycles with proper care. The smaller diameter coax allows for high flexibility, lower profile and a lighter weight test cable. The PE-TC151 series test cables are an excellent choice for use in precision high density test environments

### Electrical Specifications

| Description                  | Minimum | Typical      | Maximum | Units        |
|------------------------------|---------|--------------|---------|--------------|
| Frequency Range              | DC      |              | 18      | GHz          |
| VSWR                         |         |              | 1.3:1   |              |
| Velocity of Propagation      |         | 70           |         | %            |
| RF Shielding                 | 90      |              |         | dB           |
| Capacitance                  |         | 28.8 [94.49] |         | pF/ft [pF/m] |
| Phase Stability with Flexure |         | $\pm 5$      |         | Degrees      |

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [PE-TC151 Series Phase Stable Test Cable SMA Male to SMA Male to 18 GHz ,RoHS PE3TC0301](#)



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#### Specifications by Frequency

| Description           | F1     | F2     | F3     | F4 | F5 | Units  |
|-----------------------|--------|--------|--------|----|----|--------|
| Frequency             | 6      | 12     | 18     |    |    | GHz    |
| Insertion Loss (Max.) | 0.44   | 0.66   | 0.85   |    |    | dB/ft  |
|                       | [1.44] | [2.17] | [2.79] |    |    | [dB/m] |
| VSWR (Max.)           | 1.3:1  | 1.3:1  | 1.3:1  |    |    |        |
| Power Handling (Max.) | 55     | 29     | 20     |    |    | Watts  |

#### Mechanical Specifications

##### Cable Assembly

One Time Minimum Bend Radius 0.75 in [19.05 mm]

##### Cable

Cable Type PE-TC151  
 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 Polyurethane  
 Jacket Diameter 0.151 in [3.84 mm]

##### Connectors

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

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**Environmental Specifications**

**Temperature**

Operating Range

-65 to +90 deg C

**Compliance Certifications** (visit [www.Pasternack.com](http://www.Pasternack.com) for current document)

RoHS Compliant

Yes

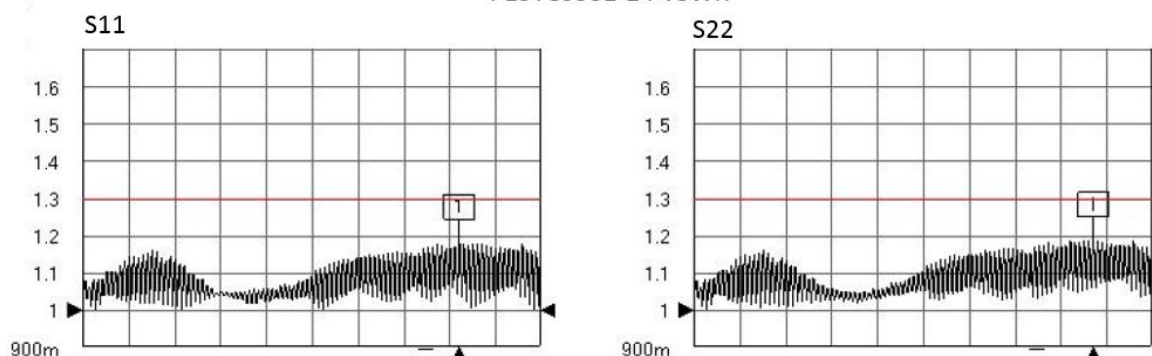
**Plotted and Other Data**

Notes:

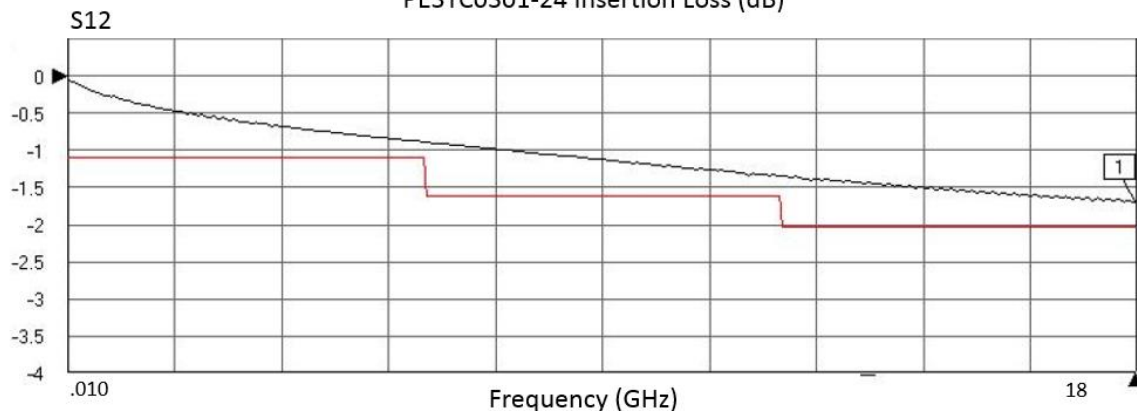
- Values at 25°C, sea level.

