



## 1.85 mm NMD (F) to 1.85 mm NMD (M) Armored VNA Test Cable, Flexible, 25"

### Description:

**Model STQ-CW-VFVM025-F1** is a 25" long, cost effective, instrumentation grade, flexible, armored coaxial cable with a 1.85 mm NMD female and a 1.85 mm NMD male connector that covers the frequency range of DC to 67 GHz. The cable is especially designed and manufactured for VNA



applications with greater than 10,000 connections. The typical amplitude and phase stabilities at 67 GHz are  $\pm 0.05$  dB and  $\pm 4^\circ$  at a bending radius of 4.9", respectively. The coaxial cable utilizes the highest quality test instrumentation grade cable and a precision manufacturing process to guarantee superior microwave performance and mechanical durability. The impedance of the cable is 50 ohms. This model and other models, such as **STQ-CW-VFV025-F1**, may form a VNA test cable pair for custom test set applications. Other connector type combinations and lengths are offered under different models.

### Features:

- High Performance
- Armored
- Flexible
- Stable and Reliable
- Greater than 10,000 Connections

### Applications:

- Test Lab
- VNA

### Electrical Specifications:

Parameter	Condition	Minimum	Typical	Maximum
Frequency		DC		67 GHz
Insertion Loss	DC to 40 GHz		3.5 dB	
	40 to 50 GHz		4.0 dB	
	50 to 67 GHz		5.2 dB	
Return Loss			15 dB	
Phase Stability*			$\pm 4^\circ$	
Amplitude Stability*			$\pm 0.05$ dB	
Impedance			50 $\Omega$	
Breakdown Voltage				500 Volts
Radiation Shielding			90 dB	
Specification Temperature			+25 $^\circ$ C	
Operating Temperature		-40 $^\circ$ C		+85 $^\circ$ C

\*When wrapped (360°) around a 4.9" (124.5 mm) radius mandrel.



