

## Low Loss SMA Male Right Angle to SMA Male Right Angle Cable Assembly using LMR-240-UF Coax With Times Microwave Components with HeatShrink



### LCCA9933

#### Configuration

- Connector 1: SMA Male Right Angle
- Connector 2: SMA Male Right Angle
- Cable Type: LMR-240-UF
- Coax Flex Type: Flexible

#### Description

L-com's LCCA9933 is a low loss SMA male right angle to SMA male right angle cable assembly using LMR-240-UF coax with Times Microwave components with heatshrink and ships same-day. The LMR-240-UF coax of this SMA cable uses the PE (F) dielectric with a VoP of 84%, resulting in very low insertion loss compared to solid dielectrics. These flexible RF cable assemblies are ideal for applications where flexure is required. Our L-com SMA to SMA cable assembly has a male to male gender configuration with flexible LMR-240-UF series coax and operates to 3 GHz. The double shield of this SMA cable is layered by tinned copper braid over aluminum tape providing shielding effectiveness greater than 90dB. This right angle SMA cable interface on the LMR-240-UF coax allows for easier connections in tight spaces.

Custom versions of this SMA male to SMA male cable, along with the rest of L-com's other RF assemblies, can also be built and shipped same day. Other available RF cable assembly value added services from L-com 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. Contact a sales representative for testing or custom RF cable quotes. Part number LCCA9933 L-com Low Loss SMA Male Right Angle to SMA Male Right Angle Cable Assembly using LMR-240-UF Coax With Times Microwave Components with HeatShrink data sheet PDF includes details of the RF product specifications, CAD drawing(s) and dimensions below.

#### Electrical Specifications

| Description                          | Minimum | Typical      | Maximum | Units                 |
|--------------------------------------|---------|--------------|---------|-----------------------|
| Frequency Range                      | DC      |              | 3       | GHz                   |
| VSWR                                 |         |              | 1.5:1   |                       |
| Velocity of Propagation              |         | 84           |         | %                     |
| RF Shielding                         | 90      |              |         | dB                    |
| Group Delay                          |         | 1.21 [3.97]  |         | ns/ft [ns/m]          |
| Capacitance                          |         | 24.2 [79.4]  |         | pF/ft [pF/m]          |
| Inductance                           |         | 0.06 [0.2]   |         | uH/ft [uH/m]          |
| DC Resistance Inner Conductor        |         | 4.28 [14.04] |         | Ohms/1000ft [Ohms/Km] |
| DC Resistance Outer Conductor        |         | 3.89 [12.76] |         | Ohms/1000ft [Ohms/Km] |
| Dielectric Withstanding Voltage (DC) |         |              | 1,500   | Vdc                   |
| Jacket Spark                         |         |              | 5,000   | Vrms                  |
| Input Power (Peak)                   |         |              | 5.6     | KWatts                |

#### Specifications by Frequency

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| Part Number   | Length                   | Description           | F1    | F2    | F3    | F4    | F5    | Units | Weight (lbs) |
|---------------|--------------------------|-----------------------|-------|-------|-------|-------|-------|-------|--------------|
|               |                          | Frequency             | 100   | 250   | 500   | 1000  | 3000  | MHz   |              |
| LCCA9933      | Custom Lengths Available | Insertion Loss (Typ.) | 0.028 | 0.046 | 0.066 | 0.095 | 0.168 | dB/ft |              |
|               |                          |                       | 0.1   | 0.16  | 0.22  | 0.32  | 0.56  | dB/m  |              |
| LCCA9933-FT1  | 12 inch                  | Insertion Loss (Typ.) | 0.43  | 0.45  | 0.47  | 0.5   | 0.57  | dB    | 0.068        |
| LCCA9933-FT2  | 24 inch                  | Insertion Loss (Typ.) | 0.46  | 0.5   | 0.54  | 0.59  | 0.74  | dB    | 0.101        |
| LCCA9933-FT3  | 36 inch                  | Insertion Loss (Typ.) | 0.49  | 0.54  | 0.6   | 0.69  | 0.91  | dB    | 0.133        |
| LCCA9933-FT5  | 60 inch                  | Insertion Loss (Typ.) | 0.54  | 0.63  | 0.73  | 0.88  | 1.24  | dB    | 0.197        |
| LCCA9933-FT25 | 300 inch                 | Insertion Loss (Typ.) | 1.1   | 1.55  | 2.05  | 2.78  | 4.6   | dB    | 0.837        |

