

## SMA Female to SMA Female Cable FM-P047 Coax



### FMCA9976

#### Configuration

- Connector 1: SMA Female
- Connector 2: SMA Female
- Cable Type: FM-P047
- Coax Flex Type: Flexible

#### Features

- Max Frequency 18 GHz
- Shielding Effectivity > 90 dB
- 70% Phase Velocity
- Double Shielded
- FEP Jacket

#### Applications

- General Purpose
- Laboratory Use

#### Description

The SMA female to SMA female cable using FM-P047 coax, part number FMCA9976, from Fairview Microwave is in-stock and ships same day. This Fairview SMA to SMA cable assembly has a female to female gender configuration with 50 ohm flexible FM-P047 coax. Fairview Microwave's flexible RF cable assemblies are ideal for applications where tight bends and continual flexure are required. The FMCA9976 SMA female to SMA female cable assembly operates to 18 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             | Minimum | Typical    | Maximum | Units        |
|-------------------------|---------|------------|---------|--------------|
| Frequency Range         | DC      |            | 18      | GHz          |
| VSWR                    |         |            | 1.4:1   |              |
| Velocity of Propagation |         | 70         |         | %            |
| RF Shielding            | 90      |            |         | dB           |
| Capacitance             |         | 29 [95.14] |         | pF/ft [pF/m] |

#### Specifications by Frequency

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| Part Number | Length                   | Description           | F1        | F2   | F3    | F4    | F5    | Units | Weight (lbs) |
|-------------|--------------------------|-----------------------|-----------|------|-------|-------|-------|-------|--------------|
|             |                          |                       | Frequency | 1000 | 2000  | 4500  | 9000  | 18000 |              |
| FMCA9976    | Custom Lengths Available | Insertion Loss (Typ.) | 0.34      | 0.48 | 0.745 | 1.102 | 1.652 | dB/ft |              |
|             |                          |                       | 1.1       | 1.59 | 2.45  | 3.62  | 5.42  | dB/m  |              |
| FMCA9976-6  | 6 inch                   | Insertion Loss (Typ.) | 0.37      | 0.45 | 0.58  | 0.76  | 1.03  | dB    | 0.016        |
| FMCA9976-12 | 12 inch                  | Insertion Loss (Typ.) | 0.54      | 0.69 | 0.95  | 1.31  | 1.86  | dB    | 0.017        |
| FMCA9976-24 | 24 inch                  | Insertion Loss (Typ.) | 0.87      | 1.17 | 1.69  | 2.41  | 3.51  | dB    | 0.021        |
| FMCA9976-36 | 36 inch                  | Insertion Loss (Typ.) | 1.21      | 1.66 | 2.44  | 3.51  | 5.16  | dB    | 0.025        |
| FMCA9976-48 | 48 inch                  | Insertion Loss (Typ.) | 1.54      | 2.14 | 3.18  | 4.61  | 6.81  | dB    | 0.029        |

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:                | 0.017 pounds   |
| Additional Weight per Inch: | 0.00031 pounds |

### Mechanical Specifications

#### Cable Assembly

Weight 0.017 lbs [7.71 g]

#### Cable

|                                      |                            |
|--------------------------------------|----------------------------|
| Cable Type                           | FM-P047                    |
| Impedance                            | 50 Ohms                    |
| Inner Conductor Type                 | Solid                      |
| Inner Conductor Material and Plating | Copper, Silver             |
| Dielectric Type                      | FEP                        |
| Number of Shields                    | 2                          |
| Shield Layer 1                       | Silver Plated Copper Tape  |
| Shield Layer 2                       | Silver Plated Copper Braid |
| Jacket Material                      | FEP, Blue                  |
| Jacket Diameter                      | 0.056 in [1.42 mm]         |
| One Time Minimum Bend Radius         | 0.2 in [5.08 mm]           |
| Repeated Minimum Bend Radius         | 0.4 in [10.16 mm]          |

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#### Connectors

| Description                   | Connector 1            | Connector 2            |
|-------------------------------|------------------------|------------------------|
| Type                          | SMA Female             | SMA Female             |
| Specification                 | MIL-STD-348            | MIL-STD-348            |
| Impedance                     | 50 Ohms                | 50 Ohms                |
| Configuration                 | Straight               | Straight               |
| Contact Material and Plating  | Beryllium Copper, Gold | Beryllium Copper, Gold |
| Contact Plating Specification | MIL-G-45204            | MIL-G-45204            |
| Dielectric Type               | PTFE                   | PTFE                   |
| Body Material and Plating     | Brass, Gold            | Brass, Gold            |
| Body Plating Specification    | MIL-G-45204            | MIL-G-45204            |

#### Environmental Specifications

Operating Range Temperature -65 to +165 deg C

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

#### Plotted and Other Data

Notes:

## SMA Female to SMA Female Cable FM-P047 Coax



### FMCA9976

#### Typical Performance Data

#### How to Order

Part Number Configuration:

**FMCA9976**

**- xx**

**uu**

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

Example: FMCA9976-12 = 12 inches long cable  
FMCA9976-100cm = 100 cm long cable

SMA Female to SMA Female Cable FM-P047 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.

