

MaxGain

ISO 9001 Certified

DC-18 GHz Ultra Low Loss Coaxial Cable and Connectors



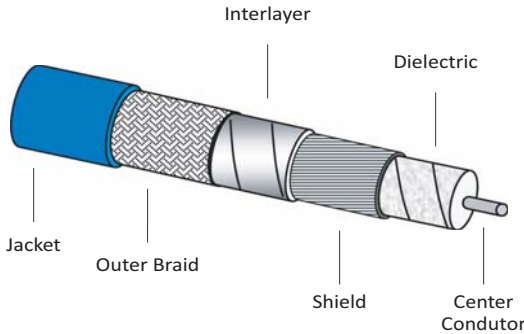
MaxGain ultra low loss, flexible Microwave Coaxial Cable and a full range of passivated stainless steel connectors are available as fully tested custom cable assemblies or for assembly by skilled assembly facilities. The assembly of the connectors to the cable is accomplished by soldering to the inner 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)

MaxGain



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:

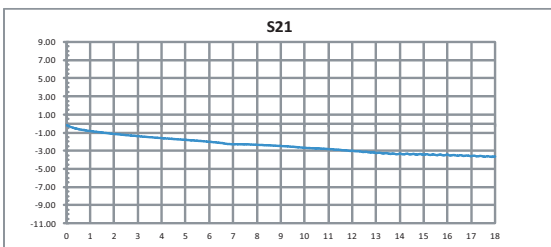
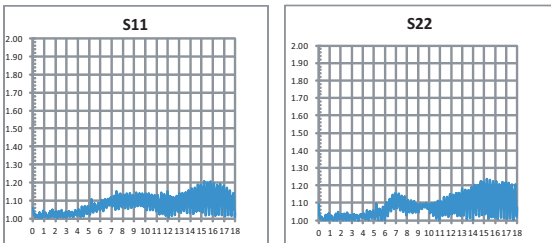
Connectors are available with a wide range of interfaces, including SMA, NM, TNC, etc., for professional technicians to build up cable assemblies. Please consult Times Microwave Systems with your requirements.



Cable Assembly:

Times Microwave Systems provides Maxgain as assemblies to meet a broad range of application requirements.

MG-300/5M/SM/SM



	MaxGain-300		MaxGain-300S		MaxGain-200	
AA Drawing Number	AA-9857		AA-9999		AA-9889	
Physical Specifications						
Description	in	(mm)	in	(mm)	in	(mm)
Center Conductor	0.087	2.210	0.092	2.337	0.0508	1.290
Dielectric	0.243	6.172	0.245	6.223	0.146	3.708
Shield	0.246	6.248	0.248	6.299	0.151	3.835
Interlayer	0.252	6.401	0.252	6.401	0.156	3.962
Outer braid	0.276	7.010	0.276	7.010	0.174	4.420
Jacket	0.302	7.671	0.302	7.671	0.200	5.080
Mechanical Specifications						
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	
Electrical Specifications						
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	
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	18.08	4.29	14.07	2.40	7.87
400 MHz	2.72	8.93	2.12	6.96	1.19	3.90
1000 MHz	1.70	5.58	1.33	4.35	0.74	2.44
3000 MHz	0.96	3.14	0.75	2.45	0.42	1.38
8000 MHz	0.56	1.85	0.44	1.45	0.25	0.82
10000 MHz	0.50	1.63	0.39	1.28	0.22	0.72
12000 MHz	0.45	1.47	0.35	1.16	0.20	0.65
13500 MHz	0.42	1.38	0.33	1.08	0.19	0.61
18000 MHz	0.36	1.17	0.28	0.92	0.16	0.52



DC - 50 GHz Ultra Low Loss Coaxial Cable Assemblies

- Times Microwave's Unique Spiral Outer Conductor Technology
- Lighter Weight Compared to Competing Technologies



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.

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 over flexure is required.

Features & Benefits:

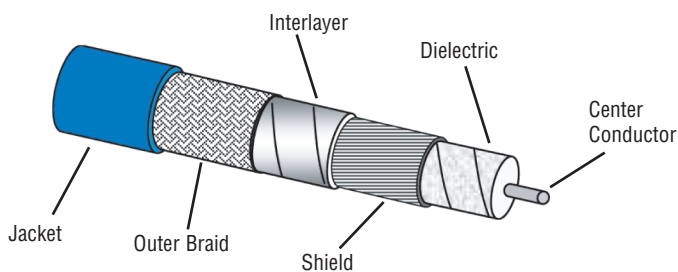
- Lowest insertion loss available, DC - 50 GHz
- Ultra stable insertion loss and VSWR with flexing
- With wide temperature range (-65° C to + 150° C)
- Extremely flexible, low minimum bend radius
- Superior shielding effectiveness (> 90 dB)
- Typical VSWR for assemblies is <1.40:1 at maximum frequencies

Connectors are available in a wide range of precision interfaces including: Type N, TNC SMA, 2.92mm (k), 2.4mm, SMP and MMP. Replaceable interface versions also available.



	MaxGain-300		MaxGain-200		MaxGain-160		MaxGain-130	
Times Cable Drawing	AA-9857		AA-9889		AA-11258		AA-11521	
Mechanical Specifications								
Bend Radius (in/mm)	1.75	44.45	1.25	31.8	0.75	19.0	0.625	15.9
Weight (lbs/ft / grams/m)	0.093	138.5	0.037	55.1	0.026	38.7	0.018	27.5
Operating Temperature	-55/+150° C		-55/+150° C		-55/+150° C		-55/+150° C	
Electrical Specifications								
Impedance	50 Ohms		50 Ohms		50 Ohms		50 Ohms	
Velocity of Propagation	81%		80%		80%		80%	
Capacitance	24.8 pF/ft	81.2 pF/m	25.4 pF/ft	83.3 pF/m	25.4 pF/ft	83.3 pF/m	25.4 pF/ft	83.3 pF/m
Delay	1.25 nSec/ft	4.10 nSec/m	1.27 nSec/ft	4.17 nSec/m	1.27 nSec/ft	4.17 nSec/m	1.27 nSec/ft	4.17 nSec/m
Shielding Effectiveness (min)	-90 dB		-90 dB		-90 dB		-90 dB	
Nominal Attenuation:	dB/100ft (100m) (25° C Ambient)							
100 MHz	1.3	4.4	2.3	7.5	3.7	12.1	4.3	14.2
400 MHz	2.7	8.9	4.6	15.2	7.4	24.3	8.7	28.4
1000 MHz	4.3	14.2	7.4	24.2	11.8	38.7	13.8	45.1
3000 MHz	7.6	25.1	12.9	42.4	20.6	67.6	24.0	78.9
8000 MHz	12.9	42.2	21.5	70.6	34.1	111.8	39.8	130.4
10000 MHz	14.5	47.6	24.2	79.3	38.3	125.5	44.6	146.4
12000 MHz	16.0	52.6	26.6	87.4	42.1	138.0	49.1	160.9
13500 MHz	17.1	56.1	28.4	93.0	44.7	146.7	52.2	171.1
18000 MHz	20.1	65.8	33.1	108.4	52.0	170.6	60.6	198.9
30000 MHz	-	-	-	-	68.1	223.5	79.4	260.4
40000 MHz	-	-	-	-	79.5	260.7	92.5	303.5
50000 MHz	-	-	-	-	-	-	104.3	342.2

Individual MaxGain® cable data sheets are available upon request



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



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