

VITA 67 Mini SMP Male to 2.4mm Male  
Cable FM-F086HF Coax in 24 Inch



**FMCA9748-24**

**Configuration**

- Connector 1: Mini SMP Male
- Connector 2: 2.4mm 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 male to 2.4mm male 24 inch cable using FM-F086HF coax, part number FMCA9748-24, from Fairview Microwave is in-stock and ships same day. This Fairview Mini SMP to 2.4mm cable assembly has a male to male gender configuration with 50 ohm flexible coax. Fairview Microwave's VITA 67 assemblies are high-density, high-performance, fixed-length 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 FMCA9748-24 Mini SMP male to 2.4mm 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                    |         |         | 1.3:1   |       |
| 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.) | 0.89 | 1.21 | 1.69 | 2.3 | 3.61 | dB    |

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

**Mechanical Specifications**

**Cable Assembly**

Length 24 in [609.6 mm]  
Weight 0.22 lbs [99.79 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 Male          | 2.4mm 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                        |
| Dielectric Type               |                        | PPO                                |
| Body Material and Plating     | Beryllium Copper, Gold | Passivated Stainless Steel         |
| Body Plating Specification    | ASTM B488              | ASTM-A380                          |

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**Environmental Specifications**

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

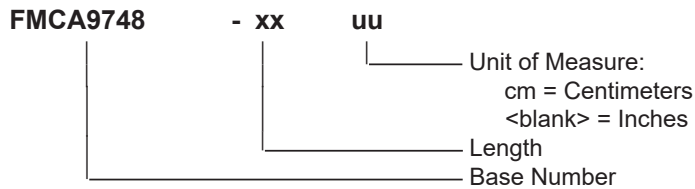
**Plotted and Other Data**

Notes:  
Values at 25°C, sea level.

**Typical Performance Data**

**How to Order**

Part Number Configuration:



Example: FMCA9748-12 = 12 inches long cable  
FMCA9748-100cm = 100 cm long cable

VITA 67 Mini SMP Male to 2.4mm Male Cable FM-F086HF Coax in 24 Inch 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.

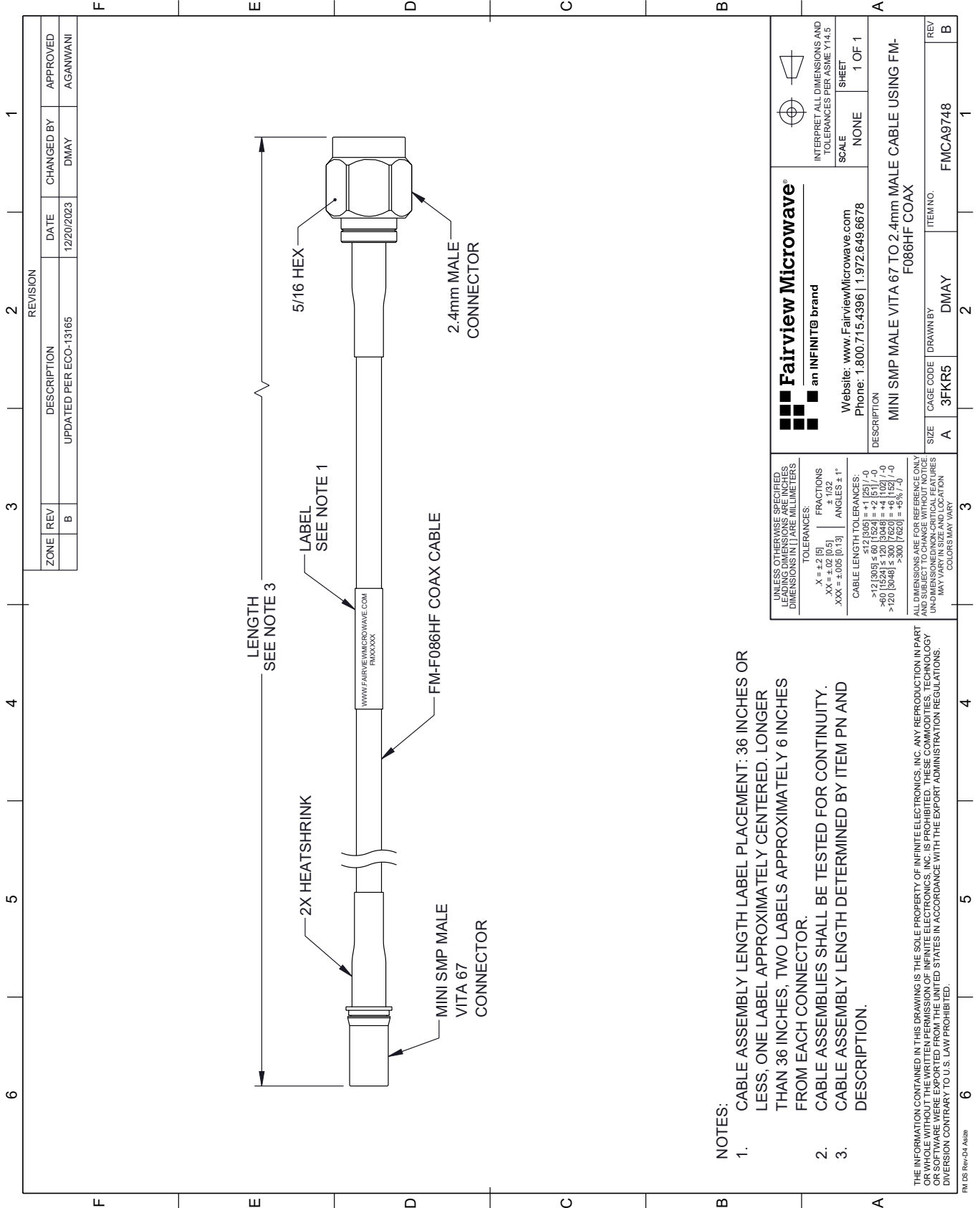
For additional information on this product, please click the following link: [VITA 67 Mini SMP Male to 2.4mm Male Cable FM-F086HF Coax in 24 Inch FMCA9748-24](#)

