

## 1.85mm Male to 1.85mm Male Cable 12 Inch Length Using FM-103FLEX Coax

The 1.85mm male to 1.85mm male 12 inch cable using FM-103FLEX coax, part number FMCA1978-12, from Fairview Microwave is in-stock and ships same day. This Fairview 1.85mm to 1.85mm cable assembly has a male to male gender configuration with 50 ohm flexible FM-103FLEX coax. Fairview Microwave's flexible RF cable assemblies are ideal for applications where tight bends and continual flexure are required. The FMCA1978-12 1.85mm male to 1.85mm male cable assembly operates to 65 GHz. The triple 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		65	GHz
VSWR			1.4:1	
Velocity of Propagation		76		%
RF Shielding	90			dB
Capacitance		26 [85.3]		pF/ft [pF/m]
Inductance		65 [213.25]		uH/ft [uH/m]
Input Power (Peak)			550	Watts

### Performance by Frequency

Description	F1	F2	F3	F4	F5	Units
Frequency	5	10	20	40	65	GHz
Insertion Loss (Max.)	0.84	1.12	1.55	2.2	2.85	dB
Insertion Loss (Typ.)	0.78	1.04	1.43	2.02	2.61	dB

### Mechanical Specifications

#### Cable Assembly

Length\* 12 in [304.8 mm]  
 Diameter 0.375 in [9.53 mm]

#### Cable

Cable Type FM-103FLEX  
 Impedance 50 Ohms  
 Inner Conductor Type Stranded  
 Inner Conductor Material and Plating Copper, Silver  
 Dielectric Type PTFE  
 Number of Shields 3  
 Shield Layer 1 Silver Plated Copper  
 Shield Layer 2 Conductive Tape



### Configuration:

- 1.85mm Male
- 1.85mm Male
- FM-103FLEX

### Features:

- Max Frequency 65 GHz
- Shielding Effectivity > 90 dB
- 76% Phase Velocity
- Triple Shielded
- ETFE Jacket

### Applications:

- General Purpose
- Laboratory Use

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Shield Layer 3	Silver Plated Copper
Jacket Material	ETFE, Gray
Jacket Diameter	0.103 in [2.62 mm]
One Time Minimum Bend Radius	0.32 in [8.13 mm]
Repeated Minimum Bend Radius	0.96 in [24.38 mm]
Typical Flex Cycles	500,000

**Connectors**

Description	Connector 1	Connector 2
Type	1.85mm Male	1.85mm Male
Impedance	50 Ohms	50 Ohms
Contact Material & Plating	Beryllium Copper, Gold	Beryllium Copper, Gold
Contact Plating Spec.	ASTM-B488 50µ In. Min	ASTM-B488 50µ In. Minimum
Dielectric Type	PPO	PPO
Body Material & Plating	Passivated Stainless Steel	Passivated Stainless Steel
Body Plating Spec.	SAE-AMS-2700	SAE-AMS-2700
Coupling Nut Material & Plating	Passivated Stainless Steel	Passivated Stainless Steel
Coupling Nut Plating Spec.	SAE-AMS-2700	SAE-AMS-2700
Hex Size	5/16 Inch	5/16 Inch
Torque	8 in-lbs 0.9 Nm	8 in-lbs 0.9 Nm

## Mechanical Specification Notes:

\*All cable assemblies have a length tolerance of 1.5% or  $\pm 3/8"$ , whichever is greater.

**Environmental Specifications**
**Temperature**

Operating Range -45 to +125 deg C

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

**Plotted and Other Data**

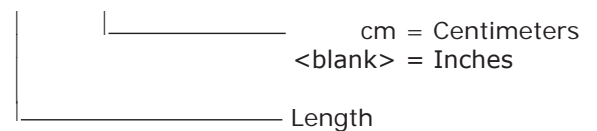
Notes:

- Values at 25°C, sea level.

**How to Order**

Part Number Configuration:

**FMCA1978 - xx uu**



Example: FMCA1978-12 = 12 inches long cable  
 FMCA1978-100cm = 100 cm long cable

1.85mm Male to 1.85mm Male Cable 12 Inch Length Using FM-103FLEX Coax from Fairview Microwave has same day shipment for domestic and International orders. Our RF, microwave and fiber optic products maintain a 99% availability and are part of the broadest selection in the industry.

