

# LMR<sup>®</sup>-200 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				
Part Number	Application	Jacket	Color	Stock Code
LMR-200	Outdoor	PE	Black	54022
LMR-200-DB	Outdoor/Watertight	PE	Black	54089
LMR-200-FR	Indoor/Outdoor Riser CMR	FRPE	Black	54028
LMR-200-FR-PVC	Indoor/Outdoor Riser CMR	FRPVC	Black	54125
LMR-200-PVC	General Purpose	PVC	Black	54216
LMR-200-PVC-W	General Purpose	PVC	White	54201
LMR-200-MA	Mobile Antennas	PVC	Black	54045

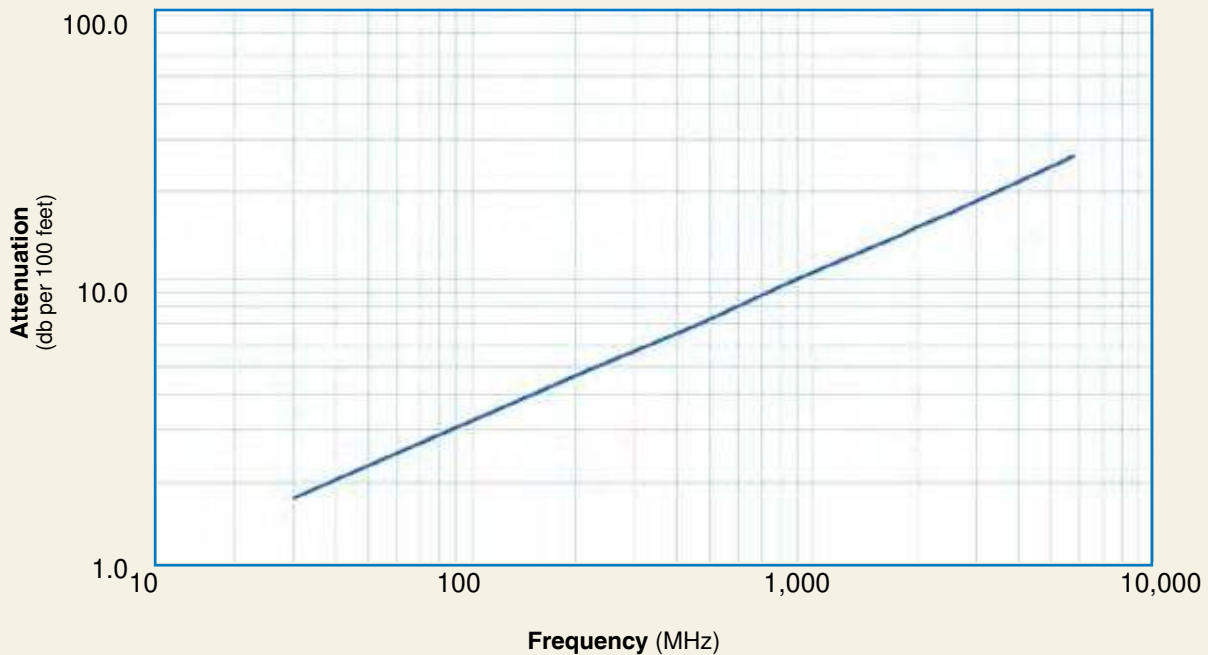
Construction Specifications			
Description	Material	In.	(mm)
Inner Conductor	Solid BC	0.044	(1.12)
Dielectric	Foam PE	0.116	(2.95)
Outer Conductor	Aluminum Tape	0.121	(3.07)
Overall Braid	Tinned Copper	0.144	(3.66)
Jacket	(see table)	0.195	(4.95)

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	%	83	
Dielectric Constant	NA	1.45	
Time Delay	nS/ft (nS/m)	1.22	(4.02)
Impedance	ohms	50	
Capacitance	pF/ft (pF/m)	24.5	(80.3)
Inductance	uH/ft (uH/m)	0.061	(0.20)
Shielding Effectiveness	dB	>90	
DC Resistance			
Inner Conductor	ohms/1000ft (/km)	5.36	(17.6)
Outer Conductor	ohms/1000ft (/km)	4.9	(16.1)
Voltage Withstand	Volts DC	1000	
Jacket Spark	Volts RMS	3000	
Peak Power	kW	2.5	

Mechanical Specifications			
Performance Property	Units	US	(metric)
Bend Radius: installation	in. (mm)	0.5	(12.7)
Bend Radius: repeated	in. (mm)	2	(50.8)
Bending Moment	ft-lb (N-m)	0.2	(0.27)
Weight	lb/ft (kg/m)	0.022	(0.03)
Tensile Strength	lb (kg)	40	(48)
Flat Plate Crush	lb/in. (kg/mm)	15	(0.27)

**Attenuation vs. Frequency (typical)**



Frequency (MHz)	30	50	150	220	450	900	1500	1800	2000	2500	5800	8000
<b>Attenuation dB/100 ft</b>	1.8	2.3	4.0	4.8	7.0	9.9	12.9	14.2	15.0	16.9	26.4	31.3
<b>Attenuation dB/100 m</b>	5.8	7.5	13.1	15.9	22.8	32.6	42.4	46.6	49.3	55.4	86.5	102.8
<b>Avg. Power kW</b>	1.02	0.79	0.45	0.37	0.26	0.18	0.14	0.13	0.12	0.11	0.07	0.06

