

Precision 1.85mm NMD Female to 1.85mm Female Cable VNA High Flex Coax

The 1.85mm NMD female to 1.85mm female cable using VNA high flex coax, part number FMC970, from Fairview Microwave is in-stock and ships same day. This Fairview 1.85mm NMD to 1.85mm cable assembly has a female to female gender configuration with 50 ohm flexible FM-VNA-HF coax. Fairview Microwave's flexible RF cable assemblies are ideal for applications where tight bends and continual flexure are required. The FMC970 1.85mm NMD female to 1.85mm female cable assembly operates to 70 GHz. The triple shielding of this Fairview cable assembly provides excellent shielding effectiveness of better than 100 dB. The stainless steel, braided armoring provides a rugged and flexible test cable solution that exceeds 100,000 flexure cycles with proper care. Very low insertion loss and VSWR as low as 1.4:1 with phase stability of $\pm 8^\circ$ with flexure give these test cables excellent electrical properties for even the most demanding applications. The rugged connectors also allow up to 5,000 mating cycles when attached with proper care.

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		70	GHz
VSWR			1.4:1	
Velocity of Propagation		78		%
RF Shielding	100			dB
Group Delay		1.34 [4.4]		ns/ft [ns/m]
Capacitance		26.5 [86.94]		pF/ft [pF/m]
Input Power (Average)			14	Watts
Phase Stability with Flexure		± 8		Degrees
Amplitude Stability with Flexure		0.1		dB

Performance by Frequency

Description	F1	F2	F3	F4	F5	Units
Frequency	50	70				GHz
Insertion Loss (Max.)	1.6	2				dB/ft
	5.25	6.56				dB/m
VSWR (Max.)	1.4:1	1.4:1				
Power Handling (Max.)					18	W

Electrical Specification Notes:
 Values at 25°C, sea level.



Configuration:

- 1.85mm NMD Female
- 1.85mm Female
- FM-VNA-HF

Features:

- Max Frequency 70 GHz
- Shielding Effectivity > 100 dB
- 78% Phase Velocity
- Triple Shielded
- Phase and Amplitude stable designed for VNA testing
- 1.4:1 VSWR to 70 GHz
- Excellent Amplitude and Phase stability with flexure
- Armored Cable construction is highly flexible
- Non Conductive Nomex outer sleeve
- In stock and ready to ship

Applications:

- General Purpose
- Laboratory Use
- VNA Test Cables
- Probe testing to 70 GHz
- Precision Development testing
- For use in Automated Test Systems

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Mechanical Specifications

Cable Assembly

Length* 0 in [0 mm]

Cable

Cable Type FM-VNA-HF
 Impedance 50 Ohms
 Inner Conductor Type Solid
 Inner Conductor Material and Plating Copper, Silver
 Dielectric Type PTFE
 Number of Shields 3
 Shield Layer 1 Silver Plated Copper Tape
 Shield Layer 2 Silver Plated Copper Braid
 Shield Layer 3 Silver Plated Copper Braid
 Jacket Diameter 0.27 in [6.86 mm]

One Time Minimum Bend Radius 1 in [25.4 mm]
 Flat Plate Crush 317 lbs/in [5.66 Kg/mm]

Connectors

Description	Connector 1	Connector 2
Type	1.85mm NMD Female	1.85mm Female
Impedance	50 Ohms	50 Ohms
Contact Material & Plating	Beryllium Copper, Gold	Beryllium Copper, Gold
Dielectric Type	ULTEM	ULTEM
Outer Cond Material & Plating	Passivated Stainless Steel	Passivated Stainless Steel
Body Material & Plating	Passivated Stainless Steel	Passivated Stainless Steel
Coupling Nut Material & Plating	Passivated Stainless Steel	
Torque	8 in-lbs 0.9 Nm	

Environmental Specifications

Temperature

Operating Range -55 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:

FMC970 - xx uu

cm = Centimeters

<blank> = Inches

Length

Example: FMC970-12 = 12 inches long cable
 FMC970-100cm = 100 cm long cable

Precision 1.85mm NMD Female to 1.85mm Female Cable VNA High Flex 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.

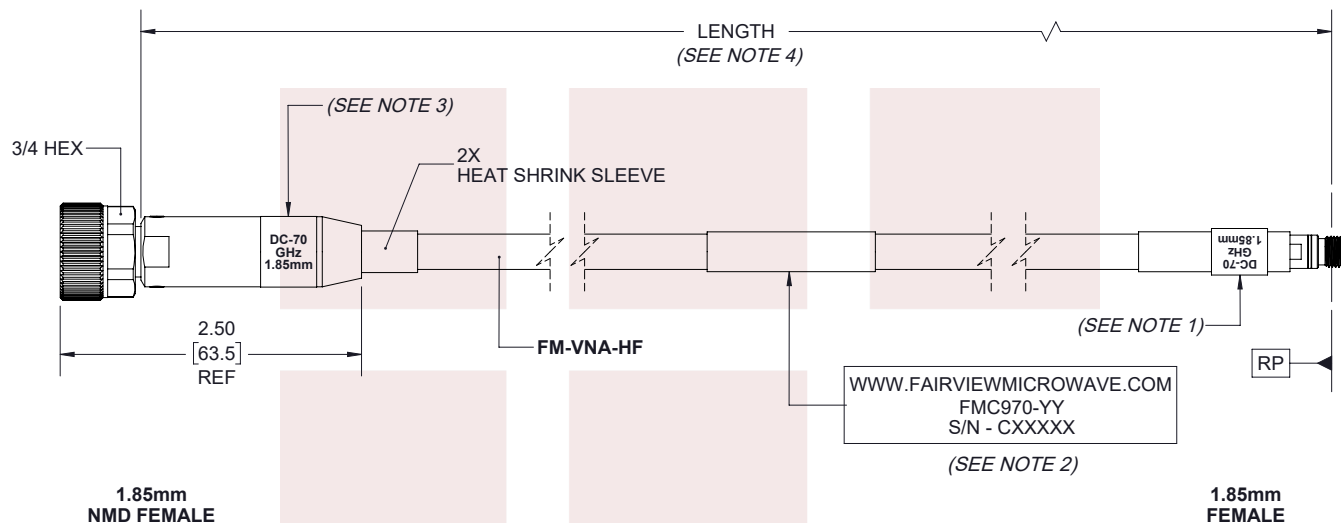
Click the following link to obtain additional part information: [Precision 1.85mm NMD Female to 1.85mm Female Cable VNA High Flex Coax FMC970](#)

URL: <https://www.fairviewmicrowave.com/precision-1.85mm-nmd-female-1.85mm-female-cable-vna-cable-coax-fmc970-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	6/2/2020	S.ELLIS



NOTES:

- WHITE LETTER ON BLACK LABEL.
- BLACK LETTER ON WHITE LABEL.
- BLACK LETTER ON SILVER LABEL WITH CLEAR COVER.
- CABLE LENGTH (L) TOLERANCES:
 - $L \leq 24 = \pm .25$ inches.
 - $L \geq 24 = \pm 2\%L$.

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TITLE				SHEET 1 OF 1	
Precision 1.85mm NMD Female to 1.85mm Female Cable VNA High Flex Coax				SCALE N/A	
SIZE A	CAGE CODE 3FKR5	DRAWN BY K.DANG	ITEM NO. FMC970	REV A	

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