

Low Loss RA MCX Plug to SMA Male Cable LMR-100 Coax

FMCA10033



Configuration

- Connector 1: MCX Plug Right Angle
- Connector 2: SMA Male
- Cable Type: LMR-100A
- Coax Flex Type: Flexible

Features

- Max Frequency 3 GHz
- Shielding Effectivity > 90 dB
- 66% Phase Velocity
- Double Shielded
- PVC Jacket

Applications

- General Purpose
- Laboratory Use

Description

The RA MCX plug to SMA male cable using LMR-100 coax, part number FMCA10033, from Fairview Microwave is in-stock and ships same day. This Fairview MCX to SMA cable assembly has a plug to male gender configuration with 50 ohm flexible LMR-100A coax. Fairview Microwave's flexible RF cable assemblies are ideal for applications where tight bends and continual flexure are required. The FMCA10033 MCX plug to SMA male cable assembly operates to 3 GHz. The right angle MCX interface on the LMR-100A cable allows for easier connections in tight spaces. The double shielding of this Fairview cable assembly provides excellent shielding effectiveness of better than 90 dB.

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 RF cable assembly value added services including connector orientation or clocking, heat shrink booting and labeling are also available. 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 | | 3 | GHz |
| VSWR | | | 1.4:1 | |
| Velocity of Propagation | | 66 | | % |
| RF Shielding | 90 | | | dB |
| Group Delay | | 1.54 [5.05] | | ns/ft [ns/m] |
| Capacitance | | 30.8 [101.05] | | pF/ft [pF/m] |
| Inductance | | 0.077 [0.25] | | uH/ft [uH/m] |
| DC Resistance Inner Conductor | | 81 [265.75] | | Ohms/1000ft [Ohms/Km] |
| DC Resistance Outer Conductor | | 9.5 [31.17] | | Ohms/1000ft [Ohms/Km] |
| Jacket Spark | | | 2,000 | Vrms |

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 | |
| FMCA10033 | Custom Lengths Available | Insertion Loss (Typ.) | 0.06 | 0.12 | 0.17 | 0.24 | 0.43 | dB/ft | |
| | | | 0.21 | 0.38 | 0.55 | 0.79 | 1.42 | dB/m | |
| FMCA10033-24 | 24 Inch | Insertion Loss (Typ.) | 0.58 | 0.68 | 0.78 | 0.93 | 1.32 | dB | 0.033 |
| FMCA10033-36 | 36 Inch | Insertion Loss (Typ.) | 0.65 | 0.8 | 0.95 | 1.17 | 1.75 | dB | 0.042 |
| FMCA10033-48 | 48 Inch | Insertion Loss (Typ.) | 0.71 | 0.91 | 1.11 | 1.41 | 2.18 | dB | 0.051 |
| FMCA10033-100CM | 100 CM | Insertion Loss (Typ.) | 0.66 | 0.83 | 1 | 1.24 | 1.87 | dB | 0.045 |
| FMCA10033-200CM | 200 CM | Insertion Loss (Typ.) | 0.87 | 1.21 | 1.54 | 2.03 | 3.29 | dB | 0.074 |

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: | 0.25 dB |
| Base Weight: | 0.024 pounds |
| Additional Weight per Inch: | 0.07833 pounds |

Mechanical Specifications

Cable Assembly

| | |
|----------------|---------------------|
| Width/Diameter | 0.5 in [12.7 mm] |
| Weight | 0.024 lbs [10.89 g] |

Cable

| | |
|--------------------------------------|------------------------|
| Cable Type | LMR-100A |
| Impedance | 50 Ohms |
| Inner Conductor Type | Solid |
| Inner Conductor Material and Plating | Copper Clad Steel |
| Dielectric Type | PE |
| Number of Shields | 2 |
| Shield Layer 1 | Aluminum Tape |
| Shield Layer 2 | Tinned Copper Braid |
| Jacket Material | PVC, Black |
| Jacket Diameter | 0.11 in [2.79 mm] |
| One Time Minimum Bend Radius | 0.25 in [6.35 mm] |
| Repeated Minimum Bend Radius | 1 in [25.4 mm] |
| Bending Moment | 0.1 lbs-ft [0.14 N-m] |
| Flat Plate Crush | 10 lbs/in [0.18 Kg/mm] |
| Tensile Strength | 15 lbs [6.8 Kg] |