URL: <https://www.fairviewmicrowave.com/vita-67-mini-smp-male-to-2.4mm-male-cable-fm-f086hf-coax-in-24-inch-fm-ca9748-24-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.

# FMCA9748-24 CAD Drawing

VITA 67 Mini SMP Male to 2.4mm Male Cable FM-F086HF Coax in 24 Inch



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

**Fairview Microwave®**  
an INFINIT® brand

Website: [www.FairviewMicrowave.com](http://www.FairviewMicrowave.com)  
Phone: 1.800.715.4396 | 1.972.649.6678

UNLESS OTHERWISE SPECIFIED, LEADING DIMENSIONS ARE IN INCHES AND TRAILING DIMENSIONS ARE IN MILLIMETERS.

TOLERANCES:  
 .X = ±.2 (5)      FRACTIONS ± 1/32  
 .XX = ±.02 (0.5)      ANGLES ± 1°  
 .XXX = ±.005 (0.13)

CABLE LENGTH TOLERANCES:  
 >12 (305) ≤ 60 (1524) = ±.1 (25) / -0  
 >60 (1524) ≤ 120 (3048) = ±.4 (102) / -0  
 >120 (3048) ≤ 300 (7620) = ±.6 (15) / -0

ALL DIMENSIONS ARE FOR REFERENCE ONLY. UNLESS OTHERWISE SPECIFIED, DIMENSIONS MAY VARY IN SIZE AND LOCATION. COLORS MAY VARY.

INTERPRET ALL DIMENSIONS AND TOLERANCES PER ASME Y14.5

SCALE: NONE  
SHEET: 1 OF 1

DESCRIPTION: MINI SMP MALE VITA 67 TO 2.4mm MALE CABLE USING FM-F086HF COAX

|      |           |          |          |
|------|-----------|----------|----------|
| SIZE | CAGE CODE | DRAWN BY | ITEM NO. |
| A    | 3FKR5     | DMAY     | FMCA9748 |

- NOTES:**
- 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.
  - CABLE ASSEMBLIES SHALL BE TESTED FOR CONTINUITY.
  - CABLE ASSEMBLY LENGTH DETERMINED BY ITEM PN AND DESCRIPTION.

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FM DS Rev-D4 Alt2b