

VITA 67 Mini SMP Female to 1.85mm  
Male Cable FM-F086HF Coax



**FMCA9738**

**Configuration**

- Connector 1: Mini SMP Female
- Connector 2: 1.85mm Male
- Cable Type: FM-F086HF
- Coax Cable Group: 2
- Coax Flex Type: Flexible

**Features**

- Max Frequency 40 GHz
- Shielding Effectivity > 110 dB
- 70% Phase Velocity
- Standard MIL-STD-348 SMPM interface
- Push-on/snap-on mating style for quick installation
- Mini SMP (SMPM) Female compatible with VITA 67 (4-port) and (8-port) blocks
- Mini SMP (SMPM) Male Compatible with VITA 67 (4-port) and (8-port) blocks

**Applications**

- General Purpose
- Laboratory Use
- Scientific research
- High-reliability, high-density for aerospace & defense application
- Ground base station & communication systems, avionics, radar systems

**Description**

The Mini SMP female to 1.85mm male cable using FM-F086HF coax, part number FMCA9738, from Fairview Microwave is in-stock and ships same day. This Fairview Mini SMP to 1.85mm cable assembly has a female to male gender configuration with 50 ohm flexible coax. Fairview Microwave's VITA 67 assemblies are high-density, high-performance RF cable assemblies that fit into VITA 67 blocks and attach to the PCB board which makes it ideal for applications where tight bends and flexure is required. The FMCA9738 Mini SMP female to 1.85mm male cable assembly operates to 40 GHz.

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		40	GHz
VSWR			1.45:1	
Velocity of Propagation		70		%
RF Shielding	110			dB

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**Electrical Specifications**

Description	Minimum	Typical	Maximum	Units
Capacitance		29.4 [96.46]		pF/ft [pF/m]

**Specifications by Frequency**

Description	F1	F2	F3	F4	F5	Units
Frequency	2.5	5	10	20	40	GHz
Insertion Loss (Typ.)	0.344	0.503	0.743	1.048	1.703	dB/ft
	1.13	1.65	2.44	3.44	5.59	dB/m

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

**Mechanical Specifications**

**Cable Assembly**

Weight 0.162 lbs [73.48 g]

**Cable**

Cable Type FM-F086HF  
Impedance 50 Ohms  
Inner Conductor Type Solid  
Inner Conductor Material and Plating Copper Clad Steel, Silver  
Dielectric Type PTFE  
Shield Layer 1 Silver Plated Copper Tape

**Connectors**

Description	Connector 1	Connector 2
Type	Mini SMP Female	1.85mm Male
Impedance	50 Ohms	50 Ohms
Configuration	Straight	Straight
Contact Material and Plating	Beryllium Copper, Gold	Beryllium Copper, Gold over Nickel
Contact Plating Specification	ASTM B488	MIL-G-45204
Body Material and Plating	Beryllium Copper, Gold	Stainless Steel, Gold over Nickel
Body Plating Specification	ASTM B488	MIL-G-45204

**Environmental Specifications**

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

**Plotted and Other Data**

Notes:

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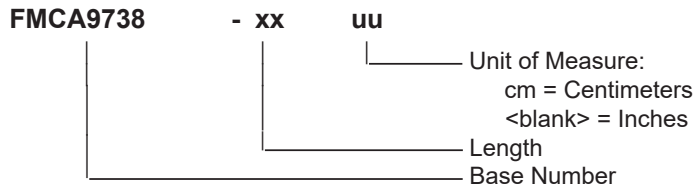
**FMCA9738**

Values at 25°C, sea level.

**Typical Performance Data**

**How to Order**

Part Number Configuration:



Example: FMCA9738-12 = 12 inches long cable  
FMCA9738-100cm = 100 cm long cable

VITA 67 Mini SMP Female to 1.85mm Male Cable FM-F086HF 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.

