

# LMR<sup>®</sup>-600 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-600          | Outdoor                  | PE           | Black | 54003 |
| LMR-600-DB       | Outdoor/Watertight       | PE           | Black | 54093 |
| LMR-600-FR       | Indoor/Outdoor Riser CMR | FRPE         | Black | 54032 |
| LMR-600-FR-PVC   | Indoor/Outdoor Riser CMR | FRPVC        | Black | 54074 |
| LMR-600-PVC      | General Purpose          | PVC          | Black | 54219 |
| LMR-600-PVC-W    | General Purpose          | PVC          | White | 54206 |

| Construction Specifications |               |       |         |
|-----------------------------|---------------|-------|---------|
| Description                 | Material      | In.   | (mm)    |
| Inner Conductor             | Solid BCCAI   | 0.176 | (4.47)  |
| Dielectric                  | Foam PE       | 0.455 | (11.56) |
| Outer Conductor             | Aluminum Tape | 0.461 | (11.71) |
| Overall Braid               | Tinned Copper | 0.490 | (12.45) |
| Jacket                      | (see table)   | 0.590 | (14.99) |

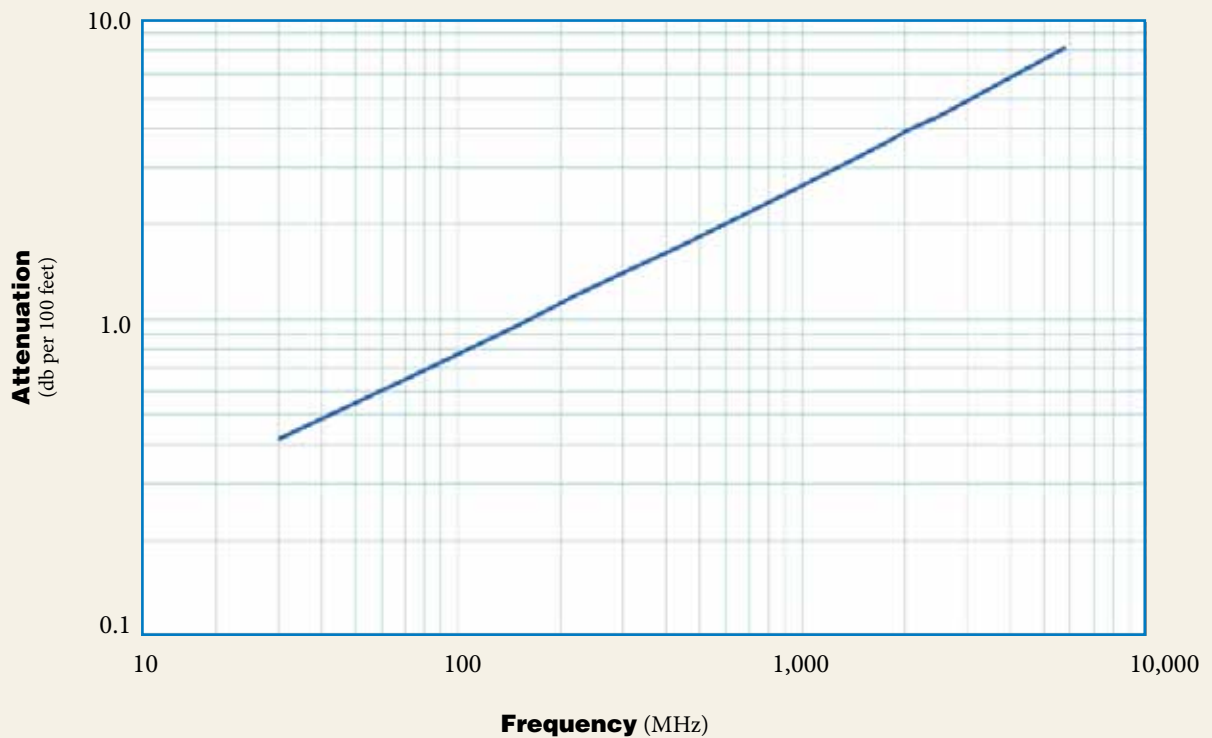
| Mechanical Specifications |                |       |          |
|---------------------------|----------------|-------|----------|
| Performance Property      | Units          | US    | (metric) |
| Bend Radius: installation | in. (mm)       | 1.50  | (38.1)   |
| Bend Radius: repeated     | in. (mm)       | 6.0   | (152.4)  |
| Bending Moment            | ft-lb (N-m)    | 2.75  | (3.73)   |
| Weight                    | lb/ft (kg/m)   | 0.131 | (0.20)   |
| Tensile Strength          | lb (kg)        | 350   | (158.9)  |
| Flat Plate Crush          | lb/in. (kg/mm) | 60    | (1.07)   |

