Fairview Microwave
an INFINITE brand

FM40VNA004
DATA SHEET

Vector Network Analyzer (VNA) Ruggedized 40 GHz Test Cable 2.4mm Male to 2.4mm Male

The 2.4mm male to 2.4mm male cable using Vector Network Analyzer (VNA) ruggedized coax, part number FM40VNA004, from Fairview Microwave is in-stock and ships same day. This Fairview 2.4mm to 2.4mm cable assembly has a male to male gender configuration with 50 ohm flexible VNA-R coax. Fairview Microwave's flexible RF cable assemblies are ideal for applications where tight bends and continual flexure are required. The FM40VNA004 2.4mm male to 2.4mm male cable assembly operates to 40 GHz. The triple shielding of this Fairview cable assembly provides excellent shielding effectiveness of better than 90 dB. Fairview's high performance precision VNA test cables are designed to provide highly accurate repeatable test results. These rugged VNA test cables have excellent insertion loss, low VSWR and +/- 5° of phase stability with flexure. The precision stainless steel connectors and spiral stainless steel armoring are designed to limit torsional twist when the cables are flexed. These VNA test cables have a 5,000 mating cycle life when mated with proper care. The cable armoring prevents stress due to over bending and enhances amplitude and phase stability, while maintaining the flexibility required in a test environment. When properly calibrated, these test cables effectively extend the VNA test port to the terminating connector of the cable assembly allowing for accurate measurement of devices that cannot be directly connected to a network analyzer test port.

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		40	GHz
VSWR			1.38:1	
Velocity of Propagation		70		%
RF Shielding	90			dB
Capacitance		26.8 [87.93]		pF/ft [pF/m]
Phase Stability with Flexure		±5		Degrees

Performance by Frequency

Description	F1	F2	F3	F4	F5	Units
Frequency	18	26	40			GHz
Insertion Loss (Max.)	0.52	0.64	0.83			dB/ft
	1.71	2.1	2.72			dB/m
VSWR (Max.)	1.38:1	1.38:1	1.38:1			
Power Handling (Max.)			42			W

Mechanical Specifications

Cable Assembly

Length*	0 in [0 mm]

Configuration:

- 2.4mm Male
- 2.4mm Male
- VNA-R

Features:

- Max Frequency 40 GHz
- Shielding Effectivity > 90 dB
- 70% Phase Velocity
- Triple Shielded
- PET Jacket
- VNA Test Cables Extend VNA Test Ports
- Low VSWR and Low Insertion Loss
- Crush resistant stainless steel cable armor
- Flexible PET protective sleeve
- Connector resist twisting during flexure
- Rugged connector attachment
- Highly stable +/- 5° of phase change under flexure
- Serialized test data provided
- Same day shipment standard length assemblies

Applications:

- General Purpose
- Test & Measurement
- Laboratory Use
- VNA Test applications
- Production floor testing
- Precision lab testing

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Cable

Cable Type	VNA-R
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 Braid
Shield Layer 2	Silver Plated Copper Tape
Shield Layer 3	Silver Plated Copper Braid
Jacket Material	PET
Jacket Diameter	0.43 in [10.92 mm]
One Time Minimum Bend Radius	3 in [76.2 mm]

Connectors

Description	Connector 1	Connector 2
Type	2.4mm Male	2.4mm Male
Impedance	50 Ohms	50 Ohms
Contact Material & Plating	Beryllium Copper, Gold	Beryllium Copper, Gold
Dielectric Type	Noryl	Noryl
Body Material & Plating	Passivated Stainless Steel	Passivated Stainless Steel
Coupling Nut Material & Plating	Passivated Stainless Steel	Passivated Stainless Steel

Mechanical Specification Notes:
Crush Resistance: 1,050 lbs.
Jacket Material is a PET weave over a spiral stainless steel sheath

Environmental Specifications

Temperature

Operating Range	+125 deg C

Compliance Certifications (see product page for current document)

Plotted and Other Data

Notes:

How to Order

Part Number Configuration: **FM40VNA004 - xx uu**

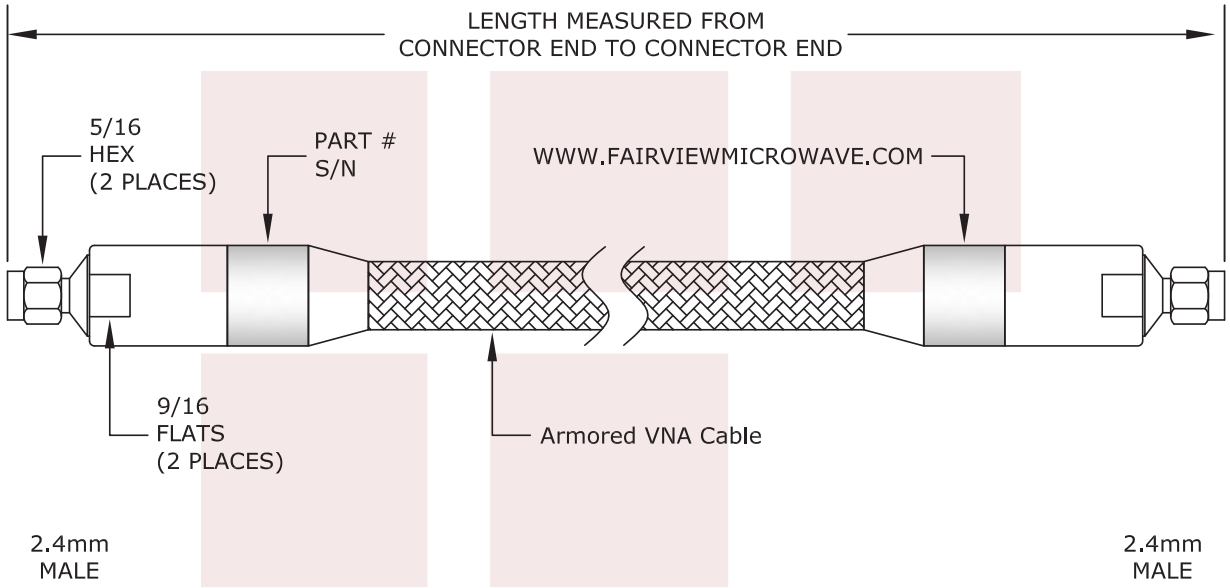
- uu: cm = Centimeters, <blank> = Inches
- xx: Length

Example: FM40VNA004-12 = 12 inches long cable
FM40VNA004-100cm = 100 cm long cable

Vector Network Analyzer (VNA) Ruggedized 40 GHz Test Cable 2.4mm Male to 2.4mm Male 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: Vector Network Analyzer (VNA) Ruggedized 40 GHz Test Cable 2.4mm Male to 2.4mm Male FM40VNA004

URL: https://www.fairviewmicrowave.com/2.4mm-male-2.4mm-male-cable-vna-cable-coax-fm40vna004-p.aspx



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TITLE Vector Network Analyzer (VNA) Ruggedized 40 GHz Test Cable 2.4mm Male to 2.4mm Male	DWG NO FM40VNA004	CAGE CODE 3FKR5			
	CAD FILE 072215	SHEET	SCALE N/A	SIZE A	2233

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