

## 2.92mm Female to 2.92mm Female Cable FM-P047 Coax



### FMCA9974

#### Configuration

- Connector 1: 2.92mm Female
- Connector 2: 2.92mm Female
- Cable Type: FM-P047
- Coax Flex Type: Flexible

#### Features

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

#### Applications

- General Purpose
- Laboratory Use

#### Description

The 2.92mm female to 2.92mm female cable using FM-P047 coax, part number FMCA9974, from Fairview Microwave is in-stock and ships same day. This Fairview 2.92mm to 2.92mm 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 FMCA9974 2.92mm female to 2.92mm 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             | Minimum | Typical    | Maximum | Units        |
|-------------------------|---------|------------|---------|--------------|
| Frequency Range         | DC      |            | 40      | 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             | 2500 | 5000 | 10000 | 20000 | 40000 | MHz   |              |
| FMCA9974    | Custom Lengths Available | Insertion Loss (Typ.) | 0.54 | 0.79 | 1.169 | 1.753 | 2.682 | dB/ft |              |
|             |                          |                       | 1.77 | 2.58 | 3.84  | 5.76  | 8.8   | dB/m  |              |
| FMCA9974-6  | 6 inch                   | Insertion Loss (Typ.) | 0.47 | 0.6  | 0.79  | 1.08  | 1.55  | dB    | 0.015        |
| FMCA9974-12 | 12 inch                  | Insertion Loss (Typ.) | 0.74 | 0.99 | 1.37  | 1.96  | 2.89  | dB    | 0.016        |
| FMCA9974-24 | 24 inch                  | Insertion Loss (Typ.) | 1.28 | 1.78 | 2.54  | 3.71  | 5.57  | dB    | 0.02         |
| FMCA9974-36 | 36 inch                  | Insertion Loss (Typ.) | 1.82 | 2.56 | 3.71  | 5.46  | 8.25  | dB    | 0.024        |
| FMCA9974-48 | 48 inch                  | Insertion Loss (Typ.) | 2.36 | 3.35 | 4.88  | 7.22  | 10.93 | dB    | 0.028        |

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:                | 0.016 pounds   |
| Additional Weight per Inch: | 0.00031 pounds |

## Mechanical Specifications

### Cable Assembly

|        |                    |
|--------|--------------------|
| Weight | 0.016 lbs [7.26 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                          | 2.92mm Female                      | 2.92mm Female                      |
| Impedance                     | 50 Ohms                            | 50 Ohms                            |
| Configuration                 | Straight                           | Straight                           |
| Contact Material and Plating  | Beryllium Copper, Gold over Nickel | Beryllium Copper, Gold over Nickel |
| Contact Plating Specification | 50 µin minimum                     | 50 µin minimum                     |
| Dielectric Type               | PEI                                | PEI                                |
| Body Material and Plating     | Passivated Stainless Steel         | Passivated Stainless Steel         |
| Body Plating Specification    | SAE-AMS-2700                       | SAE-AMS-2700                       |

Environmental Specifications

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

Plotted and Other Data

Notes:

## 2.92mm Female to 2.92mm Female Cable FM-P047 Coax



### FMCA9974

#### Typical Performance Data

#### How to Order

Part Number Configuration:

**FMCA9974**

**- xx**

**uu**

Unit of Measure:  
cm = Centimeters  
<blank> = Inches

Length

Base Number

Example: FMCA9974-12 = 12 inches long cable  
FMCA9974-100cm = 100 cm long cable

2.92mm Female to 2.92mm 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.

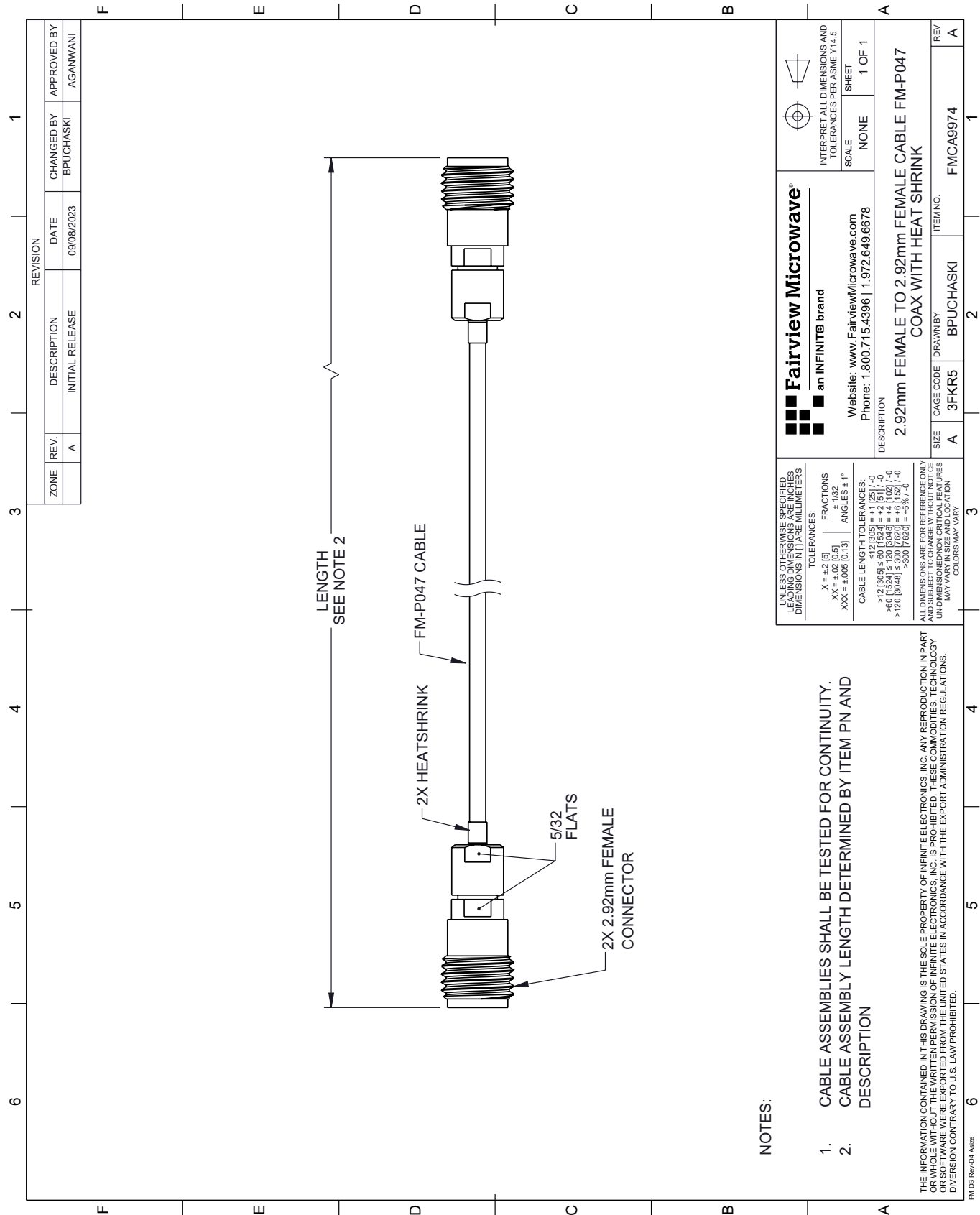
For additional information on this product, please click the following link: [2.92mm Female to 2.92mm Female Cable FM-P047 Coax FMCA9974](#)

