



## SMA Male to SMA Female Cable Using PE-SR047AL Coax

### RF Cable Assemblies Technical Data Sheet

**PE3C6781**

#### Configuration

- Connector 1: SMA Male
- Connector 2: SMA Female
- Cable Type: PE-SR047AL

#### Features

- Max Frequency 18 GHz
- Shielding Effectivity > 90 dB
- 69.5% Phase Velocity

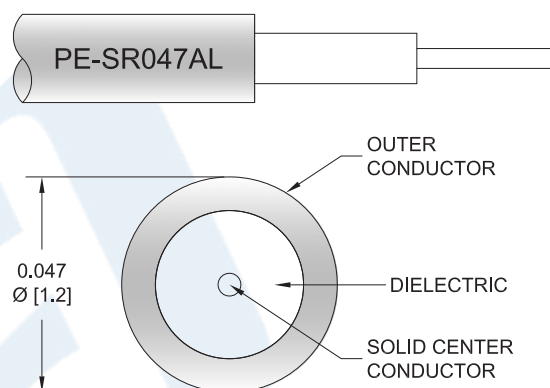
#### Applications

- General Purpose
- Laboratory Use

#### Description

Pasternack's PE3C6781 SMA male to SMA female cable using PE-SR047AL coax is part of our full line of RF components available for same-day shipping. Pasternack's semi-rigid RF cable assemblies are ideal for high performance applications and can be formed, using proper tooling, to the routing pattern required. This Pasternack SMA to SMA cable assembly has a male to female gender configuration with 50 ohm semi-rigid PE-SR047AL coax. The PE3C6781 SMA male to SMA female cable assembly operates to 18 GHz.

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 SMA Female Cable Using PE-SR047AL Coax PE3C6781](#)



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#### Electrical Specifications

| Description             | Minimum | Typical | Maximum | Units |
|-------------------------|---------|---------|---------|-------|
| Frequency Range         | DC      |         | 18      | GHz   |
| VSWR                    |         |         | 1.4:1   |       |
| Velocity of Propagation |         | 69.5    |         | %     |
| RF Shielding            | 90      |         |         | dB    |

#### Specifications by Frequency

| Description           | F1   | F2    | F3    | F4    | F5   | Units |
|-----------------------|------|-------|-------|-------|------|-------|
| Frequency             | 1    | 2     | 4.5   | 9     | 18   | GHz   |
| Insertion Loss (Typ.) | 0.41 | 0.508 | 0.756 | 1.201 | 1.78 | dB/ft |
|                       | 1.35 | 1.67  | 2.48  | 3.94  | 5.84 | dB/m  |

#### Electrical Specification Notes:

Insertion Loss does not include the loss of the connectors. Insertion Loss is estimated as 0.1 dB for the SMA female connector and  $0.05 \times \sqrt{f(\text{GHz})}$  dB for the SMA male connector.

#### Mechanical Specifications

##### Cable Assembly

Weight 0.021 lbs [9.53 g]

##### Cable

Cable Type PE-SR047AL  
 Impedance 50 Ohms  
 Inner Conductor Type Solid  
 Inner Conductor Material and Plating Copper Clad Steel, Silver  
 Dielectric Type PTFE  
 Number of Shields 1  
 Outer Conductor Material and Plating Tinned Aluminum  
 Repeated Minimum Bend Radius 0.05 in [1.27 mm]

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#### Connectors

| Description                        | Connector 1                        | Connector 2            |
|------------------------------------|------------------------------------|------------------------|
| Type                               | SMA Male                           | SMA Female             |
| Specification                      |                                    | MIL-STD-348            |
| Impedance                          | 50 Ohms                            | 50 Ohms                |
| Mating Cycles                      | 500                                |                        |
| Contact Material and Plating       | Beryllium Copper, Gold over Nickel | Beryllium Copper, Gold |
| Contact Plating Specification      | MIL-G-45204                        | MIL-G-45204            |
| Dielectric Type                    | PTFE                               | PTFE                   |
| Body Material and Plating          | Brass, Gold                        | Brass, Gold            |
| Body Plating Specification         | MIL-G-45204                        | MIL-G-45204            |
| Coupling Nut Material and Plating  | Passivated Stainless Steel         |                        |
| Coupling Nut Plating Specification | ASTM-A380                          |                        |
| Hex Size                           | 5/16 inch                          |                        |
| Torque                             | 8 in-lbs [0.9 Nm]                  |                        |

#### Environmental Specifications

##### Temperature

Operating Range -55 to +100 deg C

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

#### Plotted and Other Data

Notes:

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 SMA Female Cable Using PE-SR047AL Coax PE3C6781](#)



## SMA Male to SMA Female Cable Using PE-SR047AL Coax

### RF Cable Assemblies Technical Data Sheet

**PE3C6781**

#### How to Order

Part Number Configuration:

