

## SSMC Plug to SSMC Jack Bulkhead Cable FM-P047 Coax



### FMCA9985

#### Configuration

- Connector 1: SSMC Plug
- Connector 2: SSMC Jack Bulkhead
- Cable Type: FM-P047
- Coax Flex Type: Flexible

#### Features

- Max Frequency 12.4 GHz
- Shielding Effectivity > 90 dB
- 70% Phase Velocity
- Double Shielded
- FEP Jacket

#### Applications

- General Purpose
- Laboratory Use

#### Description

The SSMC plug to SSMC jack bulkhead cable using FM-P047 coax, part number FMCA9985, from Fairview Microwave is in-stock and ships same day. This Fairview SSMC to SSMC cable assembly has a plug to jack 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 FMCA9985 SSMC plug to SSMC jack cable assembly operates to 12.4 GHz. Our RF cable assembly with SSMC bulkhead interface allows designers to create external connections on their product enclosures, and can be used in a variety of other rack mount and panel mount applications. 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		12.4	GHz
VSWR			1.4:1	
Velocity of Propagation		70		%
RF Shielding	90			dB
Capacitance		29 [95.14]		pF/ft [pF/m]

#### Specifications by Frequency

## SSMC Plug to SSMC Jack Bulkhead Cable FM-P047 Coax



### FMCA9985

Part Number	Length	Description	F1	F2	F3	F4	F5	Units	Weight (lbs)
			Frequency	1000	2500	5000	10000	12400	
FMCA9985	Custom Lengths Available	Insertion Loss (Typ.)	0.34	0.54	0.786	1.169	1.327	dB/ft	
			1.1	1.77	2.58	3.84	4.36	dB/m	
FMCA9985-6	6 inch	Insertion Loss (Typ.)	0.77	0.87	1	1.19	1.27	dB	0.017
FMCA9985-12	12 inch	Insertion Loss (Typ.)	0.94	1.14	1.39	1.77	1.93	dB	0.018
FMCA9985-24	24 inch	Insertion Loss (Typ.)	1.27	1.68	2.18	2.94	3.26	dB	0.022
FMCA9985-36	36 inch	Insertion Loss (Typ.)	1.61	2.22	2.96	4.11	4.59	dB	0.026
FMCA9985-48	48 inch	Insertion Loss (Typ.)	1.94	2.76	3.75	5.28	5.91	dB	0.03

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:	0.3 dB
Loss due to Connector 2:	0.3 dB
Base Weight:	0.018 pounds
Additional Weight per Inch:	0.00031 pounds

### Mechanical Specifications

#### Cable Assembly

Weight 0.018 lbs [8.16 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]

## SSMC Plug to SSMC Jack Bulkhead Cable FM-P047 Coax



### FMCA9985

#### Connectors

Description	Connector 1	Connector 2
Type	SSMC Plug	SSMC Jack Bulkhead
Impedance	50 Ohms	50 Ohms
Configuration	Straight	Straight
Mating Cycles	500	
Contact Material and Plating	Beryllium Copper, Gold	Beryllium Copper, Gold
Contact Plating Specification	MIL-G-45204	MIL-G-45204
Dielectric Type	Teflon	Teflon
Outer Conductor Material and Plating		Beryllium Copper, Gold
Outer Conductor Plating Specification		MIL-G-45204
Body Material and Plating	Beryllium Copper, Gold	Beryllium Copper, Gold
Body Plating Specification	MIL-G-45204	MIL-G-45204
Coupling Nut Material and Plating	Beryllium Copper, Gold	
Coupling Nut Plating Specification	MIL-G-45204	
Torque	1.75 in-lbs 0.2 Nm	1.75 in-lbs 0.2 Nm

#### Environmental Specifications

Operating Range Temperature	-65 to +165 deg C
Shock	Method 213, Condition B, 75G @6ms @1/2 sine
Vibration	Method 204, Condition D (20G)
Salt Fog	Method 101, Condition B, 5% salt solution

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

#### Plotted and Other Data

Notes:

## SSMC Plug to SSMC Jack Bulkhead Cable FM-P047 Coax



### FMCA9985

#### Typical Performance Data

#### How to Order

Part Number Configuration:

**FMCA9985**

- **xx**

**uu**

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

Example: FMCA9985-12 = 12 inches long cable  
FMCA9985-100cm = 100 cm long cable

SSMC Plug to SSMC Jack Bulkhead 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.

