

CMC Radiating Coaxial Cable

CMC 50D-158L

PRODUCT DESCRIPTION

- The cable is used as a distributed antenna to provide communications in tunnels, subway mines, large building complexes, and any other application in confined areas.
- Slots in the copper outer conductor allow a controlled portion of the internal RF energy to be radiated into the surrounding environment and can be designed individually.
- With the broadband capability of 75~3000MHz, this cable is used for both one-way and two-way communication systems, and a single radiating cable can handle multiple communication systems simultaneously.



CONSTRUCTION

| | | |
|-----------------|---|----------|
| Inner conductor | Smooth copper tube | Φ17.60mm |
| Insulation | Physically foamed PE | Φ43.50mm |
| Outer conductor | Corrugated copper tube with double row milled slots | Φ46.50mm |
| Jacket | Non-halogenated, fire retardant PE | Φ49.50mm |

MECHANICAL PROPERTIES

| | | |
|------------------------|----|------|
| Minimum bending radius | mm | 280 |
| Tensile force | N | 3000 |

ELECTRICAL PROPERTIES

| | | |
|-----------------------|-------|--------|
| Impedance | Ω | 50±2 |
| Capacitance | pF/m | 75 |
| Propagation velocity | % | 88 |
| DC breakdown voltage | kV | 10 |
| Insulation resistance | MΩ•km | >10000 |

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TRANSMISSION PROPERTIES

| Frequency MHz | Nom. attenuation @20 °C,dB/100m | Coupling loss(50%/95%) @20 °C,dB |
|------------------|------------------------------------|-------------------------------------|
| 150 | 0.86 | 70 / 80 |
| 450 | 1.60 | 83 / 93 |
| 900 | 2.42 | 82 / 92 |
| 1800 | 3.80 | 81 / 91 |
| 1900 | 3.94 | 80 / 90 |
| 2200 | 4.36 | 80 / 90 |
| 2400 | 4.65 | 80 / 90 |

Attenuation & Coupling loss test method : IEC 61196-4.

VSWR

| | |
|-------------------------------------|------|
| Tested in customers' operating band | ≤1.3 |
|-------------------------------------|------|

ENVIRONMENTAL PROPERTIES

| | | |
|--------------------------------------|----|---------|
| Recommended storage temperature | °C | -70~+85 |
| Recommended installation temperature | °C | -25~+60 |
| Recommended operating temperature | °C | -40~+85 |