

Low Loss RA SMA Male to RA TNC Male
Cable LL160 Coax in 50 CM

FMCA1702-50CM

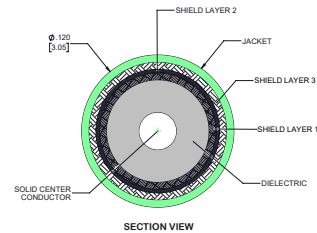
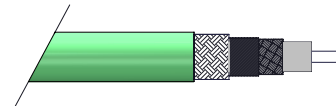


Configuration

- Connector 1: SMA Male Right Angle
- Connector 2: TNC Male Right Angle
- Cable Type: LL160
- Coax Flex Type: Flexible

Features

- Max Frequency 18 GHz
- Shielding Effectivity > -90 dB
- 82.5% Phase Velocity
- Triple Shielded
- FEP Jacket
- Low VSWR of 1.5:1 to 18 GHz
- -55 to +150 Temperature Range
- Expanded PTFE Tape Dielectric
- Same Day Shipment of Custom Lengths



Applications

- General Purpose
- Laboratory Use
- Automated Test Systems
- Military Electronics
- Phased Array Antennas
- RF Countermeasures

Description

The RA SMA Male to RA TNC Male low loss cable using LL160 coax, part number FMCA1702-50CM, from Fairview Microwave is in-stock and ships same day. This SMA to TNC low loss cable assembly features a 82.5% velocity dielectric manufactured from expanded PTFE tape. This microporous dielectric contributes to the low loss and phase stability of the cables. Our triple shielded coaxial cable construction of Fairview's low loss LL160 provides shielding levels as high as 95 dB. The precision connections are constructed with stainless steel bodies and high temperature insulators, supporting a wide range of temperature from -55 to +165 degrees C. This solid combination of connectors and low loss coax are further enhanced with the addition of heavy-duty heat shrink for improved strain relief for this superior quality RF cable assembly.

Fairview's RA SMA Male to RA TNC Male low loss cable FMCA1702-50CM datasheet, specifications and outline drawing are shown in this PDF below. Our extensive offering of RF, microwave and high speed digital connections allows designers to configure and customize their signals however they like. From reducing losses or improving phase stability, Fairview microwave has the right low loss cable solutions to meet your needs.

Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Frequency Range	DC		18	GHz
VSWR			1.5:1	
Velocity of Propagation		82.5		%
RF Shielding	-90			

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Electrical Specifications

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

Specifications by Frequency

Description	F1	F2	F3	F4	F5	Units
Frequency	1	2	4.5	9	18	GHz
Insertion Loss (Typ.)	0.3	0.43	0.66	0.94	1.35	dB

Electrical Specification Notes:

The Insertion Loss data above is based on the performance specifications of the coax cable used in this assembly. The Insertion Loss includes an estimated insertion loss of $0.04 \cdot \sqrt{F(\text{GHz})}$ dB maximum for the SMA right angle connector and $0.10 \cdot \sqrt{F(\text{GHz})}$ dB maximum for the TNC right angle connector.

Mechanical Specifications

Cable Assembly

Length	19.69 in [500.13 mm]
Weight	lbs [0 g]

Cable

Cable Type	LL160
Impedance	50 Ohms
Inner Conductor Type	Solid
Inner Conductor Material and Plating	Copper, Silver
Dielectric Type	PTFE
Number of Shields	3
Shield Layer 1	Silver Plated Copper
Shield Layer 2	Aluminum Polyester
Shield Layer 3	Silver Plated Copper
Jacket Material	FEP
Jacket Diameter	0.16 in [4.06 mm]
Repeated Minimum Bend Radius	0.8 in [20.32 mm]

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Connectors

Description	Connector 1	Connector 2
Type	SMA Male Right Angle	TNC Male Right Angle
Impedance	50 Ohms	50 Ohms
Configuration	Right Angle	Right Angle
Contact Material and Plating	Beryllium Copper, Gold	Beryllium Copper, Gold
Contact Plating Specification	ASTM-B488	ASTM-B488
Dielectric Type	PTFE	PTFE
Body Material and Plating	Passivated Stainless Steel	Passivated Stainless Steel
Coupling Nut Material and Plating	Passivated Stainless Steel	Passivated Stainless Steel

