

# LMR®-300 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-300	Outdoor	PE	Black	54086
LMR-300-DB	Outdoor/Watertight	PE	Black	54114
LMR-300-FR	Indoor/Outdoor Riser CMR	FRPE	Black	54087
LMR-300-FR-PVC	Indoor/Outdoor Riser CMR	FRPVC	Black	54108
LMR-300-PVC	General Purpose	PVC	Black	54217
LMR-300-PVC-W	General Purpose	PVC	White	54203

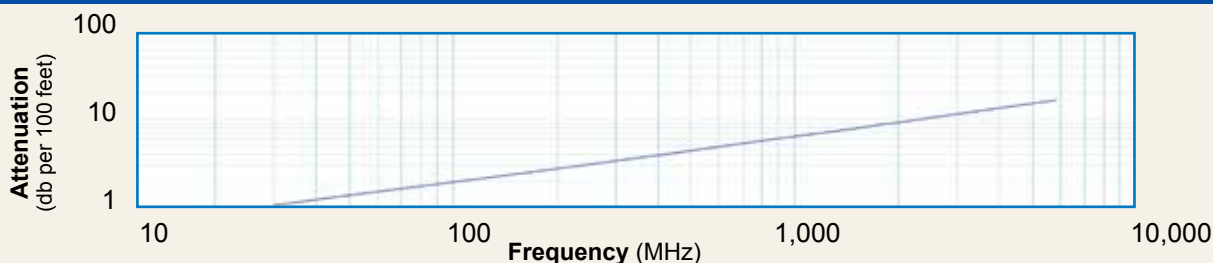
Construction Specifications			
Description	Material	In.	(mm)
Inner Conductor	Solid BC	0.070	(1.78)
Dielectric	Foam PE	0.190	(4.83)
Outer Conductor	Aluminum Tape	0.196	(4.98)
Overall Braid	Tinned Copper	0.225	(5.72)
Jacket	(see table)	0.300	(7.62)

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

Electrical Specifications			
Performance Property	Units	US	(metric)
Velocity of Propagation	%	82	
Dielectric Constant	NA	1.38	
Time Delay	nS/ft (nS/m)	1.20	(3.92)
Impedance	ohms	50	
Capacitance	pF/ft (pF/m)	23.9	(78.4)
Inductance	uH/ft (uH/m)	0.060	(0.20)
Shielding Effectiveness	dB	>90	
DC Resistance			
Inner Conductor	ohms/1000ft (/km)	2.12	(7.0)
Outer Conductor	ohms/1000ft (/km)	2.21	(7.3)
Voltage Withstand	Volts DC		2000
Jacket Spark	Volts RMS		5000
Peak Power	kW		10

Mechanical Specifications			
Performance Property	Units	US	(metric)
Bend Radius: installation	in. (mm)	0.88	(22.2)
Bend Radius: repeated	in. (mm)	3.0	(76.2)
Bending Moment	ft-lb (N-m)	0.38	(0.52)
Weight	lb/ft (kg/m)	0.055	(0.08)
Tensile Strength	lb (kg)	120	(54.5)
Flat Plate Crush	lb/in. (kg/mm)	30	(0.54)

### Attenuation vs. Frequency (typical)



Frequency (MHz)	30	50	150	220	450	900	1500	1800	2000	2500	5800	8000
Attenuation dB/100 ft	1.1	1.4	2.4	2.9	4.2	6.1	7.9	8.7	9.2	10.4	16.5	19.8
Attenuation dB/100 m	3.5	4.5	7.9	9.6	13.8	19.9	26.0	28.7	30.3	34.2	54.2	65.0
Avg. Power kW	2.09	1.62	0.92	0.76	0.52	0.36	0.28	0.25	0.24	0.21	0.13	0.11

Calculate Attenuation =  $(0.191930) \cdot \sqrt{FMHz} + (0.000330) \cdot FMHz$  (interactive calculator available at [http://www.timesmicrowave.com/cable\\_calculators](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 (mm)	Width in (mm)	Weight lb (g)
1. N Male	Right Angle	TC-300-NMH-RA-D	3190-2761	<1.30:1 (2.5)	Hex/Knurl	Solder	Crimp	N/S	1.4 (35)	1.41 (35.8)	0.130 (59.0)
2. N Male	Straight Plug	TC-300-NMH-X	3190-2861	<1.25:1 (6)	Hex/Knurl	Solder	Crimp	A/G	1.3 (33)	0.86 (21.8)	0.084 (38.1)
3. N Male	Straight Plug	EZ-300-NMH-X	3190-2420	<1.25:1 (6)	Hex	Spring finger	Crimp	A/G	1.3 (34)	0.87 (22.0)	0.077(34.95)
4. N Female	Straight Jack	EZ-300-NF-X	3190-3078	<1.25:1 (6)	NA	Solder	Crimp	A/G	1.4 (36.5)	0.87 (22.0)	0.040 (18.0)
5. TNC Male	Straight Plug	TC-300-TM	3190-500	<1.25:1 (2.5)	Knurl	Solder	Crimp	N/G	1.7 (43)	0.59 (15.0)	0.050 (22.7)
6. SMA Male	Straight Plug	TC-300-SM	3190-501	<1.25:1 (2.5)	Hex	Solder	Crimp	SS/G	1.0 (25)	0.35 (8.9)	0.018 (8.2)
7. SMA Female	Bulkhead Jack	TC-300-SF-BH	3190-590	<1.25:1 (2.5)	NA	Solder	Crimp	SS/G	1.1 (28)	0.31 (7.9)	0.022 (10.0)
8. TNC Male	Straight Plug	EZ-300-TM-X	3190-2421	<1.25:1 (6)	Hex	Spring finger	Crimp	A/G	1.3 (32)	0.66 (16.8)	0.058 (26.2)

\* Finish metals: N=Nickel, S=Silver, G=Gold, SS=Stainless Steel, A=Alballoy \*\*VSWR spec based on 3 foot cable with a connector pair

## Hardware Accessories

Type	Part Number	Stock Code	Description
Ground Kit	GK-S300TT	GK-S300TT	Standard Ground Kit (each)



## Install Tools

Type	Part Number	Stock Code	Description
Crimp Tool	CT-400/300	3190-666	Crimp tool for LMR-300 connectors
Deburr Tool	DBT-U	3192-001	Removes center conductor rough edges
Cutting Tool	CCT-02	3192-165	Cable end flush cut tool
Prep Tool	CST-300	3192-084	Prep tool for LMR-300 Connectors
Replacement Blade Kit	RB-CST	3192-086	Replacement blade kit for all CST strip tools
Replacement Blade	RB-02	3192-166	Replacement blade for cutting tool



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