

## Low Loss SMA Male to SMA Female Bulkhead Cable LMR-195 Coax in 50 CM

The SMA male to SMA female bulkhead cable using LMR-195 coax, part number FMC00117-50CM, from Fairview Microwave is in-stock and ships same day. This Fairview SMA to SMA cable assembly has a male to female gender configuration with 50 ohm flexible LMR-195 coax. Fairview Microwave's flexible RF cable assemblies are ideal for applications where tight bends and continual flexure are required. The FMC00117-50CM SMA male to SMA female cable assembly operates to 5.8 GHz. Our RF cable assembly with SMA bulkhead interface allows designers to create external connections on their product enclosures, and can be used in a variety of other rack mount and panel mount applications. 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                   | Min | Typ          | Max   | Units                            |
|-------------------------------|-----|--------------|-------|----------------------------------|
| Frequency Range               | DC  |              | 5.8   | GHz                              |
| VSWR                          |     |              | 1.4:1 |                                  |
| Velocity of Propagation       |     | 80           |       | %                                |
| RF Shielding                  | 90  |              |       | dB                               |
| Group Delay                   |     | 1.27 [4.17]  |       | ns/ft [ns/m]                     |
| Capacitance                   |     | 25.4 [83.33] |       | pF/ft [pF/m]                     |
| Inductance                    |     | 0.064 [0.21] |       | uH/ft [uH/m]                     |
| DC Resistance Inner Conductor |     | 7.6 [24.93]  |       | $\Omega$ /1000ft [ $\Omega$ /Km] |
| DC Resistance Outer Conductor |     | 4.9 [16.08]  |       | $\Omega$ /1000ft [ $\Omega$ /Km] |
| Jacket Spark                  |     |              | 3,000 | Vrms                             |

### Performance by Frequency

| Description           | F1   | F2   | F3   | F4   | F5   | Units |
|-----------------------|------|------|------|------|------|-------|
| Frequency             | 0.25 | 0.5  | 1    | 2.5  | 5.8  | GHz   |
| Insertion Loss (Typ.) | 0.29 | 0.33 | 0.39 | 0.51 | 0.69 | dB/ft |
|                       | 0.95 | 1.08 | 1.28 | 1.67 | 2.26 | dB/m  |

#### Electrical Specification Notes:

The Insertion Loss data above is based on the performance specifications of the coax cable and connectors used in this assembly. The Insertion Loss includes an estimated insertion loss of 0.1 dB for the straight connector

### Mechanical Specifications

#### Cable Assembly



### Configuration:

- SMA Male
- SMA Female Bulkhead
- LMR-195

### Features:

- Max Frequency 5.8 GHz
- Shielding Effectivity > 90 dB
- 80% Phase Velocity
- Double Shielded
- PE Jacket

### Applications:

- General Purpose
- Laboratory Use
- Antenna Installations
- Land Mobile Radio & Other Communication Systems
- Cellular & Wi-Fi Systems

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**Cable**

|                                      |                     |
|--------------------------------------|---------------------|
| Cable Type                           | LMR-195             |
| Impedance                            | 50 Ohms             |
| Inner Conductor Type                 | Solid               |
| 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                      | PE, Black           |
| Jacket Diameter                      | 0.195 in [4.95 mm]  |

|                              |                        |
|------------------------------|------------------------|
| One Time Minimum Bend Radius | 0.5 in [12.7 mm]       |
| Repeated Minimum Bend Radius | 2 in [50.8 mm]         |
| Bending Moment               | 0.2 lbs-ft [0.27 N-m]  |
| Flat Plate Crush             | 15 lbs/in [0.27 Kg/mm] |
| Tensile Strength             | 40 lbs [18.14 Kg]      |

**Connectors**

| Description                     | Connector 1                | Connector 2                |
|---------------------------------|----------------------------|----------------------------|
| Type                            | SMA Male                   | SMA Female                 |
| Mount Method                    |                            | Bulkhead                   |
| Specification                   |                            | MIL-STD-348A               |
| Impedance                       | 50 Ohms                    | 50 Ohms                    |
| Contact Material & Plating      | Brass, Gold                | Beryllium Copper, Gold     |
| Contact Plating Spec.           | ASTM B488                  | 50 µin minimum             |
| Dielectric Type                 | PTFE                       | PTFE                       |
| Outer Cond Material & Plating   | Passivated Stainless Steel | Passivated Stainless Steel |
| Body Material & Plating         | Passivated Stainless Steel |                            |
| Coupling Nut Material & Plating | Passivated Stainless Steel |                            |
| Hex Size                        | 5/16 Inch                  | 5/16 inch                  |

**Environmental Specifications**
**Temperature**

|                 |                  |
|-----------------|------------------|
| Operating Range | -40 to +85 deg C |
| Storage Range   | -70 to +85 deg C |

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

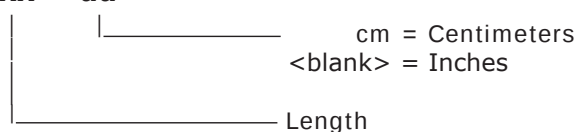
**Plotted and Other Data**

Notes:

**How to Order**

Part Number Configuration:

**FMC00117 - xx uu**



Example: FMC00117-12 = 12 inches long cable  
 FMC00117-100cm = 100 cm long cable

Low Loss SMA Male to SMA Female Bulkhead Cable LMR-195 Coax in 50 CM from Fairview Microwave 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.