URL: <https://www.fairviewmicrowave.com/2.92mm-female-to-2.92mm-female-cable-fm-p047-coax-fmca9974-p.aspx>

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FMCA9974 CAD Drawing

2.92mm Female to 2.92mm Female Cable FM-P047 Coax



NOTES:

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

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FM DS Rev-D4 Alt2a

|                                                                                                                                                                                                                                                                                                                   |  |                                                                                   |  |                                                        |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-----------------------------------------------------------------------------------|--|--------------------------------------------------------|--|
| UNLESS OTHERWISE SPECIFIED, LEADING DIMENSIONS ARE IN INCHES. DIMENSIONS IN [ ] ARE MILLIMETERS.                                                                                                                                                                                                                  |  | Fairview Microwave®<br>an INFINITI® brand                                         |  | INTERPRET ALL DIMENSIONS AND TOLERANCES PER ASME Y14.5 |  |
| TOLERANCES:                                                                                                                                                                                                                                                                                                       |  | Website: <a href="http://www.FairviewMicrowave.com">www.FairviewMicrowave.com</a> |  | SCALE: NONE                                            |  |
| X = ±.2 [5]                                                                                                                                                                                                                                                                                                       |  | Phone: 1.800.715.4396   1.972.649.6678                                            |  | SHEET: 1 OF 1                                          |  |
| .XX = ±.02 [0.5]                                                                                                                                                                                                                                                                                                  |  |                                                                                   |  |                                                        |  |
| .XXX = ±.005 [0.13]                                                                                                                                                                                                                                                                                               |  |                                                                                   |  |                                                        |  |
| FRACTIONS: ± 1/32                                                                                                                                                                                                                                                                                                 |  |                                                                                   |  |                                                        |  |
| ANGLES: ± 1°                                                                                                                                                                                                                                                                                                      |  |                                                                                   |  |                                                        |  |
| CABLE LENGTH TOLERANCES:                                                                                                                                                                                                                                                                                          |  |                                                                                   |  |                                                        |  |
| ≤ 12 [305] = ±.1 [2.5]                                                                                                                                                                                                                                                                                            |  |                                                                                   |  |                                                        |  |
| > 12 [305] ≤ 60 [1524] = ±.2 [5.1]                                                                                                                                                                                                                                                                                |  |                                                                                   |  |                                                        |  |
| > 60 [1524] ≤ 120 [3048] = ±.4 [10.2]                                                                                                                                                                                                                                                                             |  |                                                                                   |  |                                                        |  |
| > 120 [3048] ≤ 300 [7620] = ±.6 [15.2]                                                                                                                                                                                                                                                                            |  |                                                                                   |  |                                                        |  |
| > 300 [7620] = ±.8 [20.3]                                                                                                                                                                                                                                                                                         |  |                                                                                   |  |                                                        |  |
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| MAY VARY IN SIZE AND LOCATION. COLORS MAY VARY.                                                                                                                                                                                                                                                                   |  |                                                                                   |  |                                                        |  |
|                                                                                                                                                                                                                                                                                                                   |  | DESCRIPTION                                                                       |  | 2.92mm FEMALE TO 2.92mm FEMALE CABLE FM-P047           |  |
|                                                                                                                                                                                                                                                                                                                   |  |                                                                                   |  | COAX WITH HEAT SHRINK                                  |  |
|                                                                                                                                                                                                                                                                                                                   |  | SIZE                                                                              |  | CAGE CODE                                              |  |
|                                                                                                                                                                                                                                                                                                                   |  | A                                                                                 |  | 3FKR5                                                  |  |
|                                                                                                                                                                                                                                                                                                                   |  | DRAWN BY                                                                          |  | BPUCHASKI                                              |  |
|                                                                                                                                                                                                                                                                                                                   |  | ITEM NO.                                                                          |  | FMCA9974                                               |  |
|                                                                                                                                                                                                                                                                                                                   |  | REV                                                                               |  | A                                                      |  |