

## 2.4 mm (M) to 2.4 mm (M) Coaxial Cable, Semi-Rigid, 40", Phase Matched

### Description:

**Model SCW-2M2M040-S1-PM** is a 40" long, semi-rigid, phase matched coaxial cable with 2.4 mm male connectors that cover the frequency range of DC to 50 GHz. The coaxial cable utilizes high performance material and a precision manufacturing process to guarantee superior microwave performance and mechanical durability. The impedance of the cable is 50 ohms. Other lengths are offered under different models.



### Features:

- High Return Loss
- Low Insertion Loss
- Semi-Rigid

### Applications:

- Test Lab
- Sub-assemblies
- System Integration

### Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	DC		50 GHz
Insertion Loss @ 18 GHz		3.4 dB	
Insertion Loss @ 26.5 GHz		4.2 dB	
Insertion Loss @ 40 GHz		5.5 dB	
Insertion Loss @ 50 GHz		6.5 dB	
Return Loss @ 50 GHz		17 dB	
Impedance		50 $\Omega$	
Phase Match (Unit to Unit)		$\pm 10^\circ$	
Breakdown Voltage			500 V
Radiation Shielding		120 dB	
Velocity Factor		70%	
Power Handling @ 50 GHz			15 W (CW)
Specification Temperature		+25 $^\circ\text{C}$	
Operating Temperature	-40 $^\circ\text{C}$		+85 $^\circ\text{C}$

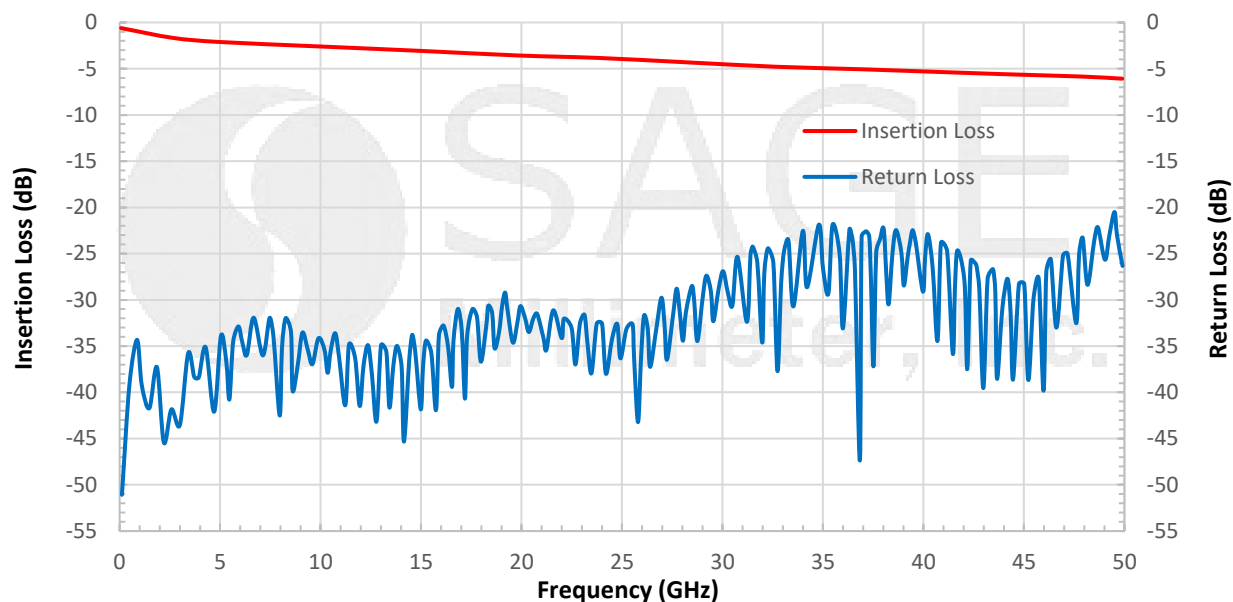
### Mechanical Specifications:

Item	Specification
Minimum Bending Radius	0.126"
Connectors	2.4 mm Male
Connector Material	Passivated Stainless Steel
Cable Conductor	Brass, Gold Plated
Cable Insulators	PEEK/PEI
Cable Outer Diameter	0.087"
Length	40"
Weight	0.7 Oz
Outline	CW-22-S8

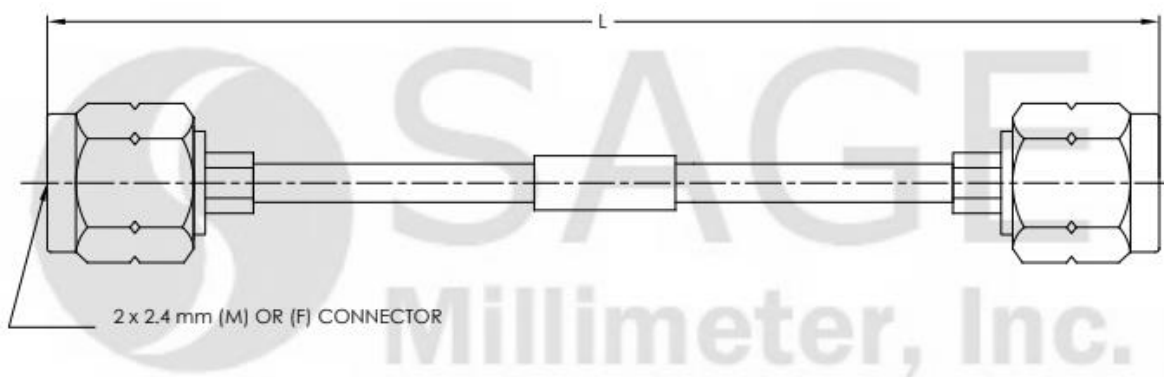


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### Typical Insertion Loss & Return Loss vs. Frequency



### Mechanical Outline: (Unless otherwise specified, all dimensions are in inches)



Note:

Length "L" is customizable

#### 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.
- 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-U3, is highly recommended.**



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