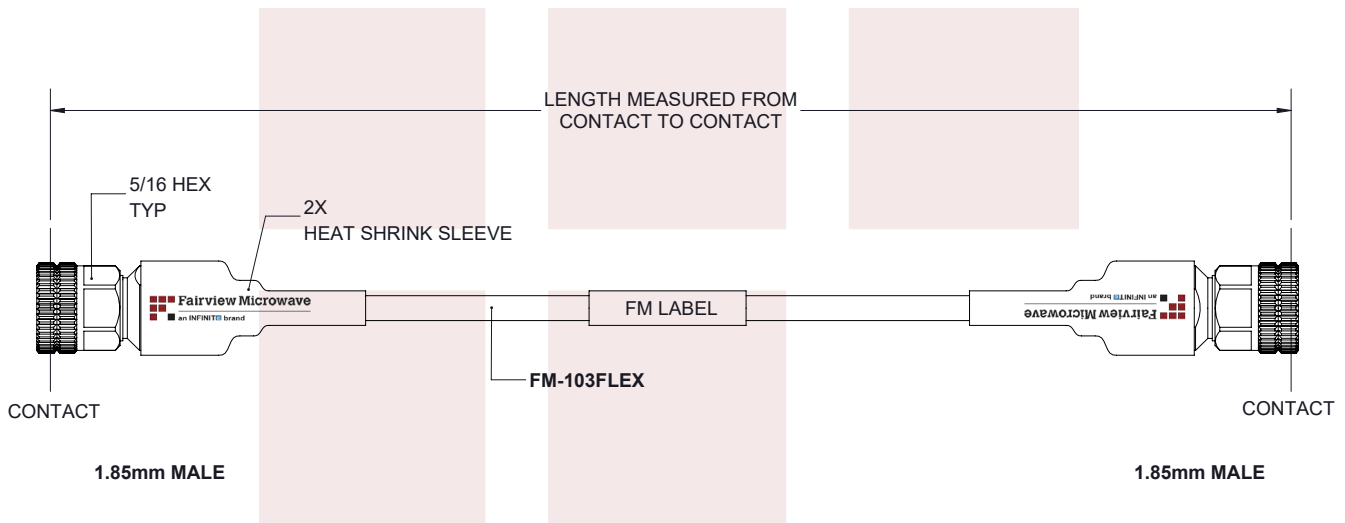
Click the following link to obtain additional part information: [1.85mm Male to 1.85mm Male Cable 12 Inch Length Using FM-103FLEX Coax FMCA1978-12](#)

URL: <https://www.fairviewmicrowave.com/1.85mm-male-1.85mm-male-FM-103FLEX-cable-assembly-FMCA1978-12-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.



REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	11/08/19	S.ELLIS



FM LABEL:

www.FAIRVIEWMICROWAVE.com  
FMCA1978

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<p><b>Fairview Microwave</b> an INFINIT<sup>®</sup> brand</p>	<p>UNLESS OTHERWISE SPECIFIED LEADING DIMENSIONS ARE INCHES DIMENSIONS IN [ ] ARE MILLIMETERS</p>		<p>THIRD-ANGLE PROJECTION</p>		
	<p>TOLERANCES:</p> <p>.X = ±.2 [ .51]    FRACTIONS ± 1/32 .XX = ±.02 [ .51]    ANGLES ± 1° .XXX = ±.005 [ .13]</p>		<p>CABLE LENGTH (L) TOLERANCES:</p> <p>L ≤ 12 [305] = +1 [25] / -0 12 [305] &lt; L ≤ 60 [1524] = +2 [51] / -0 60 [1524] &lt; L ≤ 120 [3048] = +4 [102] / -0 120 [3048] &lt; L ≤ 300 [7620] = +6 [152] / -0 300 [7620] &lt; L = +5%L / -0</p>		<p>THE INFORMATION AND DESIGN IN THIS DOCUMENT IS THE PROPERTY OF FAIRVIEW MICROWAVE CORPORATION. ALL RIGHTS RESERVED.</p>
<p>TITLE</p> <p>1.85mm Male to 1.85mm Male Cable 12 Inch Length Using FM-103FLEX Coax</p>		<p>ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.</p>		<p>SHEET 1 OF 1</p> <p>SCALE N/A</p>	
SIZE A	CAGE CODE 3FKR5	DRAWN BY K.DANG	PART NUMBER FMCA1978	REV A	

T-Rev.D