

Low Loss Space SMA Female Bulkhead to TNC Male Cable FM-R200LL Coax



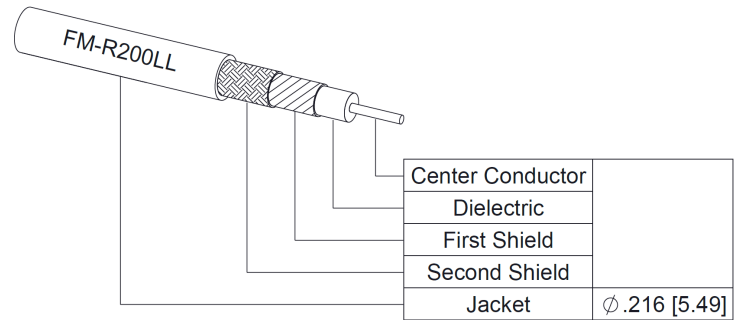
FMCA100015

Configuration

- Connector 1: SMA Female Bulkhead
- Connector 2: TNC Male
- Cable Type: FM-R200LL
- Coax Flex Type: Flexible

Features

- Max Frequency 18 GHz
- Shielding Effectivity > 100 dB
- 82% Phase Velocity
- Double Shielded
- ETFE Jacket
- Up to 300 Mrad of Radiation Resistance
- Low Outgassing (TML <1%, CVCM <1%) per ASTM E-595
- Operating Temperature -65 to +150 Deg C
- Built in a Facility with < 100,000 Particles/sq ft
- Built to IPC-A-620 Class 3



Applications

- General Purpose
- Laboratory Use
- Vacuum Environments
- Low Earth Orbit (LEO)
- Space (Exploration, Launches, Maintenance, Stations)
- Ground Systems
- Satellites

Description

The SMA female bulkhead to TNC male cable using FM-R200LL coax, part number FMCA100015, from Fairview Microwave is in-stock and ships same day. This Fairview SMA to TNC cable assembly has a female to male gender configuration with 50 ohm flexible FM-R200LL coax. Fairview Microwave's flexible RF cable assemblies are ideal for applications where tight bends and continual flexure are required. The FMCA100015 SMA female to TNC male cable assembly operates to 18 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 100 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		18	GHz
VSWR			1.4:1	
Velocity of Propagation		82		%
RF Shielding	100			dB

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Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Capacitance		25 [82.02]		pF/ft [pF/m]

Specifications by Frequency

Part Number	Length	Description	F1	F2	F3	F4	F5	Units	Weight (lbs)
			Frequency					MHz	
FMCA100015	Custom Lengths Available	Insertion Loss (Typ.)	0.068	0.098	0.15	0.22	0.33	dB/ft	
			0.23	0.33	0.5	0.73	1.09	dB/m	
FMCA100015-12	12 Inch	Insertion Loss (Typ.)	0.27	0.3	0.35	0.42	0.61	dB	0.129
FMCA100015-18	18 Inch	Insertion Loss (Typ.)	0.31	0.35	0.43	0.53	0.82	dB	0.153
FMCA100015-24	24 Inch	Insertion Loss (Typ.)	0.34	0.4	0.5	0.64	1.02	dB	0.177
FMCA100015-100CM	100 CM	Insertion Loss (Typ.)	0.43	0.53	0.7	0.93	1.55	dB	0.239
FMCA100015-200CM	200 CM	Insertion Loss (Typ.)	0.65	0.85	1.19	1.65	2.89	dB	0.396

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:	0.1 dB
Loss due to Connector 2:	0.1 dB
Base Weight:	0.129 pounds
Additional Weight per Inch:	0.004 pounds

Mechanical Specifications

Cable Assembly

Width/Diameter	0.562 in [14.27 mm]
Weight	0.129 lbs [58.51 g]

