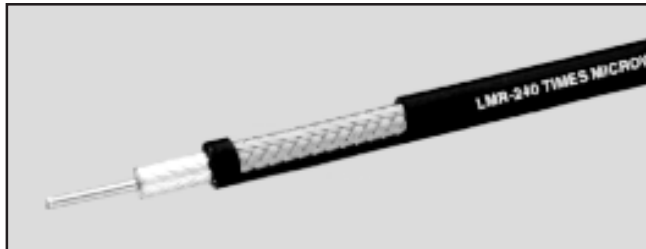


# LMR-240

## Flexible Communications Cable

### Ideal for...

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



- **Flexible:** With a 3/4-inch minimum bend radius, LMR-240 cable can be easily routed into and through tight spaces without kinking. The LMR bonded-tape outer conductor provides superior flexibility and ease of bending compared to corrugated copper or smooth wall copper hard-line cables.
- **Low Loss:** LMR-240 has lower loss than other '8x' type cables. This is achieved through the use of a high velocity dielectric and bonded aluminum tape outer conductor. The proprietary gas-injected closed cell foam dielectric prevents water migration through the cable and provides excellent crush resistance.
- **Weatherproof:** The UV protected black polyethylene jacket makes the cable rugged and resistant to the full range of outdoor environments. The DB version of the cable includes a water blocking material within the braid to protect the cable from moisture ingress and corrosion in harsh environments or should the jacket become damaged. Various jacket materials are available to address other environmental and indoor requirements.
- **RF Shielding:** The bonded aluminum tape outer conductor is overlapped to provide 100% coverage, resulting in >90 dB RF shielding (>180 dB crosstalk) and excellent interference immunity (ingress and egress).
- **Phase Stability:** The intimately bonded structure and foam dielectric of LMR cables provide excellent phase stability over temperature and with bending. The high velocity dielectric results in superior phase stability as compared with solid and air-spaced dielectric cables.
- **Connectors and Assemblies:** Times Microwave provides jumper cable assemblies fabricated with LMR-240 cable and a variety of connector interface combinations. Custom assemblies with phase matching, insertion loss matching, and other special electrical or marking requirements can also be provided. A good selection of connectors is available for LMR-240 cable as shown on the next page.

## TIMES MICROWAVE SYSTEMS

A Smiths Industries company

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### Part Description

Part Number	Designation	Jacket	Stock Code
LMR-240	Standard Outdoor Cable	Polyethylene	54021
LMR-240-MA	Indoor & Mobile Antenna Cable	PVC	54046
LMR-240-FR	Fire Retardant (CATVR)	Non-Halogen	54029
LMR-240-UltraFlex	UltraFlex Cable	TPE	54041

### Mechanical Specifications

Minimum Bend Radius	0.75	19.1
Bending Moment	0.25 ft-lbs	0.34 N-m
Weight	0.034 lbs/ft	0.05 kg/m
Tensile Strength	80 lbs	36.3 kG
Flat Plate Crush	20 lb/in	0.36 kG/mm

### Construction Specifications

Part Designation	Material	Inches	mm
Inner Conductor	Solid BC	0.056	1.42
Dielectric	Foam Polyethylene	0.150	3.81
Outer Conductor	Aluminum Tape	0.155	3.94
Overall Braid	Tinned Copper	0.178	4.52
Standard Jacket	Black Polyethylene	0.240	6.10

### Environmental Specifications

	°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

Cutoff Frequency	31 GHz	
Velocity of Propagation	84%	
Voltage Withstand	1500 VDC	
Peak Power	5.6 kW	
DC Resistance		
Inner Conductor, ohms	3.2/1000'	10.50/km
Outer Conductor, ohms	3.89/1000'	12.76/km
Jacket Spark	5000 VRMS	
Capacitance	24.2 pF/ft	79.40 pF/m
Inductance	0.060 uH/ft	0.20 uH/m
Shielding Effectiveness	>90 dB	
Phase Stability	< 10 ppm/C	

Frequency MHz	Attenuation dB/100 ft    dB/100 m		Avg. Power kW
330 MHz	1.3	4.4	1.49
50 MHz	1.7	5.7	1.15
150 MHz	3.0	9.9	0.66
220 MHz	3.7	12.0	0.54
450 MHz	5.3	17.3	0.38
900 MHz	7.6	24.8	0.26
1500 MHz	9.9	32.4	0.20
1800 MHz	10.9	35.6	0.18
2000 MHz	11.5	37.7	0.17
2500 MHz	12.9	42.4	0.15

Add 15% to tabulated attenuation for LMR-UltraFlex  
**Calculate Attenuation** = (0.24208) •  $\sqrt{\text{F/MHz}}$  + (0.00033) • F/MHz  
 (interactive calculator available at <http://www.timesmicrowave.com>)  
**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