Environmental Specifications

Operating Range Temperature -55 to +165 deg C

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

Plotted and Other Data

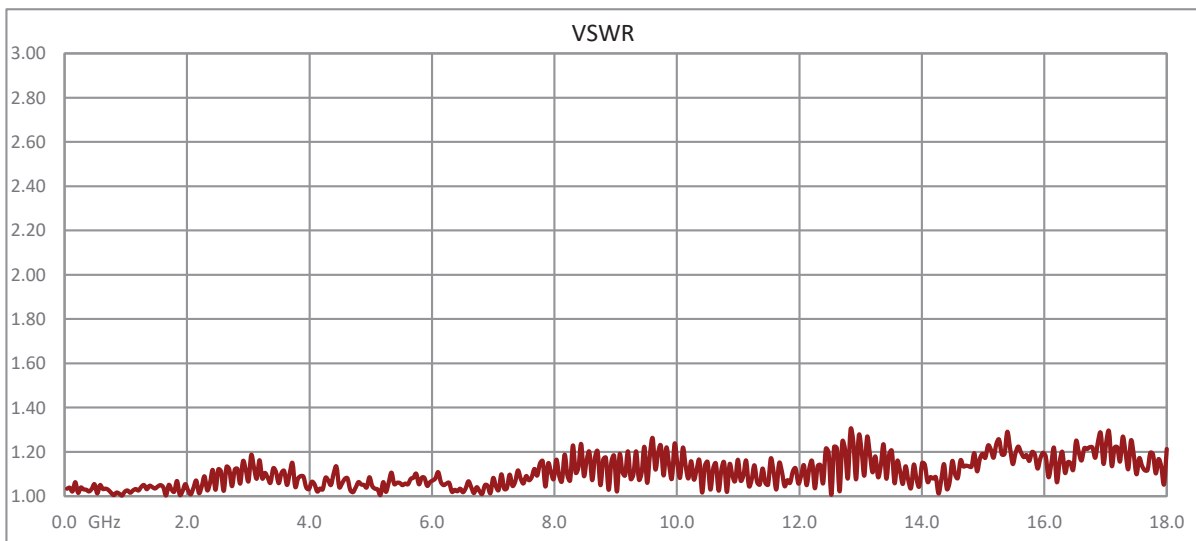
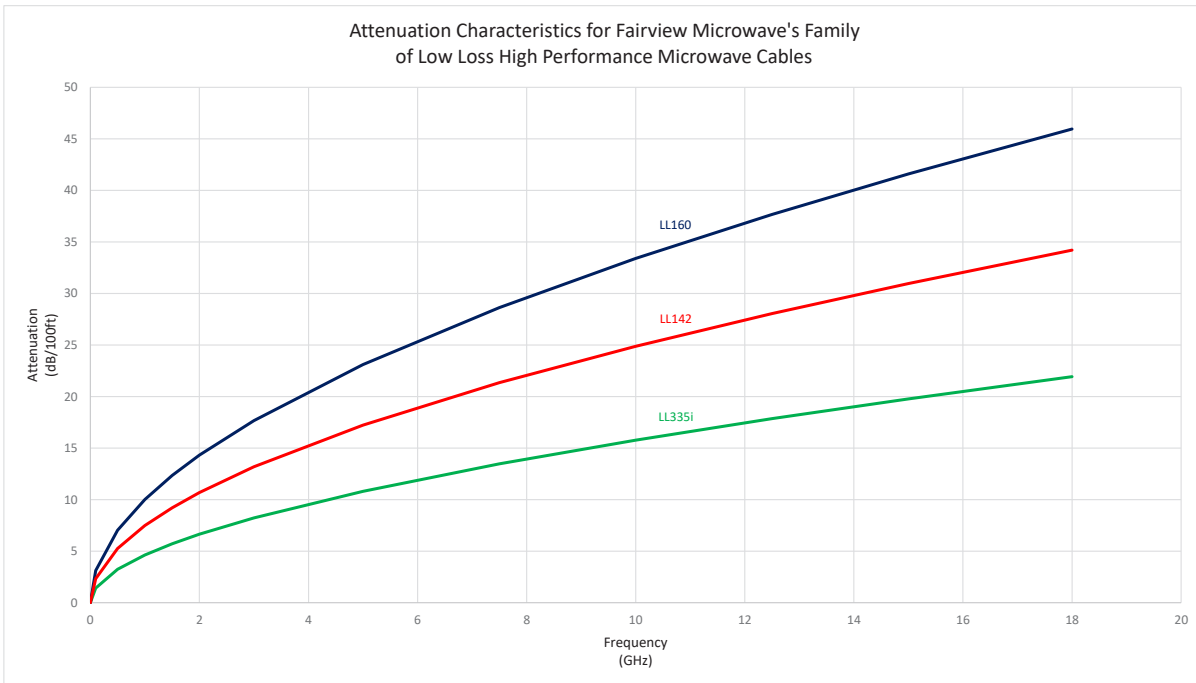
Notes:

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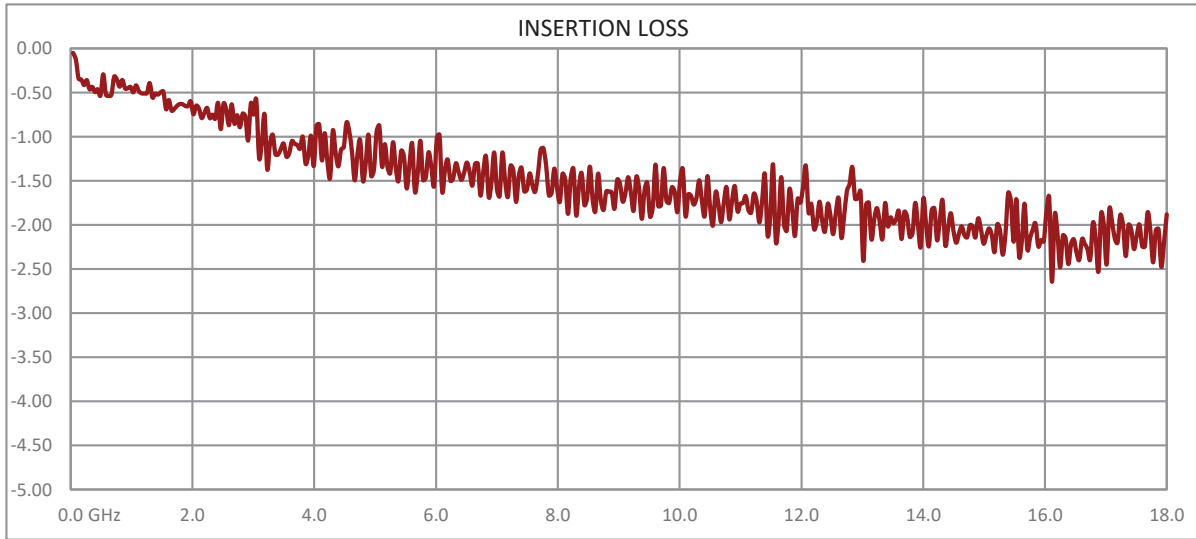
Typical Performance Data



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FMCA1702-50CM



How to Order

Part Number Configuration:

FMCA1702

- xx

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

Example: FMCA1702-12 = 12 inches long cable
FMCA1702-100cm = 100 cm long cable

Low Loss RA SMA Male to RA TNC Male Cable LL160 Coax in 50 CM 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.

