

SMPS Female to SMPS Female Cable FM-P047HF Coax

The SMPS female to SMPS female cable using FM-P047HF coax, part number FMCA9950, from Fairview Microwave is in-stock and ships same day. This Fairview SMPS to SMPS cable assembly has a female to female gender configuration with 50 ohm flexible FM-P047HF coax. Fairview Microwave's flexible RF cable assemblies are ideal for applications where tight bends and continual flexure are required. The FMCA9950 SMPS female to SMPS female cable assembly operates to 40 GHz. 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 | | 40 | GHz |
| VSWR | | | 1.5:1 | |
| Velocity of Propagation | | 70 | | % |
| RF Shielding | 90 | | | dB |
| Capacitance | | 29 [95.14] | | pF/ft [pF/m] |

Specifications by Frequency

| Part Number | Length | Description | F1 | F2 | F3 | F4 | F5 | Units | Weight (lbs) |
|-------------|--------------------------|-----------------------|-----------|------|------|------|-------|-------|--------------|
| | | | Frequency | | 2500 | 5000 | 10000 | 20000 | |
| FMCA9950 | Custom Lengths Available | Insertion Loss (Typ.) | 0.55 | 0.8 | 1.17 | 1.78 | 2.77 | dB/ft | |
| | | | 1.81 | 2.63 | 3.84 | 5.84 | 9.09 | dB/m | |
| FMCA9950-6 | 6 inch | Insertion Loss (Typ.) | 0.6 | 0.85 | 1.22 | 1.79 | 2.65 | dB | 0.004 |
| FMCA9950-12 | 12 inch | Insertion Loss (Typ.) | 0.87 | 1.25 | 1.81 | 2.68 | 4.04 | dB | 0.006 |
| FMCA9950-18 | 18 inch | Insertion Loss (Typ.) | 1.15 | 1.65 | 2.39 | 3.57 | 5.42 | dB | 0.008 |

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*SQRT(FGHz) dB

Loss due to Connector 2: 0.1*SQRT(FGHz) dB

Base Weight: 0.006 pounds

Additional Weight per Inch: 0.00033 pounds

Mechanical Specifications

Cable Assembly

Weight 0.00422 lbs [1.91 g]

Cable

Cable Type FM-P047HF
 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 Tape
 Shield Layer 2 Silver Plated Copper Braid
 Jacket Material FEP, Blue



Configuration:

- SMPS Female
- SMPS Female
- FM-P047HF

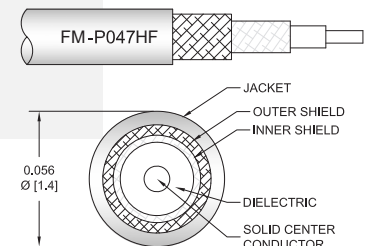
Features:

- Max Frequency 40 GHz
- Shielding Effectivity > 90 dB
- 70% Phase Velocity
- Double Shielded
- FEP Jacket

Applications:

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

Cable Diagram:



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www.fairviewmicrowave.com
sales@fairviewmicrowave.com

Jacket Diameter 0.06 in [1.52 mm]
Repeated Minimum Bend Radius 0.1 in [2.54 mm]

Connectors

| Description | Connector 1 | Connector 2 |
|-------------------------------|------------------------|------------------------|
| Type | SMPS Female Push-On | SMPS Female Push-On |
| Impedance | 50 Ohms | 50 Ohms |
| Contact Material & Plating | Beryllium Copper, Gold | Beryllium Copper, Gold |
| Contact Plating Spec. | 50 µin minimum | 50 µin minimum |
| Dielectric Type | PTFE | PTFE |
| Outer Cond Material & Plating | Beryllium Copper, Gold | Beryllium Copper, Gold |
| Outer Cond Plating Spec. | 50 µin minimum | 50 µin minimum |
| Body Material & Plating | Beryllium Copper, Gold | Beryllium Copper, Gold |
| Body Plating Spec. | 30 µin minimum | 30 µin minimum |

Environmental Specifications

Temperature

Operating Range -55 to +165 deg C

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

Plotted and Other Data

Notes:

How to Order

Part Number Configuration:

FMCA9950 - xx uu

cm = Centimeters
<blank> = Inches
Length

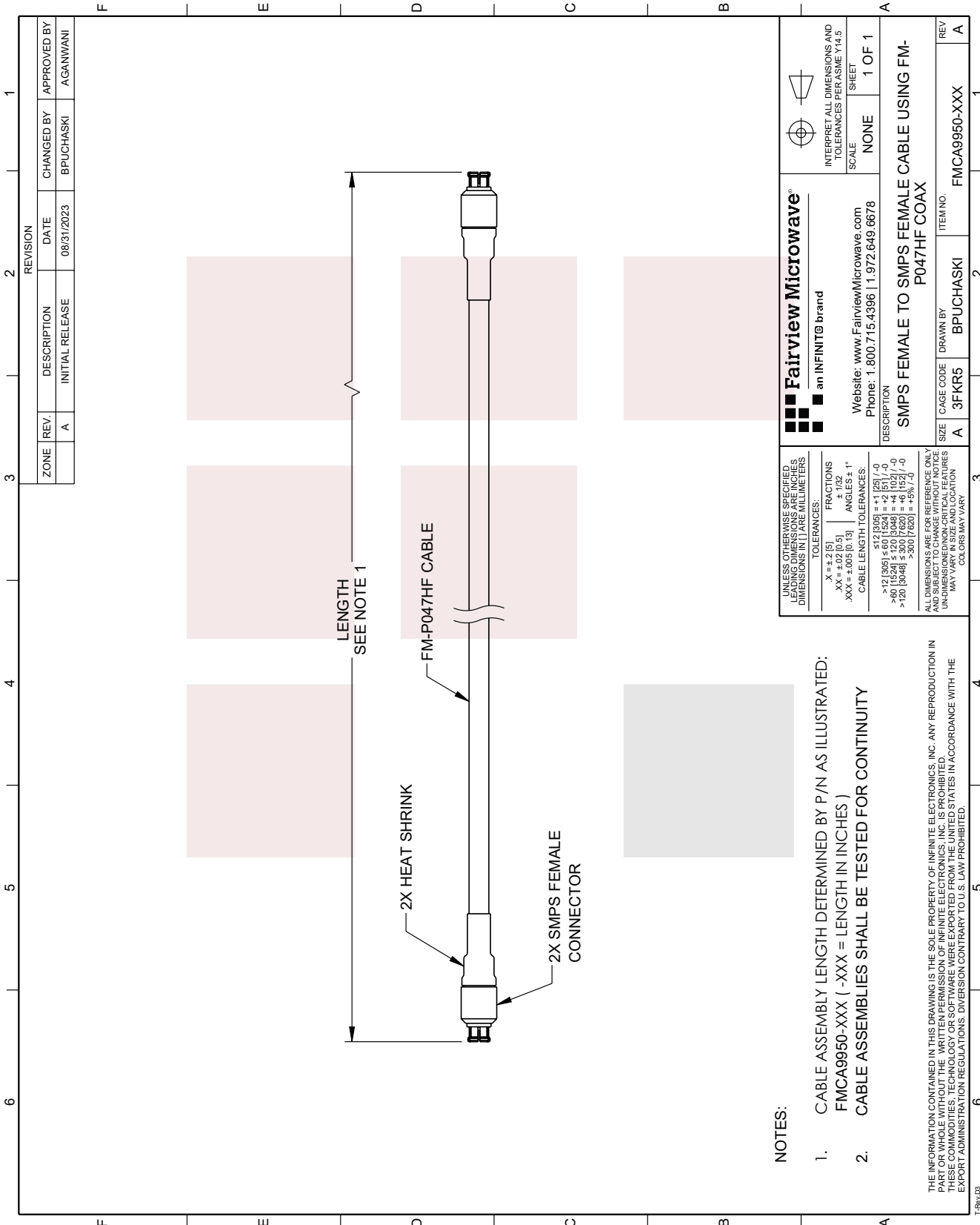
Example: FMCA9950-12 = 12 inches long cable
FMCA9950-100cm = 100 cm long cable

SMPS Female to SMPS Female Cable FM-P047HF Coax 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: [SMPS Female to SMPS Female Cable FM-P047HF Coax FMCA9950](#)

URL: <https://www.fairviewmicrowave.com/smps-female-to-smps-female-cable-fm-p047hf-coax-fmca9950-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.



| | | | |
|---|--------------------|---|--------------------------|
| Fairview Microwave an INFINIT [®] brand Website: www.FairviewMicrowave.com Phone: 1.800.715.4396 1.972.649.6678 | | INTERPRET ALL DIMENSIONS AND TOLERANCES PER ASME Y14.5 SCALE: NONE SHEET: 1 OF 1 | |
| UNLESS OTHERWISE SPECIFIED, LEADING DIMENSIONS ARE IN INCHES, DIMENSIONS IN [] ARE MILLIMETERS. | | DESCRIPTION: SMPS FEMALE TO SMPS FEMALE CABLE USING FM-P047HF COAX | |
| TOLERANCES: .X = ±.2 [5] .XX = ±.02 [0.5] .XXX = ±.005 [0.13] | | FRACTIONS: ±.132 ANGLES ± 1° CABLE LENGTH TOLERANCES: >12 [305] ≤ 60 [1524] = ±.2 [5] / -0 >6 [152] ≤ 12 [305] = ±.1 [2.5] / -0 >120 [3048] ≤ 300 [7620] = ±.6 [152] / -0 >300 [7620] = +.5% / -0 | |
| ALL DIMENSIONS ARE FOR REFERENCE ONLY AND SUBJECT TO CHANGE WITHOUT NOTICE. UN-DIMENSIONED CRITICAL FEATURES MAY VARY. COLORS MAY VARY. | | | |
| ZONE A | REV. A | DESCRIPTION INITIAL RELEASE | DATE 08/31/2023 |
| CHANGED BY BPUCHASKI | | APPROVED BY AGANWANI | |
| SIZE A | CAGE CODE 3FKR5 | DRAWN BY BPUCHASKI | ITEM NO. FMCA9950-XXX |

NOTES:

- CABLE ASSEMBLY LENGTH DETERMINED BY P/N AS ILLUSTRATED:
FMCA9950-XXX (-XXX = LENGTH IN INCHES)
- CABLE ASSEMBLIES SHALL BE TESTED FOR CONTINUITY

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