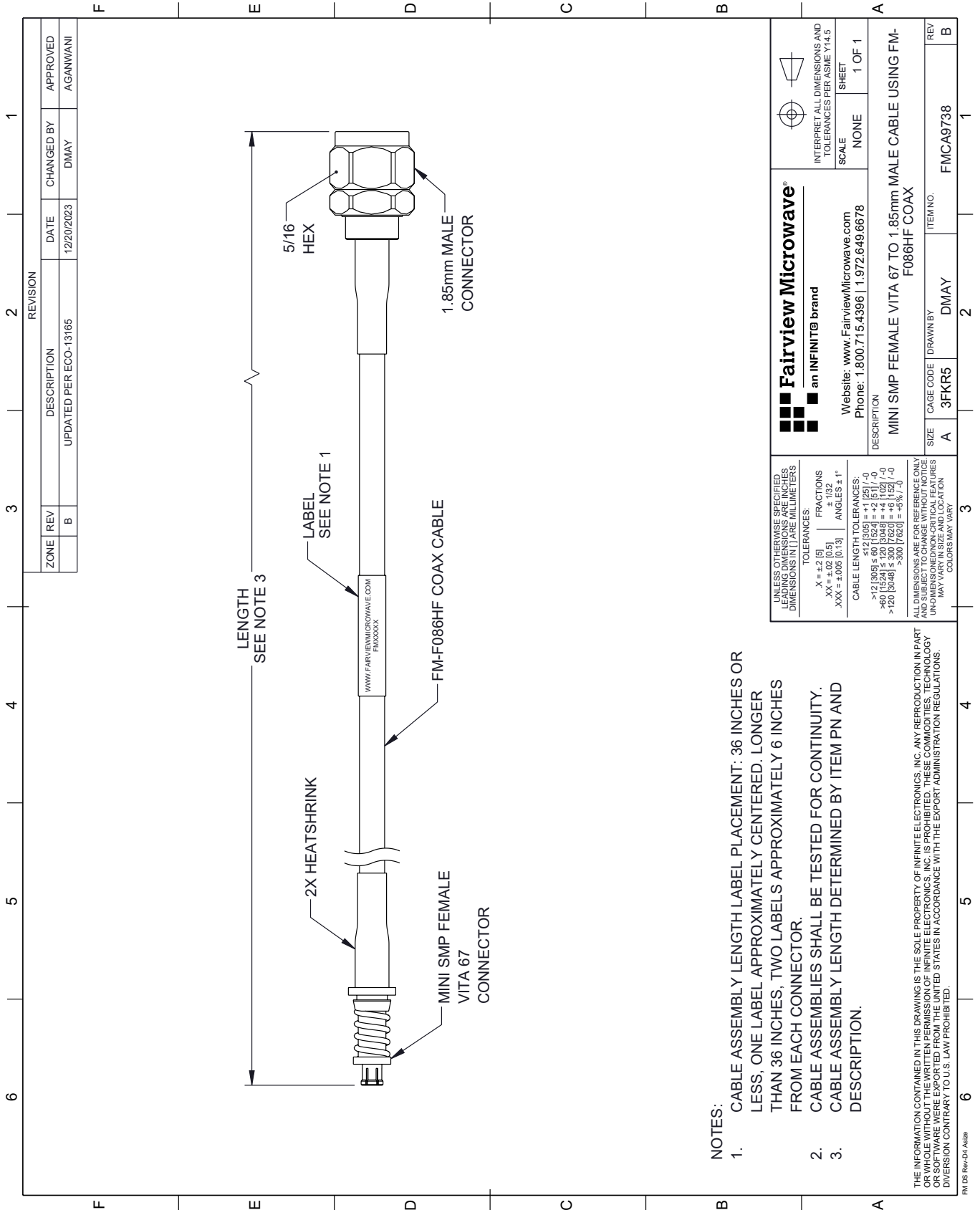
For additional information on this product, please click the following link: [VITA 67 Mini SMP Female to 1.85mm Male Cable FM-F086HF Coax FMCA9738](#)

URL: <https://www.fairviewmicrowave.com/vita-67-mini-smp-female-to-1.85mm-male-cable-fm-f086hf-coax-fmca9738-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.

# FMCA9738 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 ASSEMBLIES SHALL BE TESTED FOR CONTINUITY.
3. CABLE ASSEMBLY LENGTH DETERMINED BY ITEM PN AND DESCRIPTION.

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FM DS Rev-D4 Alt2b

REVISION		DATE	CHANGED BY	APPROVED	
ZONE	REV	DESCRIPTION	DATE	CHANGED BY	APPROVED
	B	UPDATED PER ECO-13165	12/20/2023	DMAY	AGANWANI

<p><b>Fairview Microwave®</b> an INFINIT® brand</p> <p>Website: <a href="http://www.FairviewMicrowave.com">www.FairviewMicrowave.com</a> 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: MINI SMP FEMALE VITA 67 TO 1.85mm MALE CABLE USING FM-F086HF COAX</p>		
SIZE	CAGE CODE	ITEM NO.
A	3FKR5	DMAY
		FMC9738
REV	REV	
	B	

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

TOLERANCES:

.X = ±.2 [5]	FRACTIONS ± 1/32
.XX = ±.02 [0.5]	ANGLES ± 1°
.XXX = ±.005 [0.13]	

CABLE LENGTH TOLERANCES:

<12 [305]	±.1 [25]
>12 [305] &lt; 60 [1524]	±.2 [5]
>60 [1524] &lt; 120 [3048]	±.4 [102]
>120 [3048]	±.8 [20]

ALL DIMENSIONS ARE FOR REFERENCE ONLY. UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES. DIMENSIONS IN [ ] ARE IN MILLIMETERS. UNLESS OTHERWISE SPECIFIED, LEADING DIMENSIONS ARE IN INCHES. DIMENSIONS IN [ ] ARE MILLIMETERS. COLORS MAY VARY.