

Commercial Space Line

# MaxGain® 300

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

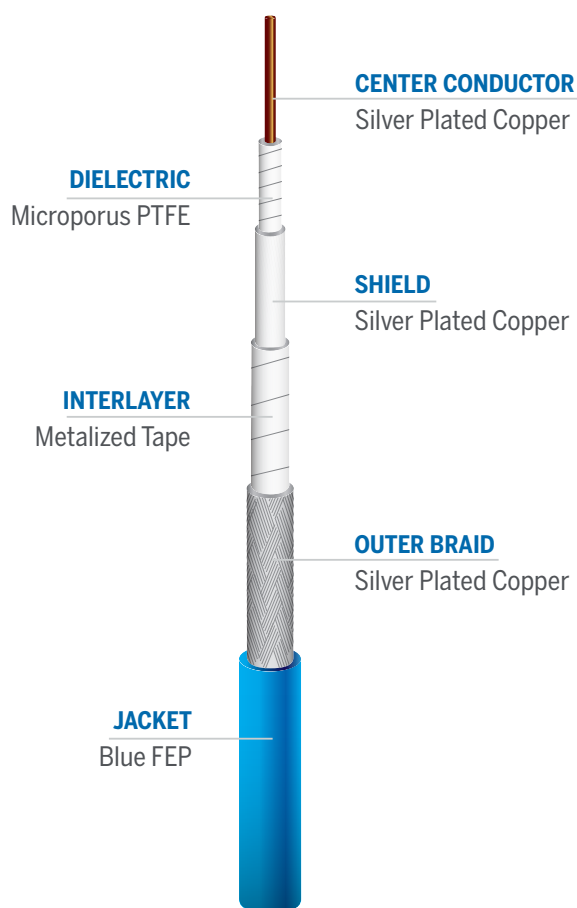
- Sold as cable assemblies
- Low outgassing materials per ASTM E595
- Class 100,000 clean room manufacturing
- Vented connectors, if applicable
- Optimized for lowest attenuation
- Ultra stable performance with flexure
- Superior shielding effectiveness (>90 dB)
- Radiation Resistance: 30 MRads

## Specifications

**Ω** Impedance  
50 Ohms

**Op Temp**  
-67 to +302°F  
-55 to +150°C

	Units	
Diameter	in (mm)	0.314 (7.98)
Weight	lb/ft (g/m)	0.093 (138)
Minimum Bend Radius	in (mm)	1.750 (44.45)
Maximum Frequency	GHz	18.0
Velocity of Propagation	%	81
Capacitance	pF/ft (pF/m)	24.8 (81.2)
Delay	ns/ft (ns/m)	1.25 (4.10)
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	0.1413	0.463605
K2	0.000102	0.000335

## Insertion loss & VSWR @ 18GHz

Stock Code	Max. Insertion Loss in dB	Max. VSWR
IE-00411-01	1.21	1.25
IE-00411-02	2.09	1.25
IE-00411-03	2.64	1.25
IE-00411-04	2.86	1.25

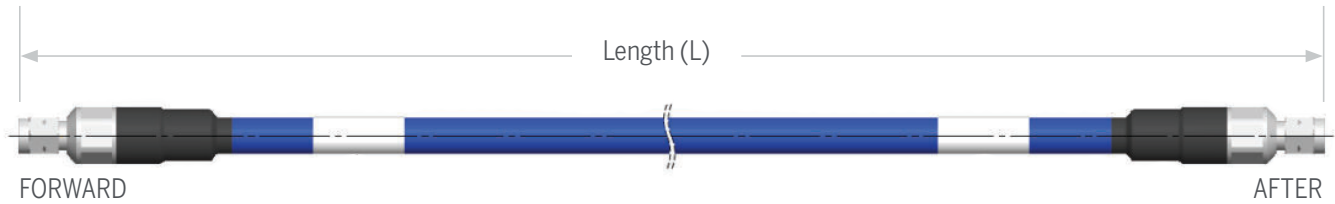
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**TIMES**  
MICROWAVE SYSTEMS  
AN AMPHENOL COMPANY

## Ordering Guide



**MGS300** - **SP052** **SP052** - **XX.X** **MM**  
Forward Connector After Connector Length Units of measure  
MM - Milimeters

Stock Code	Part-Number	Length (L) in mm
IE-00411-01	MGS300-SMSM-1.0M	1000
IE-00411-02	MGS300-SMSM-2.0M	2000
IE-00411-03	MGS300-SMSM-2.5M	2500
IE-00411-04	MGS300-SMSM-3.0M	3000

Connector Code	Description	Connector Body	Center Contact	Connector Loss (per pair)
SP052	Type SMA (M) Straight	Stainless Steel, Passivated	Beryllium Copper, Gold Plated	0.06 x v <sub>f</sub> (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.

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