**Typical Performance Data**

PE3TC0301-24 VSWR



PE3TC0301-24 Insertion Loss (dB)



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**How to Order**

Part Number Configuration:

**PE3TC0301**

- **xx**

**uu**

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

Example: PE3TC0301-12 = 12 inches long cable  
PE3TC0301-100cm = 100 cm long cable

PE-TC151 Series Phase Stable Test Cable SMA Male to SMA Male 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% availability and are part of the broadest selection in the industry.

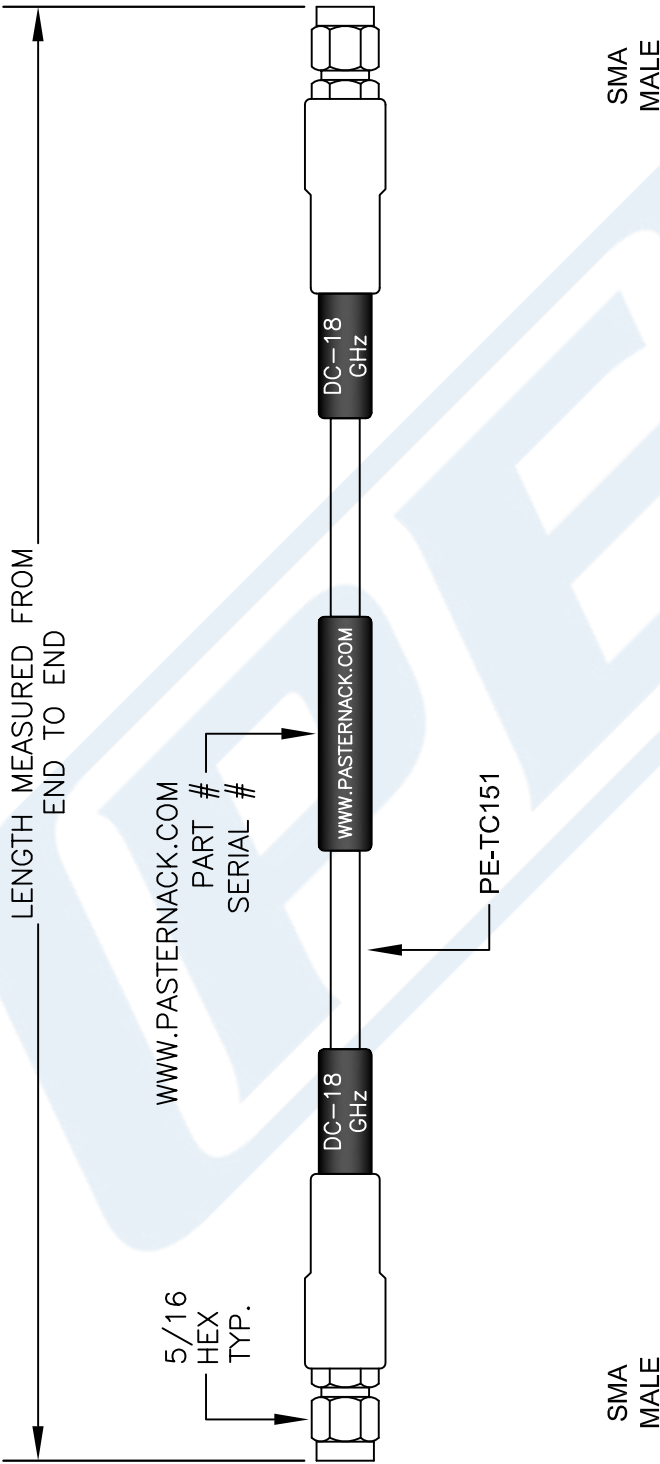
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [PE-TC151 Series Phase Stable Test Cable SMA Male to SMA Male to 18 GHz ,RoHS PE3TC0301](http://www.pasternack.com/sma-male-sma-male-.90-cable-assembly-pe3tc0301-p.aspx)

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PE3TC0301 CAD Drawing

PE-TC151 Series Phase Stable Test Cable SMA Male to SMA Male to 18 GHz ,RoHS



- 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. LENGTH TOLERANCE IS  $\pm 2\%$

DWG TITLE

**PE3TC0301**

FSCM NO. 53919

CAD FILE 072215

SCALE N/A

SIZE A

2233

**PE PASTERNAK**  
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