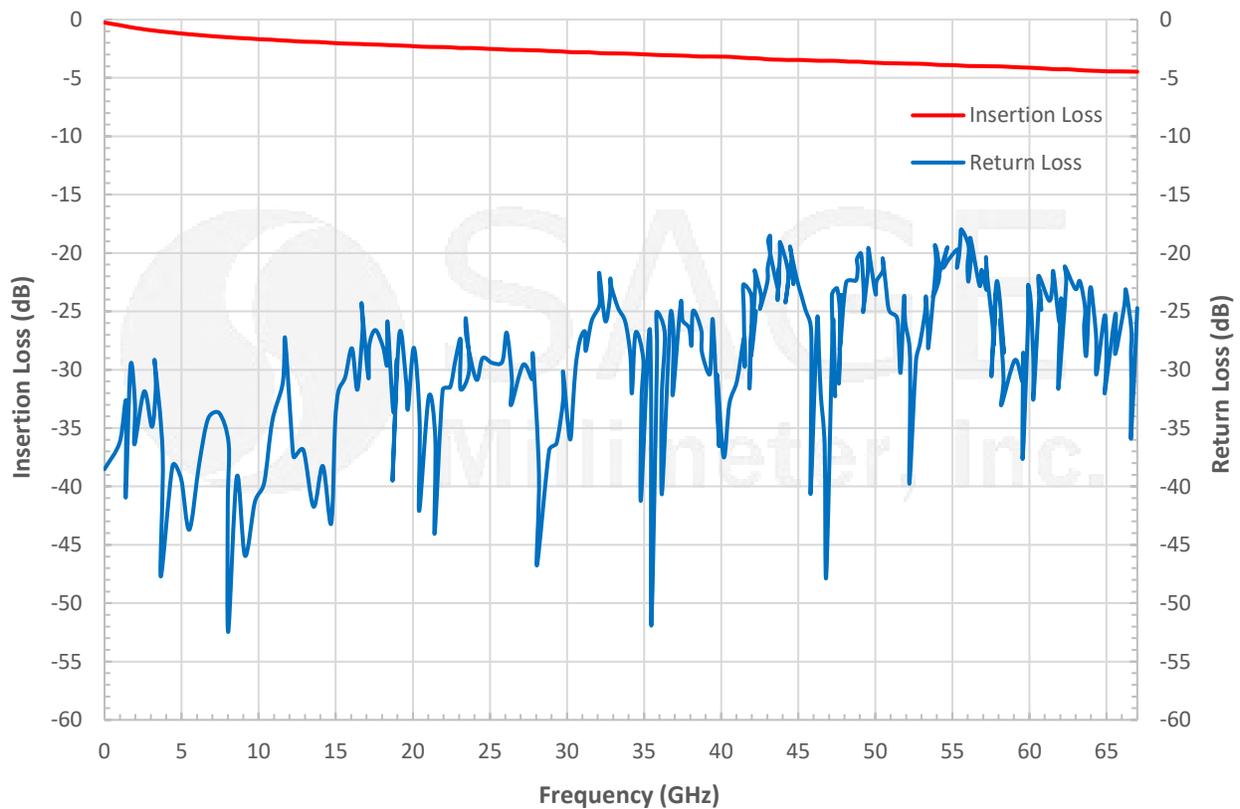


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### Mechanical Specifications:

Item	Specification
Connector 1	1.85 mm NMD Female
Connector 2	1.85 mm NMD Male
Minimum One-Time Bending Radius	2.36"
Minimum Repeated Bending Radius	4.9"
Connections	>10,000
Connector Contact Material/Plating	Beryllium Copper (BeCu)/Gold Plating Per MIL-G-45204
Connector / Cable Insulation Layer Material	Passivated Stainless Steel / PEI
Inner/Outer Cable Jacket Material	FEP/Stainless Steel Braid and Nylon
Cable Outer Diameter	0.598"
Length	25"
Outline	CW-VV-F8-V

