TIMES MICROWAVE SYSTEMS

LMR®-500
Flexible Low Loss Communications Coax



Ideal for...

- Jumper Assemblies in Wireless Communications Systems
- Short Antenna Feeder runs
- Any application (e.g. WLL, GPS, LMR, WLAN, WISP, WiMax, SCADA, Mobile Antennas) requiring an easily routed, low loss RF cable

Part Description				Stock
Part Number	**Application**	**Jacket**	**Color**	**Code**
LMR-500	Outdoor	PE	Black	54002
LMR-500-DB	Outdoor/Watertight	PE	Black	54092
LMR-500-FR	Indoor/Outdoor Riser CMR	FRPE	Black	54031

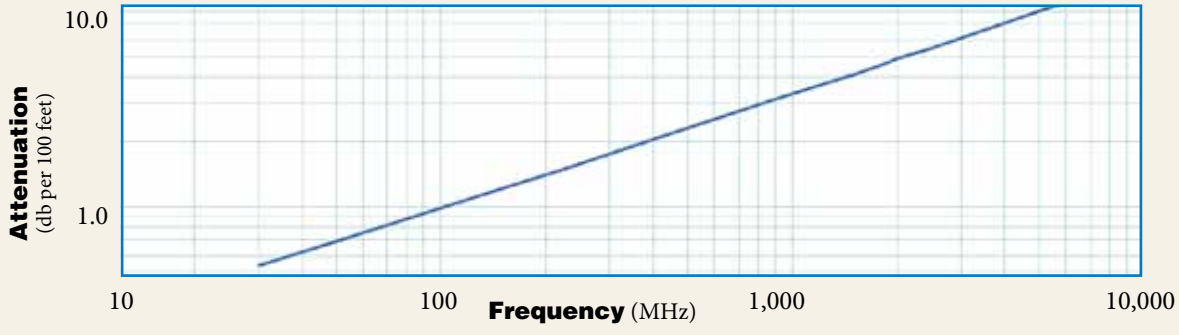
Construction Specifications			
Description	**Material**	**In.**	**(mm)**
Inner Conductor	Solid BCCAl	0.142	(3.61)
Dielectric	Foam PE	0.370	(9.40)
Outer Conductor	Aluminum Tape	0.376	(9.55)
Overall Braid	Tinned Copper	0.405	(10.29)
Jacket	(see table)	0.500	(12.70)

Mechanical Specifications			
Performance Property	**Units**	**US**	**(metric)**
Bend Radius: installation	in. (mm)	1.25	(31.8)
Bend Radius: repeated	in. (mm)	5.0	(127.0)
Bending Moment	ft-lb (N-m)	1.75	(2.37)
Weight	lb/ft (kg/m)	0.097	(0.14)
Tensile Strength	lb (kg)	260	(118.0)
Flat Plate Crush	lb/in. (kg/mm)	50	(0.89)

Electrical Specifications			
Performance Property	**Units**	**US**	**(metric)**
Velocity of Propagation	%	82	
Dielectric Constant	NA	1.35	
Time Delay	nS/ft (nS/m)	1.18	(3.88)
Impedance	ohms	50	
Capacitance	pF/ft (pF/m)	23.6	(77.5)
Inductance	uH/ft (uH/m)	0.059	(0.19)
Shielding Effectiveness	dB	>90	
DC Resistance			
Inner Conductor	ohms/1000ft (/km)	0.82	(2.7)
Outer Conductor	ohms/1000ft (/km)	1.27	(4.2)
Voltage Withstand	Volts DC	3000	
Jacket Spark	Volts RMS	8000	
Peak Power	kW	22	

Environmental Specifications		
Performance Property	**°F**	**°C**
Installation Temperature Range	-40/+185	-40/+85
Storage Temperature Range	-94/+85	-70/+85
Operating Temperature Range	-40/+185	-40/+85

Attenuation vs. Frequency (typical)



Frequency (MHz)	30	50	150	220	450	900	1500	1800	2000	2500	5800	8000
Attenuation dB/100 ft	0.5	0.7	1.2	1.5	2.2	3.1	4.1	4.6	4.8	5.5	8.9	10.7
Attenuation dB/100 m	1.8	2.3	4.0	4.9	7.1	10.3	13.6	15.0	15.9	18.0	29.1	35.2
Avg. Power kW	4.400	3.393	1.931	1.583	1.088	0.752	0.569	0.515	0.485	0.428	0.264	0.22

