

TCOM[®]-300 Low Loss Low Passive Intermod Coax

Ideal for...

- -155 dBc Intermodulation Distortion
- Low Loss UHF/Microwave Interconnect
- Wireless Base Station Interconnect
- Flexible for Easy Routing



| Part Description | | | | | Stock |
|------------------|--------------------|--------|-------|-------|-------|
| Part Number | Application | Jacket | Color | Code | Code |
| TCOM-300 | Outdoor | PE | Black | 55011 | |
| TCOM-300-FR | Indoor-Riser CMR | FRPE | Black | 55013 | |
| TCOM-300-PUR-DB | Outdoor/Watertight | PUR | Black | 55038 | |

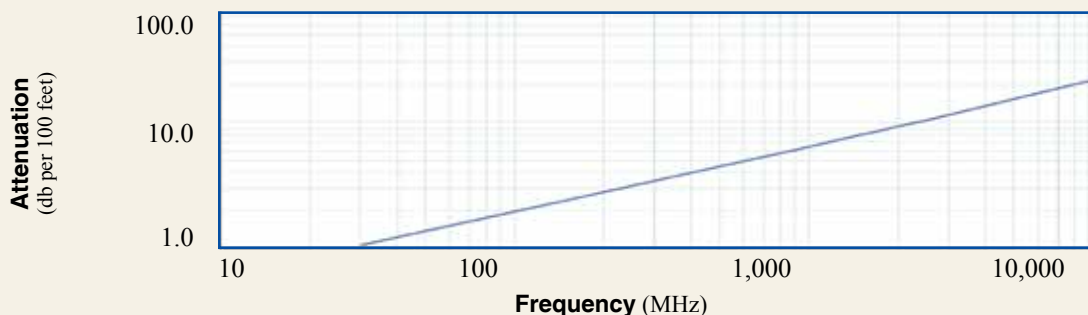
| Environmental Specifications | | | |
|--------------------------------|----------|---------|--|
| Performance Property | °F | °C | |
| Installation Temperature Range | -40/+185 | -40/+85 | |
| Storage Temperature Range | -94/+185 | -70/+85 | |
| Operating Temperature Range | -40/+185 | -40/+85 | |

| Mechanical Specifications | | | |
|---------------------------|----------------|-------|----------|
| Performance Property | Units | US | (metric) |
| Bend Radius: installation | in. (mm) | 0.88 | (22.2) |
| Bend Radius: repeated | in. (mm) | 3.0 | (76.2) |
| Bending Moment | ft-lb (N-m) | 0.38 | (0.52) |
| Weight | lb/ft (kg/m) | 0.055 | (0.08) |
| Tensile Strength | lb (kg) | 120 | (54.5) |
| Flat Plate Crush | lb/in. (kg/mm) | 30 | (0.54) |

| Construction Specifications | | | |
|-----------------------------|-----------------------|-------|--------|
| Description | Material | In. | (mm) |
| Inner Conductor | Solid BC | 0.070 | (1.78) |
| Dielectric | Foam PE | 0.190 | (4.83) |
| Outer Conductor | SPC Strip Braid | 0.200 | (5.08) |
| Overall Braid | TC Braid over Al tape | 0.234 | (5.94) |
| Jacket | (see table) | 0.300 | (7.62) |

| Electrical Specifications | | | |
|---------------------------|-------------------|-------|----------|
| Performance Property | Units | US | (metric) |
| Velocity of Propagation | % | 85 | |
| Dielectric Constant | NA | 1.38 | |
| Time Delay | nS/ft (nS/m) | 1.20 | (3.92) |
| Impedance | ohms | 50 | |
| Capacitance | pF/ft (pF/m) | 23.9 | (78.4) |
| Inductance | uH/ft (uH/m) | 0.060 | (0.20) |
| Shielding Effectiveness | dB | >100 | |
| DC Resistance | | | |
| Inner Conductor | ohms/1000ft (/km) | 2.12 | (7.0) |
| Outer Conductor | ohms/1000ft (/km) | 2.10 | (6.9) |
| Voltage Withstand | Volts DC | 2000 | |
| Jacket Spark | Volts RMS | 5000 | |
| Peak Power | kW | 10 | |
| Passive Intermod | dBc | -155 | |