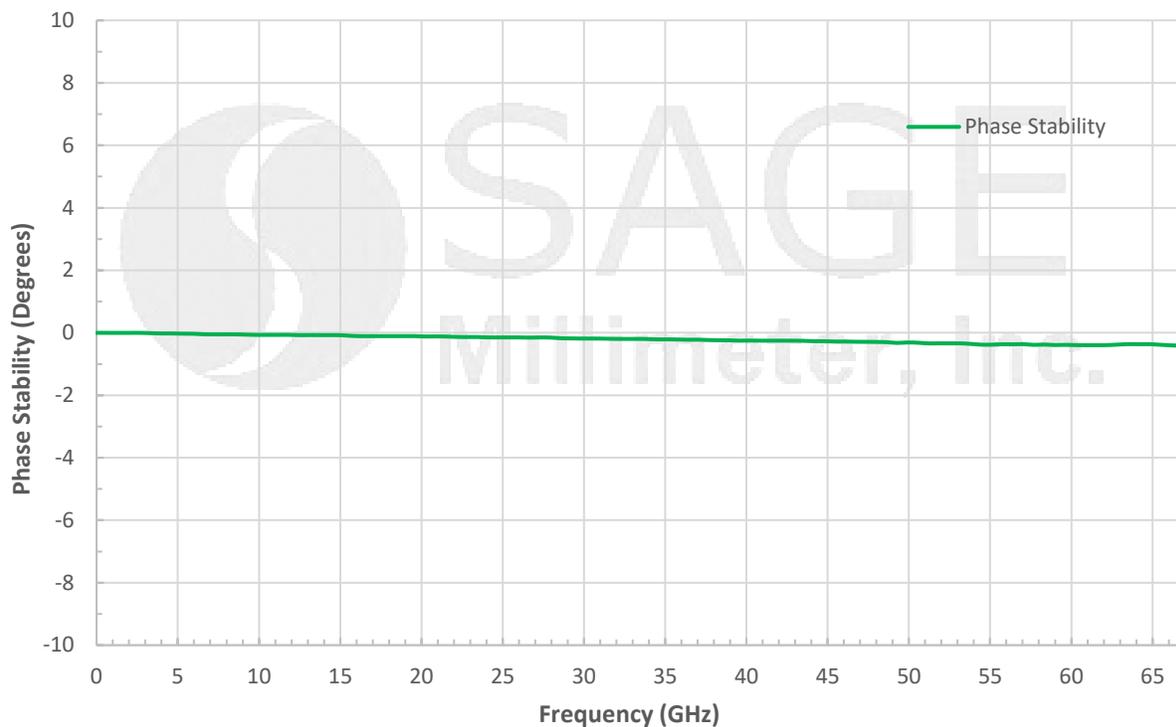
### Typical Performance vs. Frequency



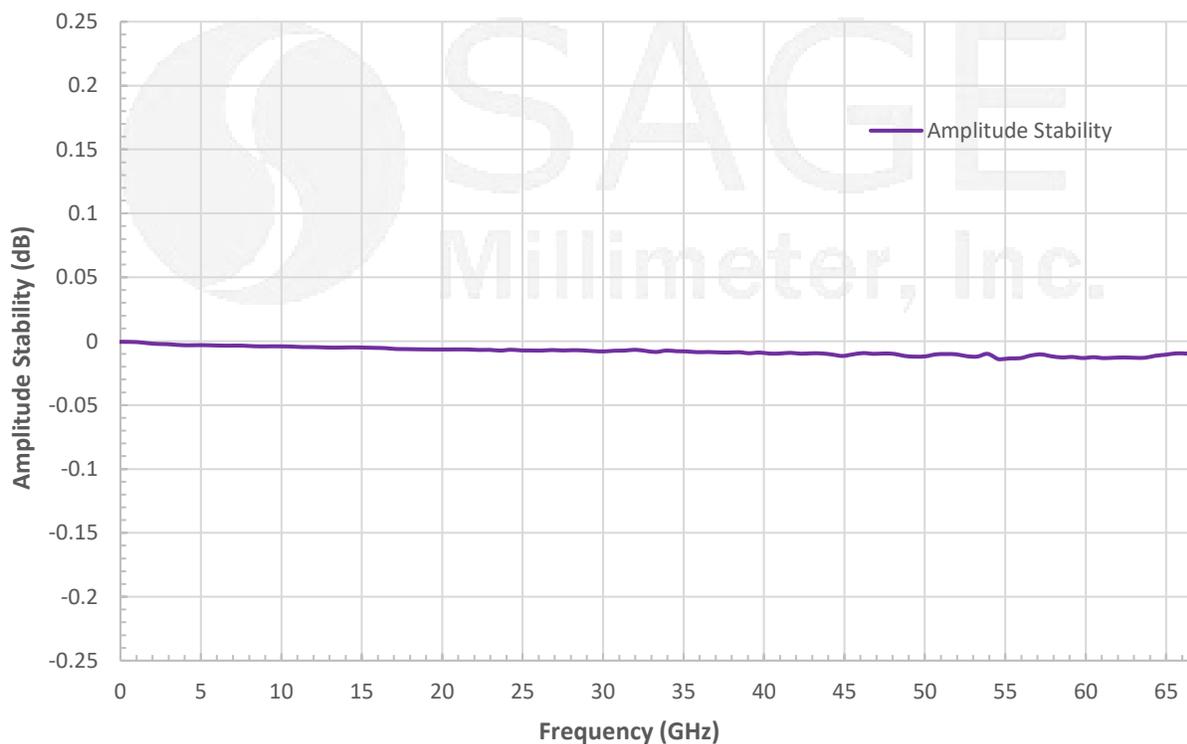


## 1.85 mm NMD (F) to 1.85 mm NMD (M) Armored VNA Test Cable, Flexible, 25"

### Typical Phase Stability vs. Frequency



### Typical Amplitude Stability vs. Frequency



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**Mechanical Outline:** (Unless otherwise specified, all dimensions are in inches [millimeters])



**Note:**

- All data presented is collected from a sample lot. Actual data may vary unit to unit, slightly.
- All testing was performed under +25 °C case temperature.
- SAGE Millimeter, Inc. reserves the right to change the information presented without notice.

**Caution:**

- Bending the cable sharply will either cause damage or degrade the performance of the cable permanently.
- Proper torque,  $8.0 \pm 0.15$  inch-pounds ( $0.90 \pm 0.02$  Nm), should be applied. **SAGE Millimeter torque wrench, model SCH-08008-U2, is highly recommended.**