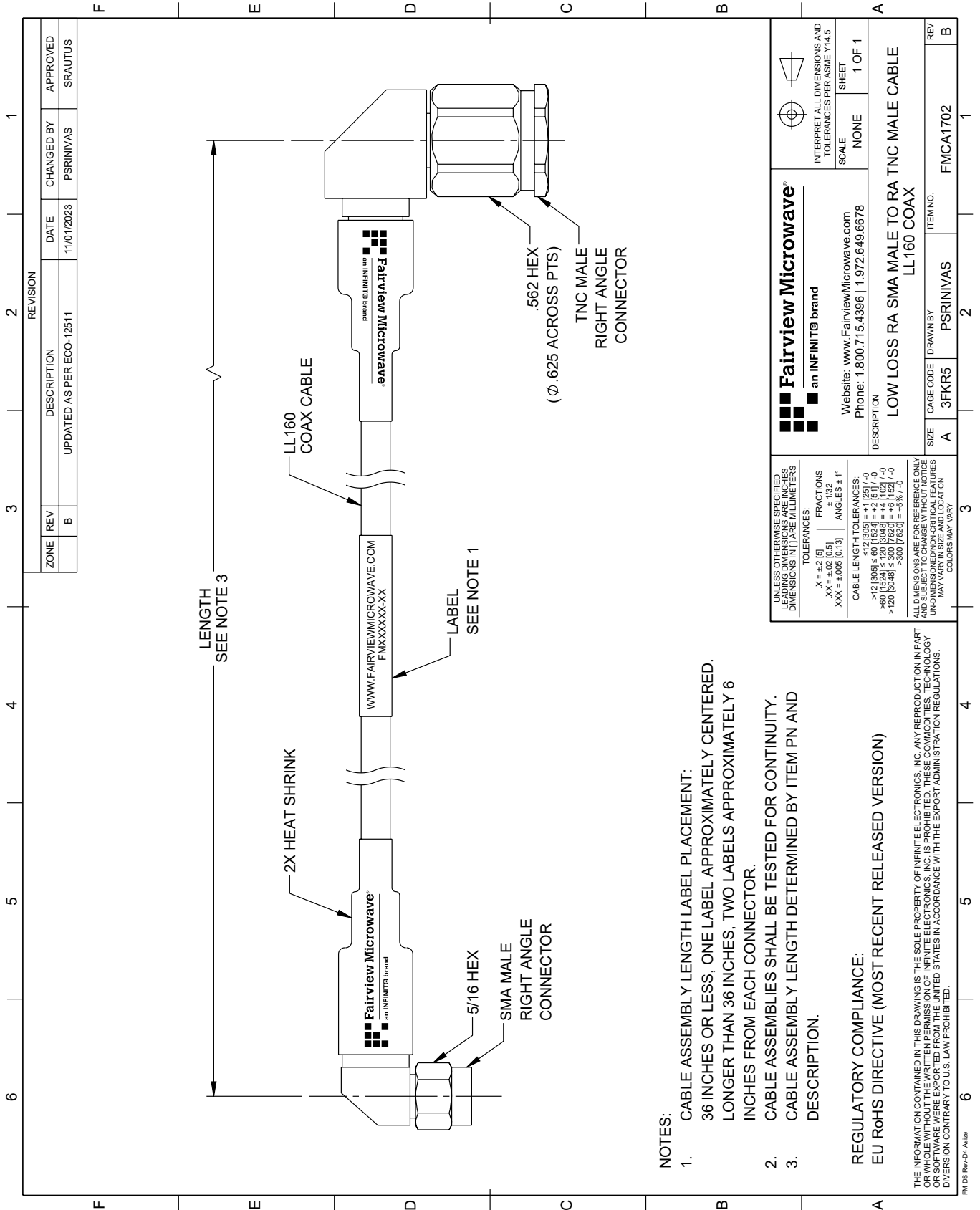
For additional information on this product, please click the following link: [Low Loss RA SMA Male to RA TNC Male Cable LL160 Coax in 50 CM FMCA1702-50CM](https://www.fairviewmicrowave.com/low-loss-ra-sma-male-ra-tnc-male-cable-ll160-coax-fmca1702-50cm-p.aspx)

URL: <https://www.fairviewmicrowave.com/low-loss-ra-sma-male-ra-tnc-male-cable-ll160-coax-fmca1702-50cm-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.

FMCA1702-50CM CAD Drawing

Low Loss RA SMA Male to RA TNC Male Cable LL160 Coax in 50 CM



- 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.

REGULATORY COMPLIANCE:
EU RoHS DIRECTIVE (MOST RECENT RELEASED VERSION)

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<p>Fairview Microwave® an INFINITIB brand</p> <p>Website: www.FairviewMicrowave.com Phone: 1.800.715.4396 1.972.649.6678</p>		<p>INTERPRET ALL DIMENSIONS AND TOLERANCES PER ASME Y14.5</p> <p>SCALE: NONE</p> <p>SHEET: 1 OF 1</p>
<p>DESCRIPTION: LOW LOSS RA SMA MALE TO RA TNC MALE CABLE LL160 COAX</p>		
<p>UNLESS OTHERWISE SPECIFIED, LEADING DIMENSIONS ARE IN INCHES AND TRAILING DIMENSIONS ARE IN MILLIMETERS</p> <p>TOLERANCES:</p> <p>X = +.2 [-5] FRACTIONS ± 1/32</p> <p>.XX = ±.02 [0.5] ANGLES ± 1°</p> <p>.XXX = ±.005 [0.13]</p> <p>CABLE LENGTH TOLERANCES:</p> <p><12 [305] ≤ 60 [1524] = +.2 [-5] / -0</p> <p>>60 [1524] ≤ 120 [3048] = +.4 [-10] / -0</p> <p>>120 [3048] ≤ 300 [7620] = +.6 [-15] / -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 B</p> <p>CHANGED BY PSRINIVAS</p> <p>APPROVED SRAUTUS</p>
<p>ZONE REV B</p> <p>DESCRIPTION UPDATED AS PER ECO-12511</p> <p>DATE 11/01/2023</p>	<p>REVISION</p>	<p>ITEM NO. FMCA1702</p>