

# MaxGain

ISO 9001 Certified

## *DC-18 GHz Ultra Low Loss Coaxial Cable and Connectors*

- *Low Insertion Loss*
- *Stable Phase & VSWR*
- *Extremely Flexible*
- *Low Minimum Bend Radius*
- *Superior Shielding Effectiveness*



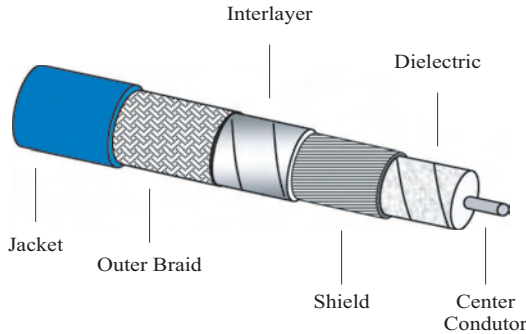
MaxGain ultra low loss, flexible Microwave Coaxial Cable and a full range of passivated stainless steel connectors are available as fully tested custom cable assemblies or for assembly by skilled assembly facilities. The assembly of the connectors to the cable is accomplished by soldering to the inner and outer conductor resulting in excellent mechanical and electrical performance, but is only recommended for installation by skilled technicians in a factory environment. Alternatively, Times can provide completed assemblies to your specifications.

MaxGain assemblies are used for general applications in both field and laboratory conditions. They are ideally suited for applications where lowest loss and good stability with bending are required.

#### Features & Benefits:

- Lowest Insertion Loss Available, DC-18GHz
- Ultra Stable Insertion Loss, Phase and VSWR with Flexing
- Excellent Phase Tracking Performance with wide Temperature (-65°C to +150°C)
- Extremely Flexible, Low Minimum Bend Radius
- Superior Shielding Effectiveness (>100 dB)

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Center Conductor: Silver Plated Copper  
 Dielectric: Microporus PTFE  
 Shield: Silver Plated Copper  
 Interlayer: Metalized Mylar Tape  
 Outer Braid: Silver Plated Copper Braid  
 Jacket: Blue FEP

## Connectors:

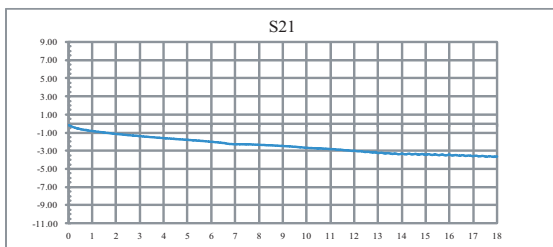
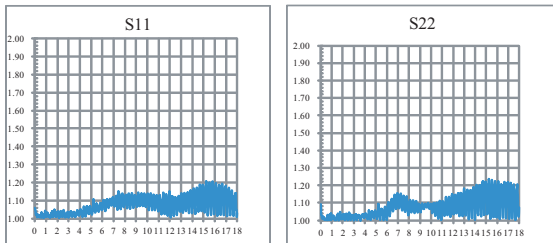
Connectors are available with a wide range of interfaces, including SMA, N, TNC, etc., for professional technicians to build up cable assemblies. Please consult Times Microwave Systems with your requirements.



## Cable Assembly:

Times Microwave Systems provides Maxgain as assemblies to meet a broad range of applicatoin requirements. Below are the typical curves for MG-300 assembly for reference:

MG-300/5M/SM/SM



	MaxGain-300		MaxGain-300S		MaxGain-200	
AA Drawing Number	AA-9857		AA-9999		AA-9889	
<b>Physical Specifications</b>						
Description	in	(mm)	in	(mm)	in	(mm)
Center Conductor	0.087	2.21	0.092	2.34	0.0508	1.29
Dielectric	0.243	6.17	0.245	6.22	0.146	3.71
Shield	0.246	6.25	0.248	6.30	0.151	3.84
Interlayer	0.252	6.40	0.252	6.40	0.156	3.96
Outer braid	0.276	7.01	0.276	7.01	0.174	4.42
Jacket	0.302	7.67	0.302	7.67	0.200	5.00
<b>Mechanical Specifications</b>						
Diameter	0.306	7.772	0.306	7.772	0.204	5.182
Bend Radius	1.750	44.45	1.750	44.45	1.250	31.75
Weight	0.093 lb/ft		0.093 lb/ft		0.090 lb/ft	
Operating Temperature Range	-65/+150°C		-65/+150°C		-65/+150°C	
<b>Electrical Specifications</b>						
Impedance	50 ohms		50 ohms		50 ohms	
Velocity of Propagation	81%		81%		80%	
Capacitance	24.75 pf/ft		24.75 pf/ft		25.0 pf/ft	
Delay	1.25 nsec/ft		1.25 nsec/ft		1.27 nsec/ft	
Shielding Effectiveness	-90 dB		-90 dB		-90 dB	
Insertion loss	0.20 dB/Ft @ 18.0 GHz		0.255 dB/Ft @18 GHz		0.33 dB/Ft @18 GHz	
Nominal Attenuation: dB/100ft (100m) (+25°C Ambient)						
100 MHz	1.3	4.4	1.7	5.7	2.3	7.5
400 MHz	2.7	8.9	3.5	11.4	4.6	15.2
1000 MHz	4.3	14.2	5.6	18.2	7.4	24.2
3000 MHz	7.6	25.1	9.8	32.2	12.9	42.4
8000 MHz	12.9	42.2	16.4	53.9	21.5	70.6
10000 MHz	14.5	47.6	18.5	60.8	24.2	79.3
12000 MHz	16.0	52.6	20.4	67.0	26.6	87.4
13500 MHz	17.1	56.1	21.8	71.4	28.4	93.0
18000 MHz	20.1	65.8	25.5	83.6	33.1	108.4
k1	0.1325600		0.1715000		0.2287000	
k2	0.0001259		0.0001373		0.0001321	
Power (kW) (+25°C Ambient; Sea Level)						
100 MHz	5.51		4.29		2.40	
400 MHz	2.72		2.12		1.19	
1000 MHz	1.70		1.33		0.74	
3000 MHz	0.96		0.75		0.42	
8000 MHz	0.56		0.44		0.25	
10000 MHz	0.50		0.39		0.22	
12000 MHz	0.45		0.35		0.20	
13500 MHz	0.42		0.33		0.19	
18000 MHz	0.36		0.28		0.16	



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