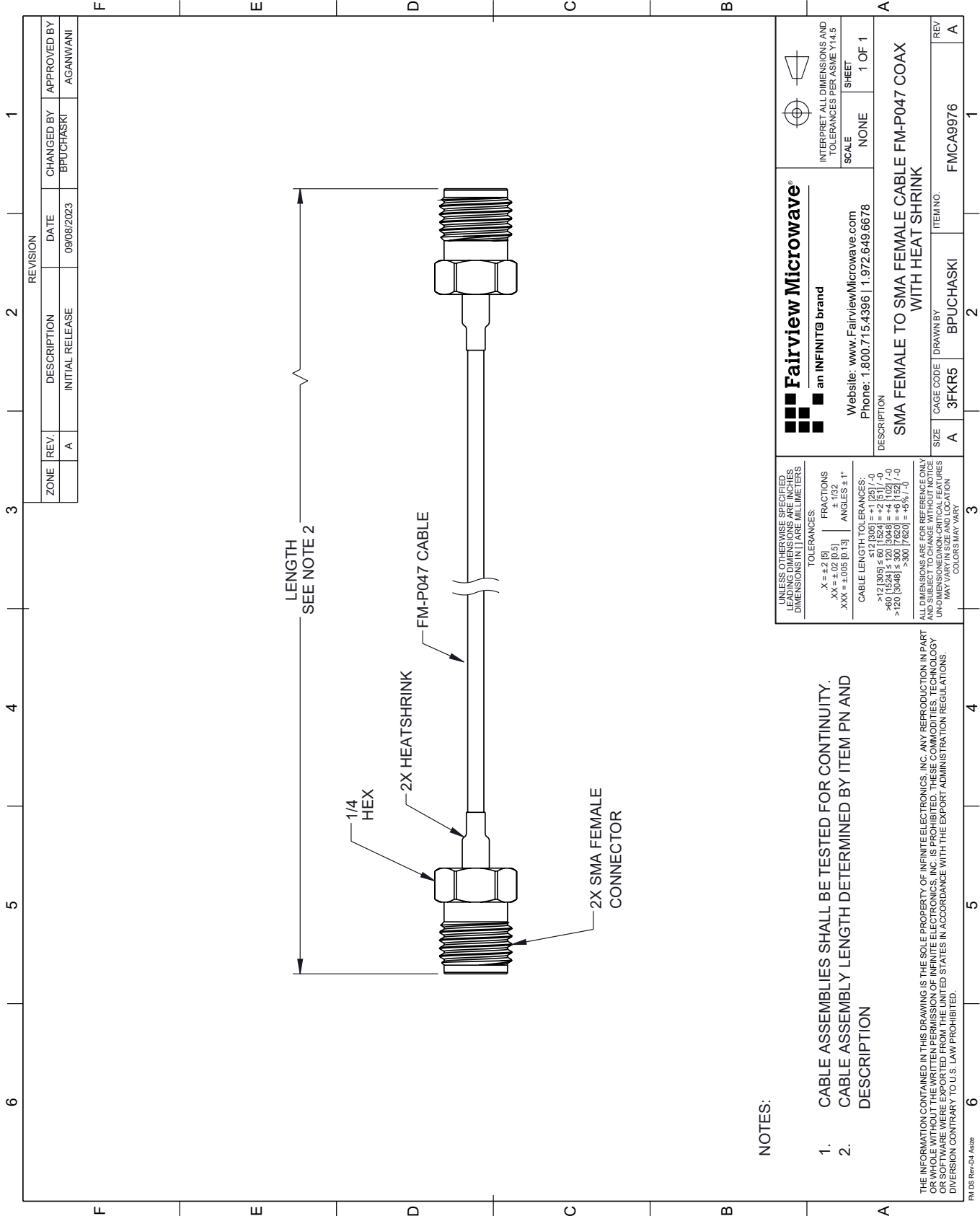
For additional information on this product, please click the following link: [SMA Female to SMA Female Cable FM-P047 Coax FMCA9976](#)

URL: <https://www.fairviewmicrowave.com/sma-female-to-sma-female-cable-fm-p047-coax-fmca9976-p.aspx>

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# FMCA9976 CAD Drawing

## SMA Female to SMA Female Cable FM-P047 Coax



| REVISION |      | DATE            | CHANGED BY | APPROVED BY |
|----------|------|-----------------|------------|-------------|
| ZONE     | REV. | DESCRIPTION     | DATE       | APPROVED BY |
|          | A    | INITIAL RELEASE | 09/08/2023 | BPUCHASKI   |
|          |      |                 |            | AGANWANI    |

**NOTES:**

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

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|   |                  |   |
|---|------------------|---|
| <p><b>Fairview Microwave®</b><br/>an INFINIT® brand</p>   |                  | <p>INTERPRET ALL DIMENSIONS AND TOLERANCES PER ASME Y14.5</p> |
| <p>Website: <a href="http://www.FairviewMicrowave.com">www.FairviewMicrowave.com</a><br/>Phone: 1.800.715.4396   1.972.649.6678</p> |                  | <p>SCALE: NONE<br/>SHEET: 1 OF 1</p>                          |
| <p>DESCRIPTION: SMA FEMALE TO SMA FEMALE CABLE FM-P047 COAX WITH HEAT SHRINK</p>  |                  |   |
| SIZE: A   | CAGE CODE: 3FKR5 | ITEM NO: FMCA9976   |
| DRAWN BY: BPUCHASKI   | REV: A           |   |

UNLESS OTHERWISE SPECIFIED, LEADING DIMENSIONS ARE IN INCHES AND UNLEADING DIMENSIONS ARE IN MILLIMETERS

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

CABLE LENGTH TOLERANCES:  
 <12 (305) ±.12 (3.05) = ±.1 (2.5) / -0  
 >12 (305) ≤ 60 (1524) = ±.2 (5.1) / -0  
 >60 (1524) ≤ 120 (3048) = ±.4 (10.2) / -0  
 >120 (3048) ≤ 300 (7620) = ±.8 (20.3) / -0  
 >300 (7620) = ±.8 (20.3) / -0

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