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Connectors

| Description | Connector 1 | Connector 2 |
|------------------------------------|----------------------|------------------|
| Type | MCX Plug Right Angle | SMA Male |
| Specification | CECC 22220 | |
| Impedance | 50 Ohms | 50 Ohms |
| Configuration | Right Angle | Straight |
| Contact Material and Plating | Brass, Gold | Brass, Gold |
| Contact Plating Specification | 30 µin minimum | 15 µin minimum |
| Dielectric Type | PTFE | PTFE |
| Body Material and Plating | Brass, Nickel | Brass, Nickel |
| Body Plating Specification | 100 µin minimum | 200 µin minimum |
| Coupling Nut Material and Plating | | Brass, Nickel |
| Coupling Nut Plating Specification | | 200 µin minimum |
| Torque | | 7 in-lbs 0.79 Nm |

Environmental Specifications

Operating Range Temperature -40 to +60 deg C

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

Plotted and Other Data

Notes:

Low Loss RA MCX Plug to SMA Male Cable LMR-100 Coax



FMCA10033

Typical Performance Data

How to Order

Part Number Configuration:

FMCA10033

- xx

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Unit of Measure:
cm = Centimeters
<blank> = Inches

Length

Base Number

Example: FMCA10033-12 = 12 inches long cable
FMCA10033-100cm = 100 cm long cable

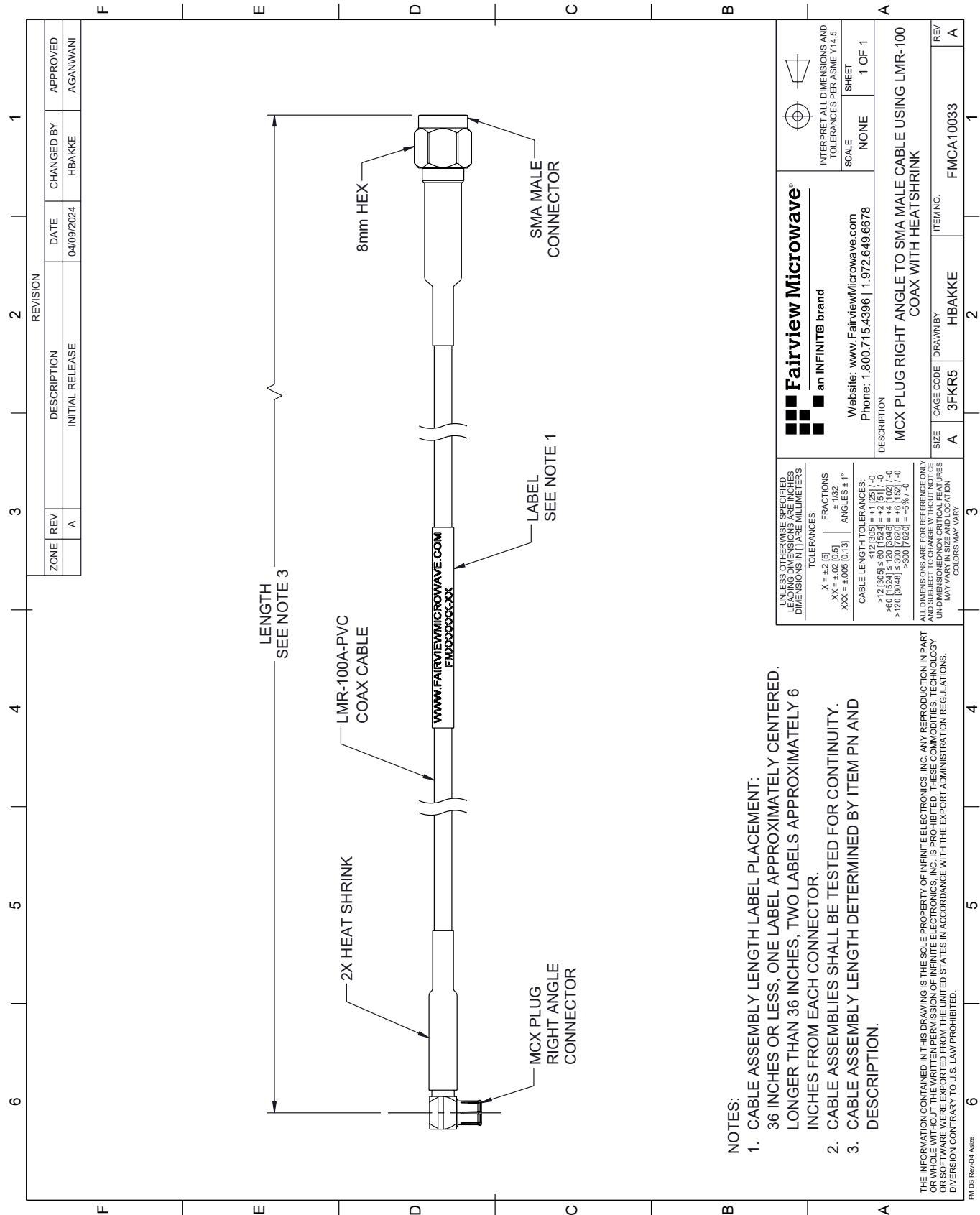
Low Loss RA MCX Plug to SMA Male Cable LMR-100 Coax from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Lewisville, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [Low Loss RA MCX Plug to SMA Male Cable LMR-100 Coax FMCA10033](#)