Calculate Attenuation = (0.096590) •$\sqrt{FMHz}$ + (0.000260) • FMHz (interactive calculator available at http://www.timesmicrowave.com/cable_calculators)
Attenuation: VSWR=1.0 ; Ambient = +25°C (77°F) **Power:** VSWR=1.0; Ambient = +40°C; Inner Conductor = 100°C (212°F); Sea Level; dry air; atmospheric pressure; no solar loading



Connectors

Interface	Description	Part Number	Stock Code	VSWR Freq. (GHz)	Coupling Nut	Inner Contact Attach	Outer Contact Attach	Finish* Body /Pin	Length in	Length (mm)	Width in	Width (mm)	Weight lb	Weight (g)
1. 7-16 DIN Female	Straight Plug	TC-500-716F-X	3190-2906	<1.30:1 (6)	N/A	Solder	Crimp	A/S	1.8	(45.9)	1.14	(29.0)	0.298	(135.0)
2. 7-16 DIN Male	Right Angle	TC-500-716M-RA-D	3190-6079	<1.30:1 (6)	Hex	Solder	Crimp	A/S	1.8	(44.9)	1.60	(41.6)	0.370	(168.0)
3. N Male	Straight Plug	TC-500-NMH-X	3190-2514	<1.35:5 (6)	Hex/Knurl	Solder	Crimp	A/G	1.8	(45)	0.87	(22.0)	0.099	(45.0)
4. N Male	Straight Plug	EZ-500-NMH-X	3190-2596	<.35:1 (6)	Hex/Knurl	Spring Finger	Crimp	A/G	1.7	(44)	0.83	(21.0)	0.111	(50.5)
5. N Male	Right Angle	TC-500-NMH-RA-D	3190-2970	<1.25:1 (6)	Hex/Knurl	Solder	Crimp	A/G	1.5	(39)	1.6	(42.0)	0.279	(127.0)
6. N Female	Straight Jack	TC-500-NFC	3190-215	<1.25:1 (2.5)	N/A	Solder	Clamp	S/G	2.2	(56)	0.94	(23.9)	0.215	(97.5)
7. N Female	Bulkhead Kit	BHA-KIT	3190-223	<1.25:1 (2.5)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.014	(6.4)
8. N Male	Right Angle	TC-500-NMC-RA	3190-227#	<1.25:1 (2.5)	Hex	Solder	Clamp	S/G	2.4	(61)	1.5	(38.1)	0.275	(124.7)
9. TNC Male	Straight Plug	TC-500-TM-X	3190-6009	<1.25:1 (2.5)	Hex	Solder	Crimp	N/G	1.5	(38)	1.62	(15.7)	0.082	(28.1)
10. TNC Female	Straight Jack	TC-500-TF-X	3190-6010	<1.30:1 (6)	N/A	Solder	Crimp	A/G	1.8	(44.5)	0.87	(22.0)	0.077	(35.0)
11. UHF Male	Straight Plug	TC-500-UMC	3190-354	<1.25:1 (2.5)	Knurl	Solder	Clamp	S/G	2.1	(53)	0.88	(22.4)	0.215	(97.5)

* Finish metals: N=Nickel, S=Silver, G=Gold, SS=Stainless Steel, A=Alballoy #Available in bulk pack

Install Tools



Type	Part Number	Stock Code	Description
Crimp Tool	CT-U	3192-181	Crimp Handle
Crimp Dies	Y151	3190-465	.532" Hex Dies
Strip Tool	CST-500	3192-075	For Crimp & Clamp Style Connectors
Crimp Tool	CT-500	3192-169	Crimp tool for LMR 500 Connectors
Deburr Tool	DBT-U	3192-001	Removes center conductor rough edges
Cutting Tool	CCT-02	3192-165	Cable End Flush Cut Tool
Replacement Blade Kit	RB-CST	3192-086	Replacement blade kit for strip tools
Replacement Blade	RB-02	3192-166	Replacement Blade for Cutting Tool