

## Vector Network Analyzer (VNA) Ruggedized 40 GHz Test Cable 2.92mm NMD Female to 2.92mm Male

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.

### 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.)	0.68	0.835	1.065			dB/ft
	2.23	2.74	3.49			dB/m
Power Handling (Max.)			42			W

### Mechanical Specifications

#### Cable Assembly

Length\* 0 in [0 mm]

#### 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]



### Configuration:

- 2.92mm NMD Female
- 2.92mm 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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**Connectors**

Description	Connector 1	Connector 2
Type	2.92mm NMD Female	2.92mm Male
Impedance	50 Ohms	50 Ohms
Contact Material & Plating	Beryllium Copper, Gold	Beryllium Copper, Gold
Dielectric Type	Noryl	Noryl
Outer Cond Material & Plating	Passivated Stainless Steel	
Body Material & Plating	Passivated Stainless Steel	Passivated Stainless Steel
Coupling Nut Material & Plating		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: **FM40VNA007 - xx uu**

cm = Centimeters  
 <blank> = Inches

Length

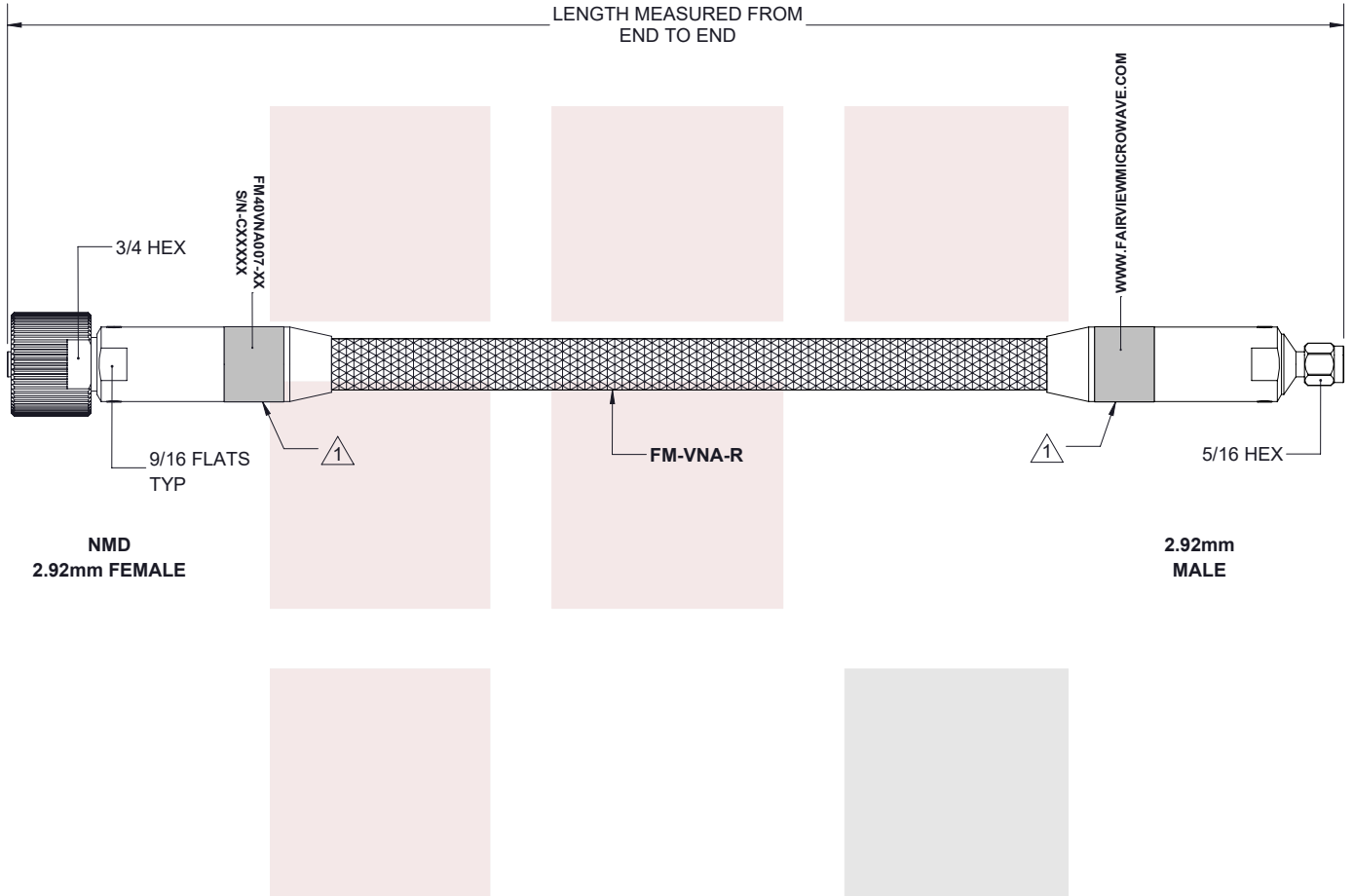
Example: FM40VNA007-12 = 12 inches long cable  
 FM40VNA007-100cm = 100 cm long cable

Vector Network Analyzer (VNA) Ruggedized 40 GHz Test Cable 2.92mm NMD Female to 2.92mm 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 2.92mm NMD Female to 2.92mm Male FM40VNA007](#)

URL: <https://www.fairviewmicrowave.com/2.92mm-nmd-female-2.92mm-male-cable-vna-cable-coax-fm40vna007-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.



STANDARD TOLERANCES	
.X	±0.2
.XX	±0.01
.XXX	±0.005

NOTES:  
1. BLACK LETTERS ON SILVER LABEL.

\*STANDARD TOLERANCES APPLY ONLY TO DIMENSIONS IN INCHES

<p><b>Fairview Microwave</b> RF COMPONENTS ON DEMAND. <i>Done!</i></p>	NOTES: 1. UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE NOMINAL. 2. ALL SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE AT ANY TIME. 3. DIMENSIONS ARE IN INCHES [mm].	
	TITLE Vector Network Analyzer (VNA) Ruggedized 40 GHz Test Cable 2.92mm NMD Female to 2.92mm Male	DWG NO FM40VNA007
CAD FILE 04/05/19	SHEET 1 OF 1	SCALE N/A
SIZE A	7361	