

LMR[®]-240-75 Ohm Flexible Low Loss Coaxial Cable

Ideal for...

- Video Applications-CCTV, CATV, baseband or broadband
- In-Building Feeder Runs
- Any 75 ohm Wireless Application requiring an easily routed, low loss RF cable



• **LMR[®]-75** standard is a UV Resistant Polyethylene jacketed cable designed for 20-year service outdoor use. The bending and handling characteristics are significantly better than any smooth wall or corrugated hard-line cables.

• **Flexibility** and bendability are hallmarks of the LMR-240-75 cable design. The flexible outer conductor enables the tightest bend radius available for any cable of similar size and performance.

• **Low Loss** is another hallmark feature of LMR-240-75. Size for size LMR-75 has the lowest loss of any flexible cable and comparable loss to semirigid hard-line cables.

• **RF Shielding** is 50 dB greater than typical single shielded coax (40 dB). The multi-ply bonded foil outer conductor is rated conservatively at > 90 dB (i.e. >180 dB between two adjacent cables).

• **Weatherability:** LMR-240-75 cables designed for outdoor exposure incorporate the best materials for UV resistance and have life expectancy in excess of 20 years.

• **Connectors:** Standard available connectors include type-N and type-F male plug with 75 ohm interface. Most LMR-75 connectors are the EZ install type with crimp outer and non-solder center contact attachment.

• **Cable Assemblies:** All LMR-240-75 cable types are available as pre-terminated cable assemblies. Refer to the section on FlexTech for further details.

| Part Description | | | | |
|------------------|----------------|--------|-------|------------|
| Part Number | Application | Jacket | Color | Stock Code |
| LMR-240-75 | Indoor/Outdoor | PE | Black | 54150 |
| LMR-240-75-DB | Outdoor | PE | Black | 54226 |

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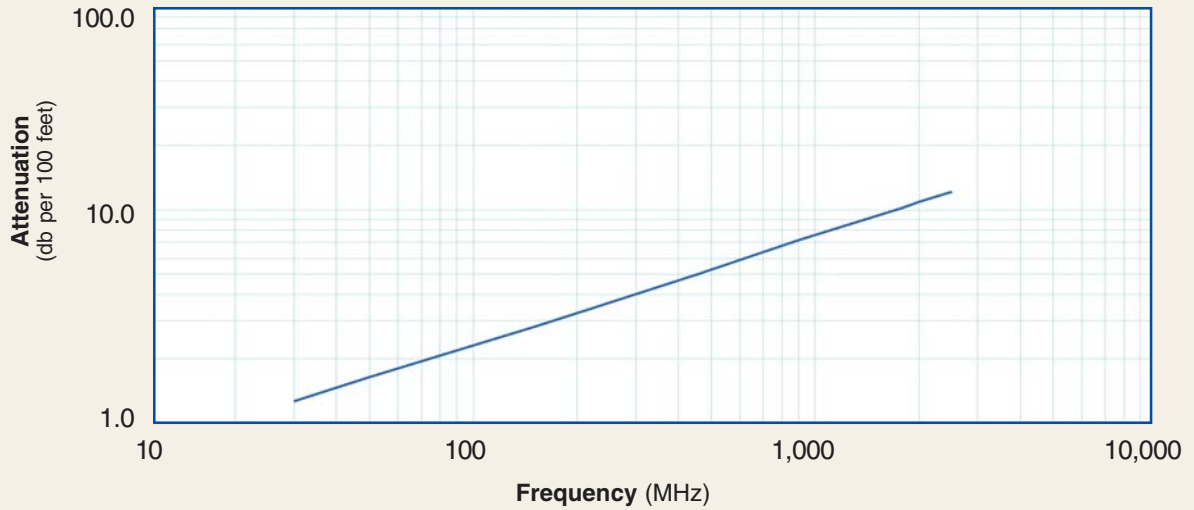
| Construction Specifications | | | |
|-----------------------------|---------------|-------|--------|
| Description | Material | In. | (mm) |
| Inner Conductor | Solid BC | 0.032 | (0.82) |
| Dielectric | Foam PE | 0.150 | (3.81) |
| Outer Conductor | Aluminum Tape | 0.155 | (3.94) |
| Overall Braid | Tinned Copper | 0.178 | (4.52) |
| Jacket | Black PE | 0.240 | (6.10) |