URL: <https://www.fairviewmicrowave.com/low-loss-ra-mcx-plug-to-sma-male-cable-lmr-100-coax-fmca10033-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. Fairview Microwave reserves the right to make such changes as required. Unless otherwise stated, all specifications are nominal. Fairview Microwave does not make any representation or warranty regarding the suitability of the part described herein for any particular purpose, and Fairview Microwave does not assume liability arising out of the use of any part or document.

FMCA10033 CAD Drawing
Low Loss RA MCX Plug to SMA Male Cable LMR-100 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. CABLE ASSEMBLIES SHALL BE TESTED FOR CONTINUITY.
 - 3. CABLE ASSEMBLY LENGTH DETERMINED BY ITEM PN AND DESCRIPTION.

| | | | | | |
|---|--|--|--|--|--|
| UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN INCHES. DIMENSIONS IN [] ARE IN MILLIMETERS. | | Fairview Microwave® an INFINITI® brand | | INTERPRET ALL DIMENSIONS AND TOLERANCES PER ASME Y14.5 | |
| TOLERANCES: | | Website: www.FairviewMicrowave.com Phone: 1.800.715.4396 1.972.649.6678 | | SCALE NONE | |
| X = ±.2 [5] .XX = ±.02 [0.5] .XXX = ±.005 [0.13] | | FRACTIONS ± 1/32 ANGLES ± 1° | | SHEET 1 OF 1 | |
| CABLE LENGTH TOLERANCES: | | DESCRIPTION MCX PLUG RIGHT ANGLE TO SMA MALE CABLE USING LMR-100 COAX WITH HEATSHRINK | | | |
| >12 [305] ≤ 60 [1524] = ±.125 [-.0] | | SIZE A | | ITEM NO. FMCA10033 | |
| >60 [1524] ≤ 120 [3048] = ±.125 [-.0] | | CAGE CODE 3FKR5 | | DRAWN BY HBAKKE | |
| >120 [3048] ≤ 300 [7620] = ±.125 [-.0] | | ALL DIMENSIONS ARE FOR REFERENCE ONLY. UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE UNLESS OTHERWISE SPECIFIED. DIMENSIONS MAY VARY IN SIZE AND LOCATION. COLORS MAY VARY. | | REV A | |