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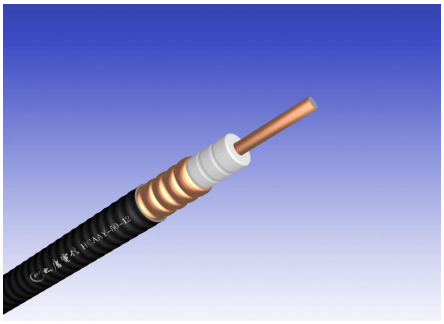
# 50 ohm Corrugated Copper-tube Outer Conductor Coaxial Cables for Wireless Communication

Standard Jacket: HCAAY-50-12 (1/2")
Fire retardant Jacket: HCAAYZ-50-12(1/2"retardant)



1/2"Flexible Coaxial Cable

## Characteristics

Low Attenuation, low VSWR, High expansion, high power rating, Excellent environmental performance and Mechanical Performance.7/8" fire retardant cable fulfills the severe requirements of CPR

Class B2ca-s1-d1-a1

Cable Normal: ECA

## Construction

| | |
|---|---|
| Inner conductor | |
| Copper Clad Aluminum | |
| Diameter（mm） | 4.80±0.10 |
| Insulation | |
| 3 layers of Insulation | |
| Diameter（mm） | 12.20±0.20 |
| Outer conductor | |
| Corrugated Copper-tube | |
| Outer conductor (mm) | 13.80±0.25 |
| Jacket | |
| Thickness（mm） | 1.00±0.20 |
| Diameter（mm） | 15.70±0.20 |

## Electrical Performance

| | |
|---|---|
| Impedance (Ω) | 50±1 |
| Capacitance (pF/m) | 76 |
| Inductance (uH/m) | 0.19 |
| Velocity (%) | 88 |
| Dc Breakdown, volts（V） | ≥4000 |
| Peak Power(kW) | 40 |
| Shielding Effectiveness（dB） | >>120 |
| Insulation Resistance(MΩ.km) | 5000 |
| Cut-off Frequency（GHz） | 8.8 |

| Frequency (MHz) | Return Loss(dB) | Attenuation（dB/100m） | Average Power (kW) |
|---|---|---|---|
| 150 MHz | 21.5 | 2.65 | 2.83 |
| 450 MHz | 21.5 | 4.73 | 1.59 |
| 800 MHz | 23 | 6.44 | 1.17 |
| 900 MHz | 23 | 6.84 | 1.10 |
| 1800 MHz | 23 | 10.08 | 0.73 |
| 2000 MHz | 23 | 10.70 | 0.71 |
| 2500 MHz | 23 | 12.14 | 0.62 |
| 3000 MHz | 21 | 13.48 | 0.56 |
| 3400 MHz | 21 | 14.49 | 0.52 |
| 3600 MHz | 21 | 14.98 | 0.50 |
| 3700 MHz | 21 | 15.23 | 0.49 |
| 3800 MHz | 21 | 15.46 | 0.48 |
| 4000 MHz | 19 | 15.94 | 0.47 |
| 4800 MHz | 19 | 17.75 | 0.42 |
| 4900 MHz | 19 | 17.97 | 0.42 |
| 5000 MHz | 19 | 18.18 | 0.42 |

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| Engineering data | |
|---|---|
| Minimum Bending Radius (mm) | |
| Single Bending | 70 |
| Multiple Bending | 125 |
| Number of bends | 15 |
| Temperature range（℃） | |
| Standard jacket | -40～+70 |
| Fire Retardant Jacket | -25～+70 |

Standard Conditions:

For attenuation: VSWR 1.0, cable temperature 20℃

For average power: VSWR 1.0,ambient temperature 40℃

Inner conductor temperature 100℃.No solar loading.

Maximum return loss and attenuation value shall be 105% of the nominal value.