| 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   | %                 | 85    |          |
| Dielectric Constant       | NA                | 1.32  |          |
| Time Delay                | nS/ft (nS/m)      | 1.17  | (3.83)   |
| Impedance                 | ohms              | 50    |          |
| Capacitance               | pF/ft (pF/m)      | 23.4  | (76.6)   |
| Inductance                | uH/ft (uH/m)      | 0.058 | (0.19)   |
| Shielding Effectiveness   | dB                | >90   |          |
| DC Resistance             |                   |       |          |
| Inner Conductor           | ohms/1000ft (/km) | 0.53  | (1.7)    |
| Outer Conductor           | ohms/1000ft (/km) | 1.2   | (3.9)    |
| Voltage Withstand         | Volts DC          | 4000  |          |
| Jacket Spark              | Volts RMS         | 8000  |          |
| Peak Power                | kW                | 40    |          |

S MICROWAVE

**Attenuation vs. Frequency (typical)**



| Frequency (MHz)              | 30   | 50   | 150  | 220  | 450  | 900  | 1500 | 1800 | 2000 | 2500 | 5800 | 8000 |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| <b>Attenuation dB/100 ft</b> | 0.4  | 0.5  | 1.0  | 1.2  | 1.7  | 2.5  | 3.3  | 3.7  | 3.9  | 4.4  | 7.3  | 8.8  |
| <b>Attenuation dB/100 m</b>  | 1.4  | 1.8  | 3.2  | 3.9  | 5.6  | 8.2  | 10.9 | 12.1 | 12.8 | 14.5 | 23.8 | 29.0 |
| <b>Avg. Power kW</b>         | 5.51 | 4.24 | 2.41 | 1.97 | 1.35 | 0.93 | 0.70 | 0.63 | 0.59 | 0.52 | 0.32 | 0.26 |

**Calculate Attenuation =**

$(0.075550) \cdot \sqrt{\text{FMHz}} + (0.000260) \cdot \text{FMHz}$  (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