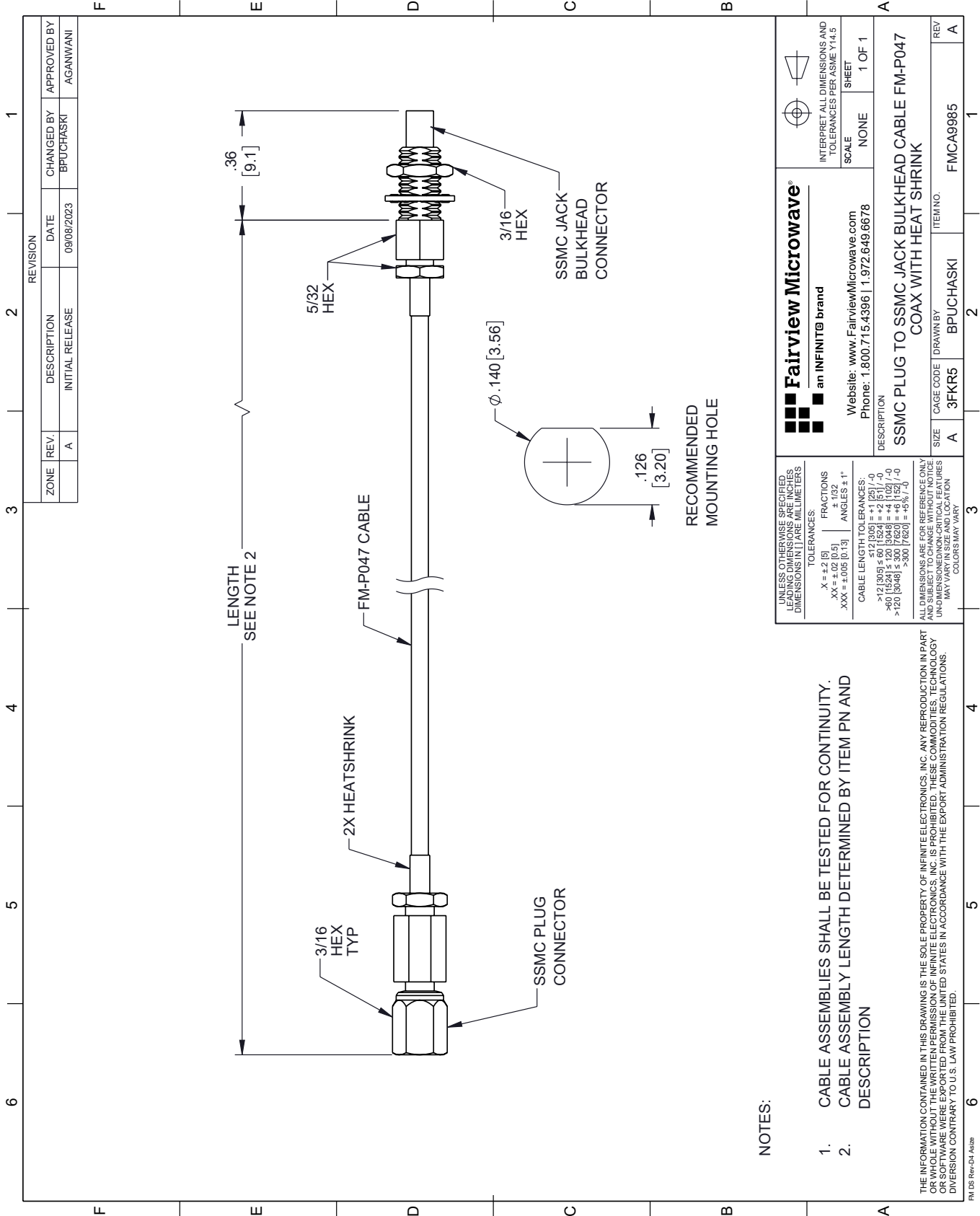
For additional information on this product, please click the following link: [SSMC Plug to SSMC Jack Bulkhead Cable FM-P047 Coax FMCA9985](#)

URL: <https://www.fairviewmicrowave.com/ssmc-plug-to-ssmc-jack-bulkhead-cable-fm-p047-coax-fmca9985-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.

# FMCA9985 CAD Drawing

SSMC Plug to SSMC Jack Bulkhead Cable FM-P047 Coax



**NOTES:**

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

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF INFINITE ELECTRONICS, INC. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF INFINITE ELECTRONICS, INC. IS PROHIBITED. THESE COMMODITIES, TECHNOLOGY OR SOFTWARE WERE EXPORTED FROM THE UNITED STATES IN ACCORDANCE WITH THE EXPORT ADMINISTRATION REGULATIONS. DIVERSION CONTRARY TO U.S. LAW PROHIBITED.

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

**TOLERANCES:**  
 .X = ±.2 [5] FRACTIONS ±.132  
 .XX = ±.02 [0.5] ANGLES ± 1°  
 .XXX = ±.005 [0.13]

**CABLE LENGTH TOLERANCES:**  
 <12 [305] ≤ 60 [1524] = ±.2 [5] / -0  
 >60 [1524] ≤ 120 [3048] = ±.4 [102] / -0  
 >120 [3048] ≤ 300 [7620] = ±.8 [20] / -0

ALL DIMENSIONS ARE FOR REFERENCE ONLY. UNKNOWN DIMENSIONS/NON-CRITICAL FEATURES MAY VARY IN SIZE AND LOCATION. COLORS MAY VARY.

**Fairview Microwave®**  
 an INFINIT® brand

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

DESCRIPTION: SSMC PLUG TO SSMC JACK BULKHEAD CABLE FM-P047 COAX WITH HEAT SHRINK

SIZE	A	CAGE CODE	3FKR5	DRAWN BY	BPUCHASKI	ITEM NO.	FMCA9985
SCALE	NONE	SHEET	1 OF 1	REV	A		

INTERPRET ALL DIMENSIONS AND TOLERANCES PER ASME Y14.5