The insertion loss data for the base model does not include loss due to the connectors. Each length includes insertion loss due to the connectors.

|                             |                |
|-----------------------------|----------------|
| Loss due to Connector 1:    | 0.2 dB         |
| Loss due to Connector 2:    | 0.2 dB         |
| Base Weight:                | 0.068 pounds   |
| Additional Weight per Inch: | 0.00267 pounds |

Electrical Specification Notes:  
Values at 25°C, sea level.

**Mechanical Specifications**

**Cable Assembly**

|                |                   |
|----------------|-------------------|
| Width/Diameter | 0.5 in [12.7 mm]  |
| Weight         | 0.14 lbs [63.5 g] |

**Cable**

|                                      |                        |
|--------------------------------------|------------------------|
| Cable Type                           | LMR-240-UF             |
| Impedance                            | 50 Ohms                |
| Inner Conductor Type                 | Stranded               |
| Inner Conductor Material and Plating | Copper                 |
| Dielectric Type                      | PE (F)                 |
| Number of Shields                    | 2                      |
| Shield Layer 1                       | Aluminum Tape          |
| Shield Layer 2                       | Tinned Copper Braid    |
| Jacket Material                      | TPE                    |
| Jacket Diameter                      | 0.24 in [6.1 mm]       |
| One Time Minimum Bend Radius         | 0.75 in [19.05 mm]     |
| Repeated Minimum Bend Radius         | 2.5 in [63.5 mm]       |
| Bending Moment                       | 0.13 lbs-ft [0.18 N-m] |

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### Connectors

| Description                  | Connector 1                 | Connector 2                 |
|------------------------------|-----------------------------|-----------------------------|
| Type                         | SMA Male Right Angle        | SMA Male Right Angle        |
| Impedance                    | 50 Ohms                     | 50 Ohms                     |
| Configuration                | Right Angle                 | Right Angle                 |
| Contact Material and Plating | Brass, Gold                 | Brass, Gold                 |
| Dielectric Type              | PTFE                        | PTFE                        |
| Body Material and Plating    | Stainless Steel, Passivated | Stainless Steel, Passivated |

### Environmental Specifications

Operating Range Temperature -40 to +85 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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### LCCA9933

#### Typical Performance Data

#### How to Order

Part Number Configuration:

**LCCA9933**

**- xx**

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

Example: LCCA9933-12 = 12 inches long cable  
LCCA9933-100cm = 100 cm long cable

Low Loss SMA Male Right Angle to SMA Male Right Angle Cable Assembly using LMR-240-UF Coax With Times Microwave Components with HeatShrink from L-com has same day shipment for domestic and International orders. Our portfolio includes coaxial cable assemblies, connectors, adapters and custom products as well as lightning and surge protectors, NEMA rated enclosures, and an RF product line which includes antennas, amplifiers, passive, and active components.

URL: <https://www.l-com.com/sma-male-sma-male-cable-assembly-invalid-lcca9933-p.aspx>

The information contained within 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. L-com reserves the right to make such changes as required. Unless otherwise stated, all specifications are nominal. L-com does not make any representation or warranty regarding the suitability of the part described herein for any particular purpose, and L-com does not assume liability arising out of the use of any part or document.

LCCA9933 CAD Drawing

Low Loss SMA Male Right Angle to SMA Male Right Angle Cable Assembly using LMR-240-UF Coax With Times Microwave Components with HeatShrink