# LMR<sup>®</sup>-600 Flexible Low Loss Communications Coax



| Connectors         |                  | Part             | Stock     | VSWR**        | Coupling  | Inner Contact Attach | Outer Contact Attach | Finish* /Pin | Length in (mm) | Width in (mm) | Weight lb (g) |
|--------------------|------------------|------------------|-----------|---------------|-----------|----------------------|----------------------|--------------|----------------|---------------|---------------|
| Interface          | Description      | Number           | Code      | Freq. (GHz)   | Nut       |                      |                      |              |                |               |               |
| 1. 7/8 EIA         | Flange           | EZ-600-78EIA     | 3190-1373 | <1.25:1 (2.5) | NA        | Spring Finger        | Finger Clamp         | S/S          | 2.3 (58)       | 2.60 (66.0)   | 0.873 (396.0) |
| 2. 7-16 DIN Female | Straight Jack    | TC-600-716FC     | 3190-375  | <1.25:1 (2.5) | NA        | Solder               | Clamp                | S/S          | 1.1 (28)       | 1.00 (25.4)   | 0.249 (112.9) |
| 3. 7-16 DIN        | Bulkhead Plug    | EZ-600-716M-X    | 3190-2643 | <1.30:1 (6)   | Hex       | Spring Finger        | Crimp                | A/S          | 1.6 (42)       | 1.38 (35.0)   | 0.209 (94.8)  |
| 4. 7-16 DIN        | Straight Plug    | TC-600-716M-X    | 3190-2642 | <1.30:1 (6)   | Hex       | Solder               | Crimp                | A/S          | 1.6 (40)       | 1.38 (35.0)   | 0.191 (86.6)  |
| 5. 7-16 DIN        | Straight Plug    | TC-600-716MC     | 3190-502  | <1.25:1 (2.5) | Hex       | Solder               | Clamp                | S/S          | 2.0 (51)       | 1.30 (33.0)   | 0.347 (157.4) |
| 6. 7/16 Male       | Right Angle      | EZ-600-716M-RA-X | 3190-2546 | <1.35:1 (6)   | Hex       | Spring Finger        | Crimp                | A/G          | 1.6 (40)       | 1.38 (35.0)   | 0.462 (210.0) |
| 7. 7-16 DIN        | Right Angle      | TC-600-716M-RA-D | 3190-2599 | <1.35:1 (6)   | Hex       | Solder               | Crimp                | A/S          | 1.7 (44)       | 2.00 (50.9)   | 0.362 (164.2) |
| 8. 7-16 DIN        | Straight Jack    | EZ-600-716F      | 3190-2447 | <1.25:1 (6)   | Hex       | Spring Finger        | Crimp                | A/G          | 1.8 (45)       | 1.32 (33.6)   | 0.158 (71.7)  |
| 9. HN Male         | Straight Plug    | TC-600-HNMC      | 3190-1429 | <1.25:1 (<1)  | Knurl     | Solder               | Clamp                | S/g          | 2.3 (59.2)     | 0.88 (22.4)   | 0.25 (113)    |
| 10. LC Male        | Straight Plug    | TC-600-LCM       | 3190-1406 | <1.25:1 (<1)  | Hex       | Solder               | Clamp                | N/S          | 3.1 (78.0)     | 1.62 (41.1)   | 1.20 (544)    |
| 11. N Female       | Straight Jack    | TC-600-NF-X      | 3190-2816 | <1.30:1 (6)   | NA        | Solder               | Crimp                | A/G          | 1.7 (43)       | 0.69 (17.6)   | 0.076 (34.6)  |
| 12. N Female       | Straight Jack    | EZ-600-NF-X      | 3190-2817 | <1.30:1 (6)   | NA        | Spring Finger        | Crimp                | A/G          | 1.7 (43)       | 0.69 (17.6)   | 0.090 (40.6)  |
| 13. N Female       | Bulkhead Jack    | EZ-600-NF-BH     | 3190-616  | <1.25:1 (2.5) | NA        | Spring Finger        | Crimp                | S/G          | 2.4 (61)       | 0.88 (22.4)   | 0.195 (88.5)  |
| 14. N Female       | Bulkhead Jack    | TC-600-NF-BH     | 3190-589  | <1.25:1 (2.5) | NA        | Solder               | Crimp                | S/G          | 2.4 (61)       | 0.88 (22.4)   | 0.195 (88.5)  |
| 15. N Female       | Bulkhead Jack    | TC-600-NFC-BH    | 3190-466  | <1.25:1 (2.5) | NA        | Solder               | Clamp                | S/G          | 2.2 (56)       | 0.94 (23.9)   | 0.214 (97.1)  |
| 16. N Male         | Straight Plug    | EZ-600-NMK       | 3190-669  | <1.25:1 (2.5) | Knurl     | Spring Finger        | Crimp                | S/G          | 2.1 (53)       | 0.92 (23.4)   | 0.164 (74.4)  |
| 17. N Male         | Straight Plug    | EZ-600-NMC-2-D   | 3190-2641 | <1.25:1 (6)   | Hex/Knurl | Spring Finger        | Clamp                | A/G          | 2.1 (53)       | 0.92 (23.4)   | 0.202 (91.6)  |
| 18. N Male         | Straight Plug    | EZ-600-NMH-X     | 3190-2627 | <1.25:1 (8)   | Hex/Knurl | Spring Finger        | Crimp                | A/G          | 2.1 (53)       | 0.92 (23.4)   | 0.164 (74.4)  |
| 19. N Male         | Straight Plug    | TC-600-NMH-X     | 3190-2628 | <1.25:1 (8)   | Hex/Knurl | Solder               | Crimp                | A/G          | 2.1 (53)       | 0.92 (23.4)   | 0.166 (75.3)  |
| 20. N Male         | Right Angle      | EZ-600-NMH-RA-X  | 3190-2639 | <1.35:1 (6)   | Hex       | Spring Finger        | Crimp                | A/G          | 2.0 (50)       | 1.42 (36.0)   | 0.224 (101.7) |
| 21. N Male         | Right Angle      | TC-600-NMH-RA-D  | 3190-2427 | <1.35:1 (6)   | Hex       | Solder               | Crimp                | A/G          | 1.8 (46.5)     | 1.62 (41.2)   | 0.185 (84.3)  |
| 22. N Male         | Straight Plug    | TC-600-NMH-75-50 | 3190-1610 | <1.35:1 (6)   | Hex       | Solder               | Crimp                | N/G          | 2.1 (52.8)     | 0.91 (23.1)   | 0.130 (59.0)  |
| 23. BNC Male       | Right Angle      | TC-600-BM-RA     | 3190-2734 | 1.30:1 (4)    | Knurl     | Solder               | Crimp                | A/G          | 1.8 (45.5)     | 1.54 (39.0)   | 0.164 (74.3)  |
| 24. TNC Male       | Straight Plug    | TC-600-TM-X      | 3190-2530 | <1.25:1 (6)   | Hex/Knurl | Solder               | Crimp                | A/G          | 2.3 (57.6)     | 0.75 (19.0)   | 0.100 (45.6)  |
| 25. TNC Male       | Straight Plug    | EZ-600-TM-X      | 3190-2531 | <1.25:1 (6)   | Hex/Knurl | Spring Finger        | Crimp                | A/G          | 2.3 (57.6)     | 0.75 (19.0)   | 0.100 (45.6)  |
| 26. TNC Male       | Reverse Polarity | EZ-600-TM-RP     | 3190-796  | <1.25:1 (2.5) | Knurl     | Spring Finger        | Crimp                | A/G          | 2.2 (56)       | 0.87 (22.0)   | 0.112 (50.8)  |
| 27. TNC Male       | Reverse Polarity | TC-600-TM-RP     | 3190-1064 | <1.25:1 (6)   | Knurl     | Solder               | Crimp                | N/G          | 2.1 (53.3)     | 0.88 (22.4)   | 0.112 (50.8)  |
| 28. TNC Male       | Right Angle      | TC-600-TM-RA-D   | 3190-2707 | <1.35:1 (6)   | Hex/Knurl | Solder               | Crimp                | A/G          | 1.6 (41)       | 1.75 (44.5)   | 0.164 (74.3)  |
| 29. TNC Female     | Reverse Polarity | EZ-600-TF-RP     | 3190-797  | <1.25:1 (2.5) | NA        | Spring Finger        | Crimp                | A/G          | 2.3 (58)       | 0.87 (22.0)   | 0.100 (45.4)  |
| 30. TNC Female     | Reverse Polarity | TC-600-TF-RP     | 3190-1065 | <1.35:1 (6)   | Knurl     | Solder               | Crimp                | N/G          | 2.2 (55.8)     | 0.68 (17.3)   | 0.100 (45.4)  |
| 31. UHF Male       | Straight Plug    | EZ-600-UM        | 3190-615  | <1.25:1 (2.5) | Knurl     | Spring Finger        | Crimp                | S/G          | 1.7 (43)       | 0.88 (22.4)   | 0.164 (74.4)  |
| 32. UHF Male       | Straight Plug    | TC-600-UMC       | 3190-213  | <1.25:1 (2.5) | Knurl     | Solder               | Clamp                | S/G          | 1.7 (43)       | 0.88 (22.4)   | 0.198 (89.8)  |

