



MCX Plug Right Angle to SMA Male Right Angle Cable  
100 cm Length Using RG174 Coax with HeatShrink

**RF Cable Assemblies Technical Data Sheet**

**PE33831/HS-100CM**

**Configuration**

- Connector 1: MCX Plug Right Angle
- Connector 2: SMA Male Right Angle
- Cable Type: RG174

**Features**

- Max Frequency 1 GHz
- 66% Phase Velocity
- PVC Jacket

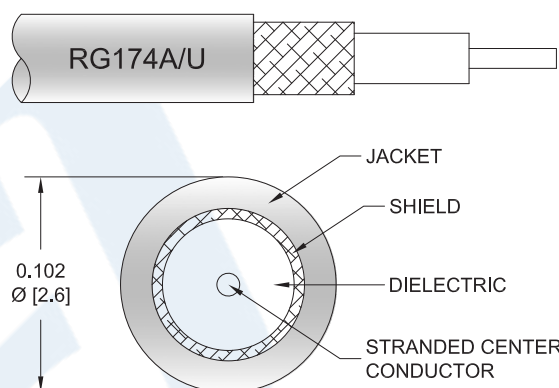
**Applications**

- General Purpose
- Laboratory Use

**Description**

Pasternack's PE33831/HS-100CM MCX plug right angle to SMA male right angle 100 cm cable using RG174 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 MCX to SMA cable assembly has a plug to male gender configuration with 50 ohm flexible RG174 coax. The PE33831/HS-100CM MCX plug to SMA male cable assembly operates to 1 GHz. The right angle MCX and right angle SMA interfaces on the RG174 cable allow for easier connections in tight spaces.

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: [MCX Plug Right Angle to SMA Male Right Angle Cable 100 cm Length Using RG174 Coax with HeatShrink PE33831/HS-100CM](#)



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#### Electrical Specifications

| Description             | Minimum | Typical        | Maximum | Units        |
|-------------------------|---------|----------------|---------|--------------|
| Frequency Range         | DC      |                | 1,000   | MHz          |
| VSWR                    |         |                | 1.45:1  |              |
| Velocity of Propagation |         | 66             |         | %            |
| Capacitance             |         | 31.08 [101.97] |         | pF/ft [pF/m] |

#### Specifications by Frequency

| Description           | F1   | F2   | F3  | F4    | F5 | Units |
|-----------------------|------|------|-----|-------|----|-------|
| Frequency             | 100  | 250  | 500 | 1,000 |    | MHz   |
| Insertion Loss (Max.) | 0.68 | 0.85 | 1.1 | 1.45  |    | dB    |

#### Electrical Specification Notes:

The Insertion Loss data above is based on the performance specifications of the coax used in this assembly. Insertion Loss is estimated as 0.2 dB per connector.

#### Mechanical Specifications

##### Cable Assembly

|          |                   |
|----------|-------------------|
| Length*  | 39.37 in [100 cm] |
| Diameter | 0.315 in [8 mm]   |

##### Cable

|                                      |                     |
|--------------------------------------|---------------------|
| Cable Type                           | RG174               |
| Impedance                            | 50 Ohms             |
| Inner Conductor Type                 | Stranded            |
| Inner Conductor Material and Plating | Copper Clad Steel   |
| Dielectric Type                      | PE                  |
| Number of Shields                    | 1                   |
| Shield Layer 1                       | Tinned Copper Braid |
| Jacket Material                      | PVC, Black          |
| Jacket Diameter                      | 0.11 in [2.79 mm]   |

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### Connectors

| Description                        | Connector 1          | Connector 2          |
|------------------------------------|----------------------|----------------------|
| Type                               | MCX Plug Right Angle | SMA Male Right Angle |
| Specification                      | CECC 22220           | MIL-STD-348A         |
| Impedance                          | 50 Ohms              | 50 Ohms              |
| Contact Material and Plating       | Brass, Gold          | Brass, Gold          |
| Contact Plating Specification      | 30 µin minimum       | 50 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        |
| Coupling Nut Plating Specification |                      | 100 µin minimum      |
| Hex Size                           |                      | 5/16 inch            |
| Torque                             |                      | 3 in-lbs [0.34 Nm]   |