Cable

Cable Type	FM-R200LL
Impedance	50 Ohms
Inner Conductor Type	Solid
Inner Conductor Material and Plating	Copper, Silver
Dielectric Type	PTFE
Number of Shields	2
Shield Layer 1	Silver plated copper
Shield Layer 2	Silver plated copper
Jacket Material	ETFE, Black
Jacket Diameter	0.216 in [5.49 mm]
One Time Minimum Bend Radius	1.08 in [27.43 mm]

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Connectors

Description	Connector 1	Connector 2
Type	SMA Female Bulkhead	TNC Male
Impedance	50 Ohms	50 Ohms
Configuration	Straight	Straight
Contact Material and Plating	Beryllium Copper, Gold	Brass, Gold
Contact Plating Specification	30 µin minimum	30 µin minimum
Dielectric Type	PTFE	PTFE
Body Material and Plating	Stainless Steel, Passivated	Stainless Steel, Passivated

Environmental Specifications

Operating Range Temperature -65 to +150 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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Typical Performance Data

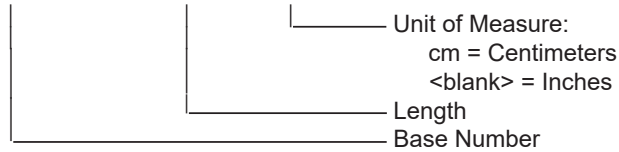
How to Order

Part Number Configuration:

FMCA100015

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Example: FMCA100015-12 = 12 inches long cable
FMCA100015-100cm = 100 cm long cable

Low Loss Space SMA Female Bulkhead to TNC Male Cable FM-R200LL 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.

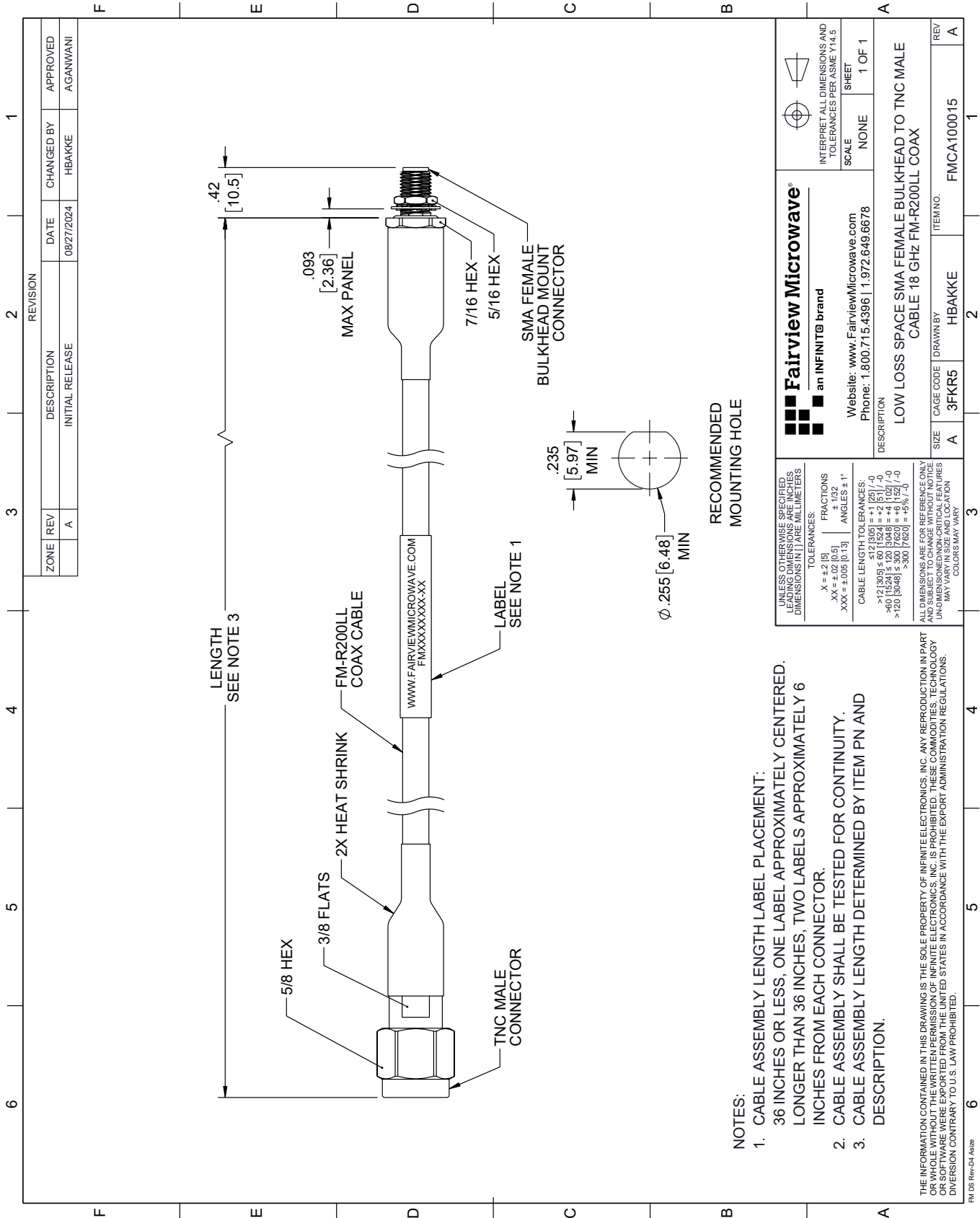
For additional information on this product, please click the following link: [Low Loss Space SMA Female Bulkhead to TNC Male Cable FM-R200LL Coax FMCA100015](#)