**Calculate Attenuation =**  
 $(0.320900) \cdot \sqrt{\text{FMHz}} + (0.000330) \cdot \text{FMHz}$  (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

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Connectors		Part Number	Stock Code	VSWR**	Coupling Nut	Inner Contact Attach	Outer Contact Attach	Finish* Body /Pin	Length in (mm)	Width in (mm)	Weight lb (g)
1. BNC Male	Straight Plug	TC-200-BM-X	3190-2883	<1.25:1 (2.5)	Knurl	Solder	Crimp	S/G	1.7 (43.2)	0.56 (14.2)	0.045 (20.4)
2. Mini-UHF	Straight Plug	TC-200-MUHF	3190-444	<1.25:1 (2.5)	Knurl	Solder	Crimp	NG	1.1 (27.9)	0.45 (11.4)	0.015 (6.8)
3. N Male	Straight Plug	EZ-200-NMH-X	3190-2886	<1.25:1 (8)	Hex/Knurl	Spring Finger	Crimp	A/G	1.5 (38.1)	0.75 (19.1)	0.073 (33.1)
4. N Male	Straight Plug	TC-200-NMH-X	3190-2882	<1.25:1 (6)	Hex	Solder	Crimp	A/G	1.5(38.1)	0.89 (22.6)	0.086 (39.0)
5. N Male	Reverse Polarity	TC-200-NM-RP	3190-959	<1.25:1 (2.5)	Knurl	Solder	Crimp	N/G	1.5 (38.1)	0.75 (19.1)	0.073 (33.1)
6. SMA Male	Straight Plug	TC-200-SM-SS-X	3190-2881	<1.25:1 (2.5)	Hex	Solder	Crimp	SS/G	1.0(38.1)	0.75 (19.1)	0.073 (33.1)
7. SMA Male	Reverse Polarity	TC-200-SM-RP	3190-327	<1.25:1 (2.5)	Hex	Solder	Crimp	SS/G	1.0 (25.4)	0.32 (8.1)	0.015 (6.8)
8. TNC Male	Straight Plug	EZ-200-TM-X	3190-2885	<1.25:1 (2.5)	Knurl	Spring Finger	Crimp	S/G	1.4 (35.6)	0.59 (15.0)	0.045 (20.4)
9. TNC Male	Straight Plug	TC-200-TMC	3190-240	<1.25:1 (2.5)	Knurl	Solder	Clamp	S/G	1.7 (43.2)	0.59 (15.0)	0.045 (20.4)
10. TNC Male	Reverse Polarity	EZ-200-TM-RP	3190-792	<1.25:1 (2.5)	Knurl	Spring Finger	Crimp	A/G	1.4 (35.6)	0.32 (8.1)	0.045 (20.4)
11. TNC Female	Straight Jack	TC-200-TF-X	3190-2884	<1.25:1 (2.5)	NA	Solder	Crimp	N/G	1.3 (33.0)	0.57 (14.5)	0.033 (15.0)
12. TNC Female	Reverse Polarity	EZ-200-TF-RP	3190-793	<1.25:1 (2.5)	NA	Spring Finger	Crimp	A/G	1.3 (33.0)	0.57 (14.5)	0.033 (15.0)
13. SMA Female	Straight Jack	EZ-200-SF-SS-X	3190-6007	<1.25:1 (6)	NA	Spring Finger	Crimp	A/G	0.9 (23.2)	0.40 (10.0)	0.019 (8.6)
14. SMA Male	Right Angle	EZ-200-SM-RA-SS-X	3190-6006	<1.30:1 (6)	Hex	Spring Finger	Crimp	A/G	1.0 (24.7)	0.70 (17.7)	0.019 (8.6)
15. TNC Male	Right Angle	EZ-200-TM-RA-X	3190-6008	<1.25:1 (6)	Hex	Spring Finger	Crimp	A/G	1.1 (27.5)	1.10 (28.8)	0.091 (41.7)
16. FME Female	Straight Jack	TC-200-FMEF-X	3190-6249	<1.25:1 (2)	Hex	Solder	Crimp	A/G	1.2 (29.3)	0.36 (9.2)	0.240 (6.1)
17. FME Male	Straight Plug	TC-200-FMEM-X	3190-6250	<1.25:1 (2)	NA	Solder	Crimp	A/G	1.1063(28.1)	0.4252 (10.8)	0.4213 (10.7)

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

## Hardware Accessories

Type	Part Number	Stock Code	Description
Ground Kit	GK-S200TT	GK-S200TT	Standard Ground Kit (each)



## Install Tools

Type	Part Number	Stock Code	Description
Crimp Tool	CT-240/200/195/100	3190-667	Crimp tool for LMR-100, 195, 200 and 240 connectors
Cutting Tool	CCT-02	3192-165	Cable end flush cut tool
Deburr Tool	DBT-U	3192-001	Removes center conductor rough edges
Replacement Blade	RB-02	3192-166	Replacement blade for cutting tool
Strip Tool	CST-195/200	3192-102	Combination prep tool for LMR-195 and LMR-200
Replacement Blade	RB-CST	3192-086	Replacement blade kit for all CST strip tools