### Environmental Specifications

#### Temperature

Operating Range

-40 to +60 deg C

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

### Plotted and Other Data

Notes:

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**PE33831/HS-100CM**

#### How to Order

Part Number Configuration:

**PE33831/HS - xx**

**uu**

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

Example: PE33831/HS-12 = 12 inches long cable  
PE33831/HS-100cm = 100 cm long cable

MCX Plug Right Angle to SMA Male Right Angle Cable 100 cm Length Using RG174 Coax with HeatShrink 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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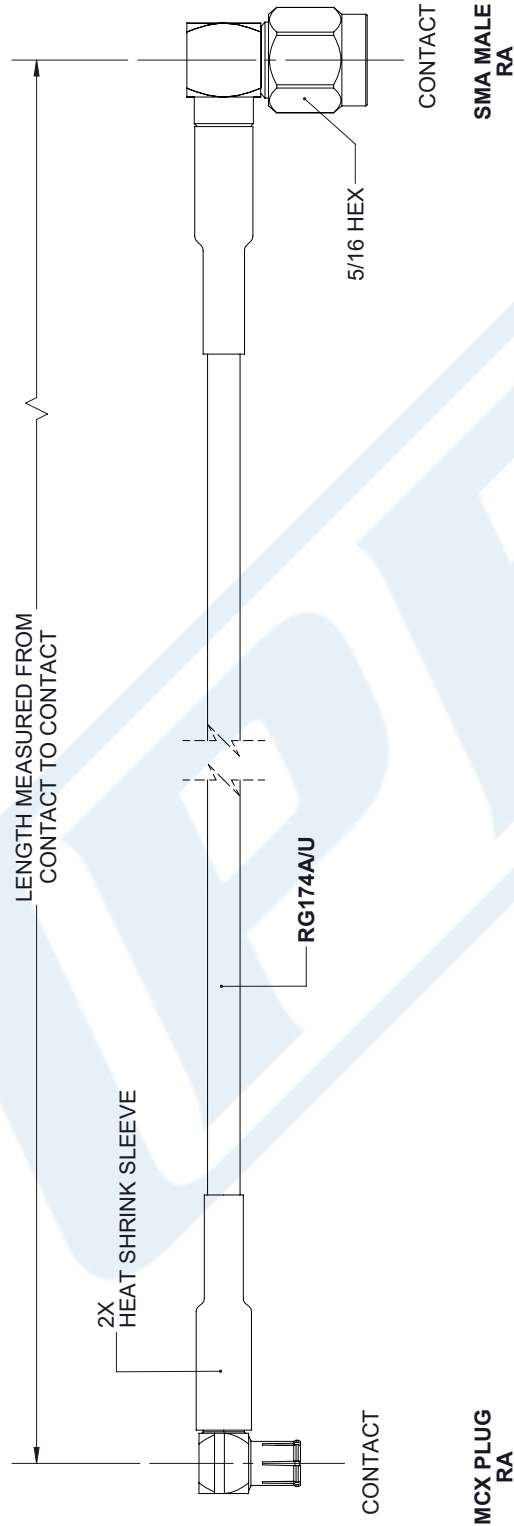
URL:

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.

# PE33831/HS-100CM CAD Drawing

MCX Plug Right Angle to SMA Male Right Angle Cable 100 cm

Length Using RG174 Coax with HeatShrink



## REVISIONS

| REV. | DESCRIPTION     | DATE      | APPROVED |
|------|-----------------|-----------|----------|
| A    | INITIAL RELEASE | 8/24/2020 | S.ELLIS  |

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

### TOLERANCES:

.X = ± .2 [ .08 ] FRACTIONS  
.XX = ± .02 [ .51 ] ± 1/32  
.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% L / -0

ALL DIMENSIONS SHOWN  
ARE FOR REFERENCE ONLY.



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SHEET 1 OF 1

SCALE N/A

REV A



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ITEM NO. PE33831/HS

SIZE A

CAGE CODE 53919

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