URL: <https://www.fairviewmicrowave.com/low-loss-space-sma-female-bulkhead-to-tnc-male-cable-fm-r200ll-coax-fm-ca100015-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.

FMCA100015 CAD Drawing

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- 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 ASSEMBLY SHALL BE TESTED FOR CONTINUITY.
 3. CABLE ASSEMBLY LENGTH DETERMINED BY ITEM PN AND DESCRIPTION.

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<p>Fairview Microwave® an INFINIT® brand</p>		<p>INTERPRET ALL DIMENSIONS AND TOLERANCES PER ASME Y14.5</p>
<p>Website: www.FairviewMicrowave.com Phone: 1.800.715.4396 1.972.649.6678</p>		<p>SCALE: NONE SHEET: 1 OF 1</p>
<p>DESCRIPTION: LOW LOSS SPACE SMA FEMALE BULKHEAD TO TNC MALE CABLE 18 GHZ FM-R200LL COAX</p>		
<p>UNLESS OTHERWISE SPECIFIED, LEADING DIMENSIONS ARE IN INCHES, DIMENSIONS IN [] ARE MILLIMETERS</p>	<p>TOLERANCES: .X = ±.2 [5] .XX = ±.02 [0.5] .XXX = ±.005 [0.13] FRACTIONS: ± 1/32 ANGLES: ± 1°</p>	<p>ITEM NO. FMCA100015</p>
<p>CABLE LENGTH TOLERANCES: >12 [305] ≤ 60 [1524] = ±.1 [25] / -0 >60 [1524] ≤ 120 [3048] = ±.4 [102] / -0 >120 [3048] ≤ 300 [7620] = ±.8 [203] / -0</p>	<p>ALL DIMENSIONS ARE FOR REFERENCE ONLY. UNDIMENSIONED/NON-CRITICAL FEATURES MAY VARY IN SIZE AND LOCATION. COLORS MAY VARY.</p>	<p>REV A</p>
<p>SIZE: A</p>	<p>CAGE CODE: 3FKR5</p>	<p>ITEM NO. FMCA100015</p>
<p>DESCRIPTION: LOW LOSS SPACE SMA FEMALE BULKHEAD TO TNC MALE CABLE 18 GHZ FM-R200LL COAX</p>	<p>DRAWN BY: HBAKKE</p>	<p>REV A</p>