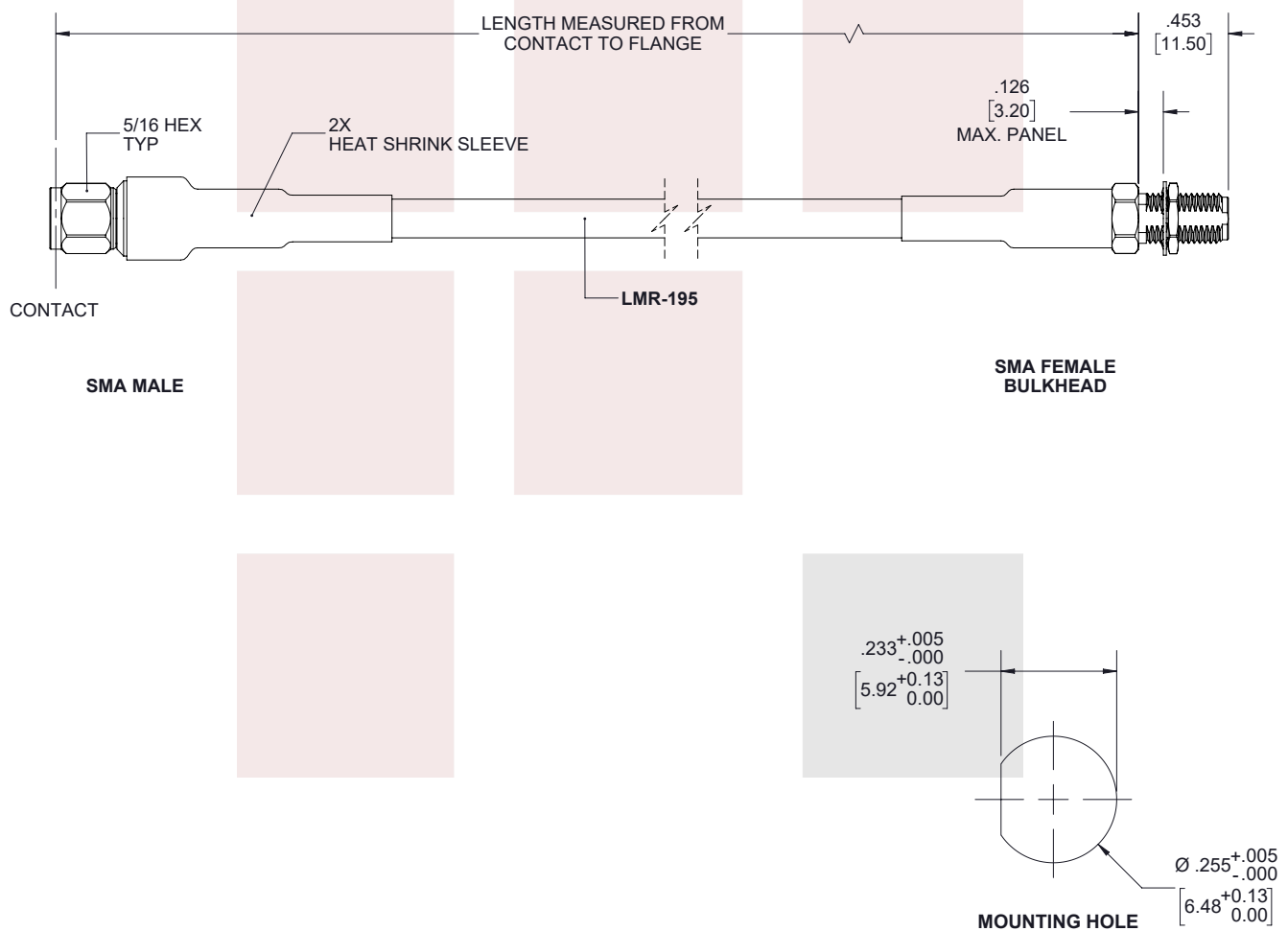
Click the following link to obtain additional part information: [Low Loss SMA Male to SMA Female Bulkhead Cable LMR-195 Coax in 50 CM FMC00117-50CM](#)

URL: <https://www.fairviewmicrowave.com/low-loss-sma-male-sma-female-cable-lmr195-coax-fmc00117-50cm-p.aspx>

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. 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 any liability arising out of the use of any part or documentation.



| REVISIONS |                 |           |          |
|-----------|-----------------|-----------|----------|
| REV.      | DESCRIPTION     | DATE      | APPROVED |
| A         | INITIAL RELEASE | 2/10/2020 | S.ELLIS  |



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TITLE

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LMR-195 Coax in 50 CM

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

TOLERANCES:

.X = ±.2 [5.08] FRACTIONS ± 1/32  
.XX = ±.02 [.51] ANGLES ± 1°  
.XXX = ±.005 [.13]

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

THIRD-ANGLE PROJECTION



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SHEET 1 OF 1

SCALE

N/A

| SIZE | CAGE CODE | DRAWN BY | ITEM NO. | REV |
|------|-----------|----------|----------|-----|
| A    | 3FKR5     | K.DANG   | FMC00117 | A   |

T-Rev.D