Attenuation vs. Frequency (typical)



| Frequency (MHz) | 30 | 50 | 150 | 220 | 450 | 900 | 1500 | 1800 | 2000 | 2500 | 5800 | 10,000 |
|-----------------------|------|------|------|------|------|------|------|------|------|------|------|--------|
| Attenuation dB/100 ft | 1.1 | 1.4 | 2.4 | 3.0 | 4.3 | 6.1 | 8.0 | 8.8 | 9.3 | 10.5 | 16.7 | 22.7 |
| Attenuation dB/100 m | 3.5 | 4.6 | 8.0 | 9.7 | 14.0 | 20.1 | 26.3 | 29.0 | 30.7 | 34.6 | 54.8 | 74.5 |
| Avg. Power kW | 2.07 | 1.60 | 0.91 | 0.75 | 0.52 | 0.36 | 0.28 | 0.25 | 0.24 | 0.21 | 0.13 | 0.10 |

Calculate Attenuation = $(0.194337) \cdot \sqrt{\text{FMHz}} + (0.000327) \cdot \text{FMHz}$ (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) |
|---------------|---------------|-----------------|------------|-----------------------|-----------------|----------------------------|----------------------------|-------------------------|-------------------|------------------|------------------|
| 1. TNC Male | Straight Plug | TC-300-TM | 3190-500 | <1.25:1 (2.5) | Knurl | Solder | Crimp | N/S | 1.7 (43) | 0.59 (15.0) | 0.050 (22.7) |
| 2. SMA Male | Straight Plug | TC-300-SM | 3190-501 | <1.25:1 (2.5) | Hex | Solder | Crimp | SS/G | 1.0 (25) | 0.35 (8.9) | 0.018 (8.2) |
| 3. SMA Female | Bulkhead Jack | TC-300-SF-BH | 3190-590 | <1.25:1 (2.5) | NA | Solder | Crimp | SS/G | 1.1 (28) | 0.31 (7.9) | 0.022 (10.0) |
| 4. N Male | Straight Plug | TC-300-NMH-X | 3190-2861 | <1.25:1 (6) | Hex/Knurl | Solder | Crimp | A/G | 1.3 (33) | 0.86 (21.8) | 0.084(38.1) |
| 5. N Male | Right Angle | TC-300-NMH-RA-D | 3190-2761 | <1.30:1 (2.5) | Hex/Knurl | Solder | Crimp | N/S | 1.4 (35) | 1.41 (35.8) | 0.130 (59.0) |
| 6. N Female | Straight Jack | EZ-300-NF-X | 3190-3078 | <1.25:1 (6) | NA | Spring Finger | Crimp | A/G | 1.4 (36.5) | 0.87 (22.0) | 0.033 (18.0) |

Hardware Accessories

| Type | Part Number | Stock Code | Description |
|------------|-------------|------------|----------------------------|
| Ground Kit | GK-S300TT | GK-S300TT | Standard Ground Kit (each) |



Install Tools

| Type | Part Number | Stock Code | Description |
|-----------------------|-------------|------------|---|
| Crimp Tool | CT-400/300 | 3190-666 | Crimp tool for LMR 300 connectors |
| Deburr Tool | DBT-U | 3192-001 | Removes center conductor rough edges |
| Cutting Tool | CCT-02 | 3192-165 | Cable end flush cut tool |
| Prep Tool | CST-300 | 3192-084 | Prep tool for LMR-300 connectors |
| Replacement Blade | RB-02 | 3192-166 | Replacement blade for cutting tool |
| Replacement Blade Kit | RB-CST | 3192-086 | Replacement blade kit for all strip tools |

