

Commercial Space Line

MaxGain® 160

High Performance Microwave Cable Assemblies



MaxGain® Assemblies are high-performance, ultra-low-loss microwave coaxial cables. Built with our unique spiral outer conductor technology, this light-weight cable is a reliable, high frequency interconnect solution.

Features

- Sold as cable assemblies
- Low outgassing materials per ASTM E595
- Class 100,000 clean room manufacturing
- Vented connectors, if applicable
- Optimized for lowest attenuation
- Ultra stable performance with flexure
- Superior shielding effectiveness (>90 dB)
- Radiation Resistance: 30 MRads

Specifications

Ω Impedance
50 Ohms

Op Temp
-67 to +302°F
-55 to +150°C

	Units	
Diameter	in (mm)	0.160 (4.04)
Weight	lb/ft (g/m)	0.026 (38)
Minimum Bend Radius	in (mm)	0.750 (19.0)
Maximum Frequency	GHz	40
Velocity of Propagation	%	80
Capacitance	pF/ft (pF/m)	25.4 (83.3)
Delay	ns/ft (ns/m)	1.27 (4.17)
Shielding	dB	>90

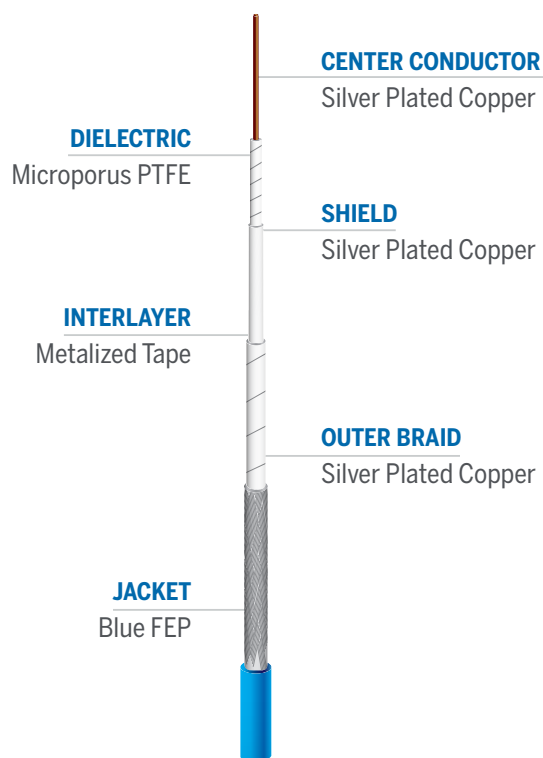
Calculation

$$IL = (K1 \times v(f) + K2 \times f) \times \text{Cable Length} + \text{Connector Loss}$$

Cable Insertion Loss
f = Frequency (MHz)

Use K values with
matching length unit

K values	dB/ft	dB/m
K1	0.368	1.136243
K2	0.000146	0.000479



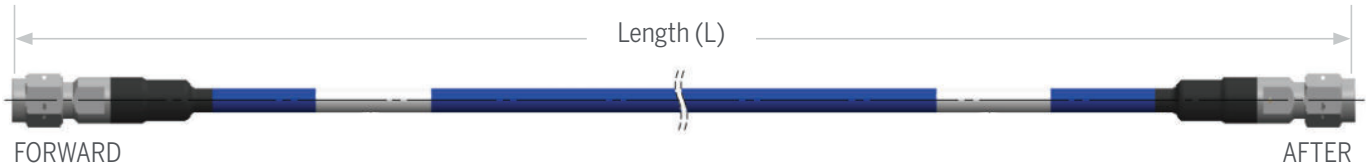
Insertion loss & VSWR

Stock Code	Max. Insertion Loss in dB @ 40GHz	Max. VSWR @ 40GHz
IE-00407-01	1.98	1.40
IE-00407-02	3.41	1.40
IE-00407-03	4.81	1.40
IE-00407-04	6.27	1.40
	Max. Insertion Loss in dB @ 22GHz	Max. VSWR @ 22GHz
IE-00408-01	1.43	1.35
IE-00408-02	2.53	1.35
IE-00408-03	3.52	1.35
IE-00408-04	4.51	1.35

MaxGain® 160

High Performance Microwave Cable Assemblies

Ordering Guide

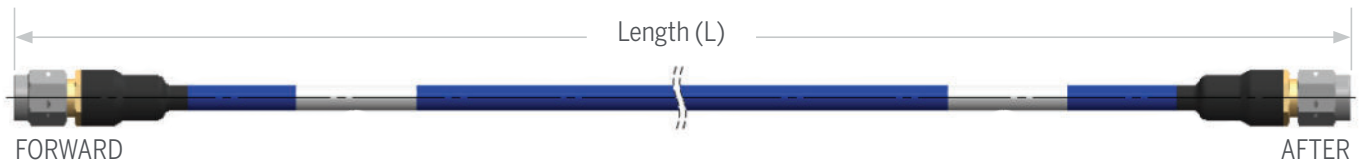


MGS160 - SPO29 SPO29 - XX.X MM

Forward Connector After Connector Length Units of measure
MM - Milimeters

Stock Code	Part-Number	Length (L) in mm
IE-00407-01	MGS160-KMKM-0.5M	500
IE-00407-02	MGS160-KMKM-1.0M	1000
IE-00407-03	MGS160-KMKM-1.5M	1500
IE-00407-04	MGS160-KMKM-2.0M	2000

Connector Code	Description	Connector Body	Center Contact	Connector Loss (per pair)
SPO29	Type 2.92mm (M) Straight	Stainless Steel, Passivated	Beryllium Copper, Gold Plated	0.08 x vf (GHz)



MGS160 - SPO07 SPO07 - XX.X MM

Forward Connector After Connector Length Units of measure
MM - Milimeters

Stock Code	Part-Number	Length (L) in mm
IE-00408-01	MGS160-SMSM-0.5M	500
IE-00408-02	MGS160-SMSM-1.0M	1000
IE-00408-03	MGS160-SMSM-1.5M	1500
IE-00408-04	MGS160-SMSM-2.0M	2000

Connector Code	Description	Connector Body	Center Contact	Connector Loss (per pair)
SPO07	Type SMA (M) Straight	Stainless Steel, Gold Plated	Beryllium Copper, Gold Plated	0.08 x vf (GHz)



Global manufacturing capability: US, and Asia.



Heritage—in the air and on the ground, thousands of assemblies built over decades.



Assembled and tested assemblies provide assured performance.

Rev.2: 3/27/2023