**PE3C6781**

- **xx**

**uu**

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

Example: PE3C6781-12 = 12 inches long cable  
PE3C6781-100cm = 100 cm long cable

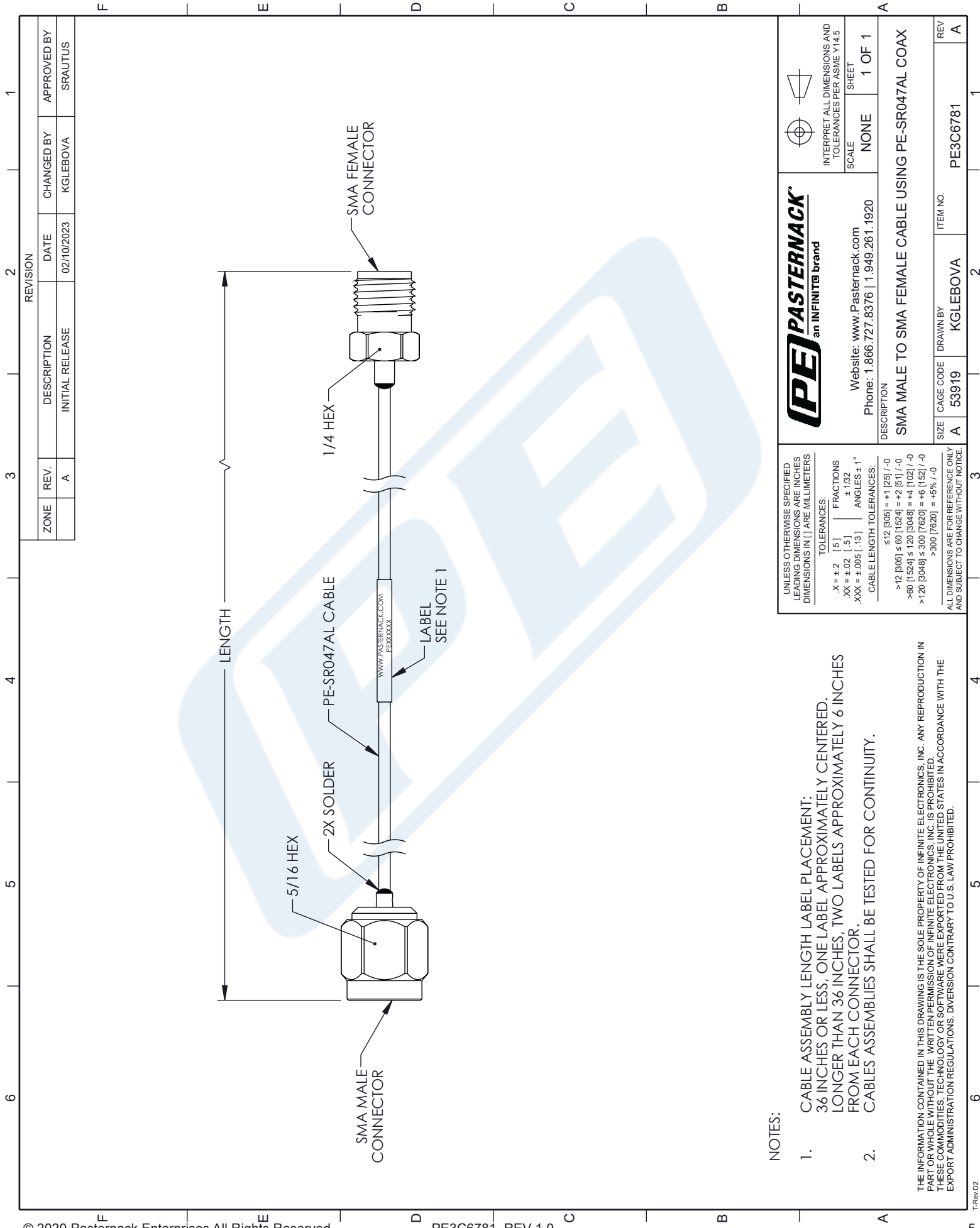
SMA Male to SMA Female Cable Using PE-SR047AL Coax from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99.4% availability and are part of the broadest selection in the industry.

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 SMA Female Cable Using PE-SR047AL Coax PE3C6781](#)

URL: <https://www.pasternack.com/sma-male-to-sma-female-cable-using-pe-sr047al-pe3c6781-p.aspx>

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PE3C6781 CAD Drawing  
SMA Male to SMA Female Cable Using PE-SR047AL Coax



NOTES:

- 1. 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.
- 2. CABLES ASSEMBLIES SHALL BE TESTED FOR CONTINUITY.

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

TOLERANCES:

|              |       |             |
|--------------|-------|-------------|
| X = ±.2      | [.5]  | FRACTIONS   |
| .XX = ±.02   | [.5]  | ±.1/32      |
| .XXX = ±.005 | [.13] | ANGLES ± 1° |

CABLE LENGTH TOLERANCES:

|             |              |                |
|-------------|--------------|----------------|
| ≤12 [305]   | ±.1 [25]     | / -0           |
| >12 [305]   | ≤.60 [1524]  | ±.2 [51] / -0  |
| >60 [1524]  | ≤1.20 [3048] | ±.4 [102] / -0 |
| >120 [3048] | ≤3.00 [7620] | ±.6 [152] / -0 |
| >300 [7620] | ±.5% / -0    |                |

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Phone: 1.866.727.8376 | 1.949.261.1920

INTERPRET ALL DIMENSIONS AND TOLERANCES PER ASME Y14.5

SCALE: NONE

SHEET: 1 OF 1

DESCRIPTION  
**SMA MALE TO SMA FEMALE CABLE USING PE-SR047AL COAX**

|      |           |          |          |     |
|------|-----------|----------|----------|-----|
| SIZE | CAGE CODE | DRAWN BY | ITEM NO. | REV |
| A    | 53919     | KGLEBOVA | PE3C6781 | A   |