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



| Type                  | Part Number | Stock Code | Description  |
|-----------------------|-------------|------------|--|
| Crimp Tool            | CT-U        | 3192-181   | Crimp Handle   |
| Crimp Dies            | Y1720       | 3190-203   | .610" Hex Dies   |
| Crimp Rings           | CR-600      | 3190-831   | Crimp Rings for TC/EZ-600 connectors (pkg of 10)                                       |
| Strip Tool            | CST-600     | 3192-052   | Combination prep tool for LMR-600 crimp and clamp style connectors                     |
| Crimp Tool            | CT-600      | 3192-170   | Crimp tool for LMR 600 connectors  |
| Replacement Blades    | RB-456      | 3190-421   | Replacement Blades for Strip Tools   |
| Deburr Tool           | DBT-U       | 3192-001   | Removes center conductor rough edges   |
| Midspan Strip Tool    | GST-600A    | 3190-1051  | For ground strap attachment  |
| Wrench                | WR-600      | 3190-1435  | 15/16" Box Wrench (2 required for EZ-600-NMC-2)  |
| Cutting Tool          | CCT-02      | 3192-165   | Cable end flush cut tool   |
| Replacement Blade     | RB-02       | 3192-166   | Replacement blade for cutting tool   |
| Replacement Blade Kit | RB-CST      | 3192-086   | Replacement blade kit for all CST strip tools  |
| Tool Kit              | TK-600EZ    | 3190-1602  | Tool kit for LMR crimp/clamp connectors (includes CCT-02, CST-600, CT-600, Tool Pouch) |



| Type                             | Part Number | Stock Code  | Description   |
|----------------------------------|-------------|-------------|---|
| Ground Kit                       | GK-S600TT   | GK-S600TT   | Standard Grounding Kit (each)   |
| Hoisting Grip                    | HG-600T     | HG-600T     | Split/Laced Type (each)   |
| Cold Shrink                      | CS-A600T    | CS-A600T    | Cable to Antenna Junction (each)  |
| Cold Shrink                      | CS-60120T   | CS-60120T   | LMR-600 to -1200 Junction (each)  |
| Cold Shrink                      | CS-60170T   | CS-60170T   | LMR-600 to -1700 Junction (each)  |
| Hanger Blocks                    | CB-600T     | CB-600T     | Dual Cable Support Block (kit of 10)  |
| Stand. Entry Port Cushion        |             | SC-600T-3   | Three cables (each)   |
| Snap-In Hangers                  | SH-U600T    | SH-U600T    | Snap-In Hangers (Kit of 10)   |
| Hanger Block Supporting Hardware |             |             | Complete Range of Supporting Hardware & Adapters Available                                    |
| Weather Proof Boot               | IPB-600-NM  | 3109-600-NM | LMR-600 Male IP boot suitable for type N, TNC, BNC, 4310, 4195                                |
| Weather Proof Boot               | IPB-600-NF  | 3109-600-NF | LMR-600 Female IP boot suitable for type N, TNC, BNC, 4310, 4195                              |
| Weather seal boots               | WSB-600     | 3109-401    | Weather seal strain relief boot (10 pk) for use with most popular LMR-600-X series connectors |