

LMR[®]-1700 Flexible Low Loss Communications Coax

Ideal for...

- Long Antenna Feeder runs
- Building-Top Sites
- 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 | Color | Stock Code |
| LMR-1700-DB | Outdoor/Watertight | PE | Black | 54096 |
| LMR-1700-FR | Indoor/Outdoor Riser CMR | FRPE | Black | 54035 |

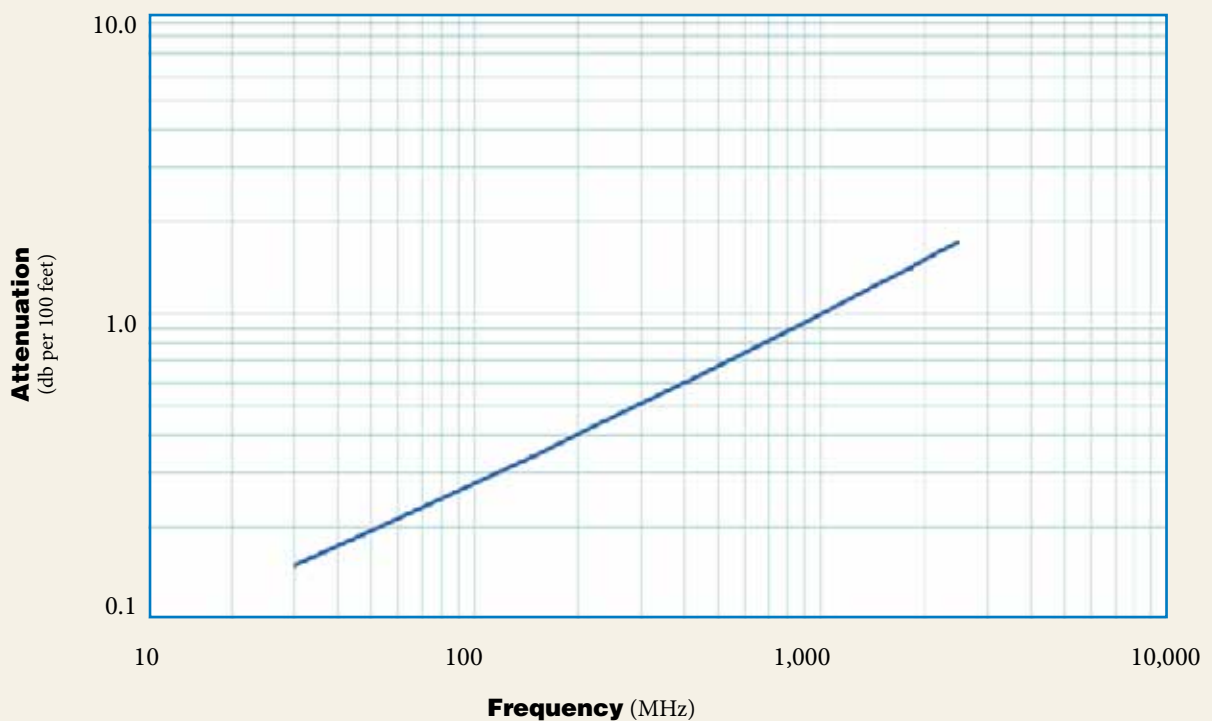
| Construction Specifications | | | |
|-----------------------------|--------------------|-------|---------|
| Description | Material | In. | (mm) |
| Inner Conductor | BC Tube (.477" ID) | 0.527 | (13.39) |
| Dielectric | Foam PE | 1.350 | (34.29) |
| Outer Conductor | Aluminum Tape | 1.356 | (34.44) |
| Overall Braid | Tinned Copper | 1.402 | (35.61) |
| Jacket | (see table) | 1.670 | (42.42) |

| Mechanical Specifications | | | |
|---------------------------|----------------|-------|----------|
| Performance Property | Units | US | (metric) |
| Bend Radius: installation | in. (mm) | 13.50 | (342.9) |
| Bend Radius: repeated | in. (mm) | 17.0 | (431.8) |
| Bending Moment | ft-lb (N-m) | 40 | (54.23) |
| Weight | lb/ft (kg/m) | 0.736 | (1.10) |
| Tensile Strength | lb (kg) | 1500 | (681.0) |
| Flat Plate Crush | lb/in. (kg/mm) | 300 | (5.36) |

| 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) |
| Velocity of Propagation | % | 89 | |
| Dielectric Constant | NA | 1.26 | |
| Time Delay | nS/ft (nS/m) | 1.14 | (3.75) |
| Impedance | ohms | 50 | |
| Capacitance | pF/ft (pF/m) | 22.8 | (74.9) |
| Inductance | uH/ft (uH/m) | 0.057 | (0.19) |
| Shielding Effectiveness | dB | >90 | |
| DC Resistance | | | |
| Inner Conductor | ohms/1000ft (/km) | 0.21 | (0.7) |
| Outer Conductor | ohms/1000ft (/km) | 0.27 | (0.9) |
| Voltage Withstand | Volts DC | 9000 | |
| Jacket Spark | Volts RMS | 8000 | |
| Peak Power | kW | 202 | |

Attenuation vs. Frequency (typical)



| Frequency (MHz) | 30 | 50 | 150 | 220 | 450 | 900 | 1500 | 1800 | 2000 | 2500 |
|------------------------------|-------|-------|------|------|------|------|------|------|------|------|
| Attenuation dB/100 ft | 0.1 | 0.2 | 0.3 | 0.4 | 0.6 | 0.9 | 1.3 | 1.4 | 1.5 | 1.7 |
| Attenuation dB/100 m | 0.5 | 0.6 | 1.1 | 1.4 | 2.1 | 3.1 | 4.1 | 4.6 | 4.9 | 5.7 |
| Avg. Power kW | 20.27 | 15.55 | 8.72 | 7.09 | 4.79 | 3.23 | 2.40 | 2.15 | 2.02 | 1.76 |

Calculate Attenuation =

$(0.026460) \cdot \sqrt{\text{FMHz}} + (0.000160) \cdot \text{FMHz}$ (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

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| 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. 7-16 DIN Female | Straight Jack | EZ-1700-716FC | 3190-388 | <1.25:1 (2.5) | NA | Press Fit | Clamp | S/S | 2.17 (55) | 2.2 (55.9) | 1.005(455.9) |
| 2. 7-16 DIN Male | Straight Plug | EZ-1700-716MC | 3190-387 | <1.25:1 (2.5) | Hex | Press Fit | Clamp | S/S | 2.17 (55) | 2.2 (55.9) | 1.055(478.5) |
| 3. N Female | Straight Jack | EZ-1700-NFC | 3190-386 | <1.25:1 (2.5) | NA | Press Fit | Clamp | S/S | 2.17 (55) | 2.2 (55.9) | 1.087(493.1) |
| 4. N Male | Straight Plug | EZ-1700-NMC | 3190-385 | <1.25:1 (2.5) | Hex | Press Fit | Clamp | S/S | 2.17 (55) | 2.2 (55.9) | 1.058(479.9) |

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



Install Tools

| Type | Part Number | Stock Code | Description |
|--------------------|-------------|------------|------------------------------------|
| Strip Tool | ST-1700C | 3190-312 | For Clamp Style Connectors |
| Midspan Strip Tool | GST-1700A | 3190-437 | For Ground Strap Attachment |
| Wrenches | WR-1700 | 3190-514 | 2" Box Wrench (2 required) |
| Cutting Tool | CCT-02 | 3192-165 | Cable end flush cut tool |
| Replacement Blade | RB-02 | 3192-166 | Replacement blade for cutting tool |