| Mechanical Specifications | | | |
|---------------------------|----------------|-------|----------|
| Performance Property | Units | US | (metric) |
| Bend Radius: installation | in. (mm) | 0.75 | (19.1) |
| Bend Radius: repeated | in. (mm) | 2.5 | (63.5) |
| Bending Moment | ft-lb (N-m) | 0.25 | (0.34) |
| Weight | lb/ft (kg/m) | 0.034 | (0.05) |
| Tensile Strength | lb (kg) | 80 | (38.3) |
| Flat Plate Crush | lb/in. (kg/mm) | 20 | (0.36) |

| 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) |
| Max Operating Frequency | GHz | 2.5 | |
| Velocity of Propagation | % | 84 | |
| Dielectric Constant | NA | 1.42 | |
| Time Delay | nS/ft (nS/m) | 1.21 | (3.97) |
| Impedance | ohms | 75 | |
| Capacitance | pF/ft (pF/m) | 16.1 | (52.9) |
| Inductance | uH/ft (uH/m) | 0.091 | (0.30) |
| Shielding Effectiveness | dB | >90 | |
| DC Resistance | | | |
| Inner Conductor | ohms/1000ft (/km) | 10.1 | (33.1) |
| Outer Conductor | ohms/1000ft (/km) | 3.89 | (12.8) |
| Voltage Withstand | Volts DC | 1500 | |
| Jacket Spark | Volts RMS | 5000 | |
| Peak Power | kW | 5.6 | |

Attenuation vs. Frequency (typical)



| Frequency (MHz) | 30 | 50 | 150 | 220 | 450 | 900 | 1500 | 1800 | 2000 | 2500 |
|------------------------------|------|------|------|------|------|------|------|------|------|------|
| Attenuation dB/100 ft | 1.3 | 1.6 | 2.9 | 3.5 | 5.0 | 7.2 | 9.4 | 10.3 | 10.9 | 12.3 |
| Attenuation dB/100 m | 4.1 | 5.4 | 9.4 | 11.4 | 16.4 | 23.5 | 30.7 | 33.8 | 35.8 | 40.3 |
| Avg. Power kW | 1.41 | 1.09 | 0.62 | 0.51 | 0.35 | 0.25 | 0.19 | 0.17 | 0.16 | 0.14 |

Calculate Attenuation =

$(0.229100) \cdot \sqrt{\text{FMHz}} + (0.000330) \cdot \text{FMHz}$ (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 (mm) | Width in (mm) | Weight lb (g) |
|-----------|---------------|---------------|------------|--------------------|--------------|----------------------|----------------------|-------------------|----------------|---------------|---------------|
| F Male | Straight Plug | EZ-240-FMH-75 | 3190-1613 | <1.25:1 (2.0) | Hex | Spring Finger | Crimp | N/G | 1.7 (43.4) | 0.56 (14.2) | 0.016 (7.3) |
| | Straight Plug | TC-240-FMH-75 | 3190-1483 | <1.25:1 (2.5) | Hex | Solder-on | Crimp | N/G | 1.7 (43.2) | 0.56 (14.2) | 0.016 (7.3) |
| N Male | Straight Plug | EZ-240-NM-75 | 3190-1614 | <1.25:1 (2.0) | Knurl | Spring Finger | Crimp | N/G | 1.5 (38.1) | 0.83 (21.1) | 0.086 (39.0) |
| | Straight Plug | TC-240-NM-75 | 3190-477 | <1.25:1 (2.5) | Knurl | Solder-on | Crimp | N/G | 1.5 (38.1) | 0.83 (21.1) | 0.086 (39.0) |

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

Accessories

| Type | Part Number | Stock Code | Description |
|------------|-------------|------------|------------------------|
| Ground Kit | GK-S240TT | GK-S240TT | Standard Grounding Kit |

