

AVA6-50



AVA6-50, HELIAX® Andrew Virtual Air™ Coaxial Cable, corrugated copper, 1-1/4 in, black PE jacket (Halogen free jacketing non-fire-retardant)

Product Classification

| | |
|-----------------------|------------------------|
| Brand | HELIAX® |
| Product Series | AVA6-50 |
| Product Type | Coaxial wireless cable |

Standards And Qualifications

| | |
|------------------------------------|-----|
| EN50575 CPR Cable EuroClass | Fca |
|------------------------------------|-----|

Construction Materials

| | |
|---------------------------------|------------------------|
| Jacket Material | PE |
| Outer Conductor Material | Corrugated copper |
| Dielectric Material | Foam PE |
| Flexibility | Standard |
| Inner Conductor Material | Corrugated copper tube |
| Jacket Color | Black |

Dimensions

| | |
|---------------------------------|------------------------|
| Nominal Size | 1-1/4 in |
| Cable Weight | 0.46 lb/ft 0.68 kg/m |
| Diameter Over Dielectric | 34.036 mm 1.340 in |
| Diameter Over Jacket | 39.624 mm 1.560 in |
| Inner Conductor OD | 14.0208 mm 0.5520 in |
| Outer Conductor OD | 36.068 mm 1.420 in |

Electrical Specifications

| | |
|---------------------------------------|--------------------------------|
| Cable Impedance | 50 ohm \pm 1 ohm |
| Capacitance | 22.0 pF/ft 72.0 pF/m |
| dc Resistance, Inner Conductor | 0.530 ohms/kft 1.740 ohms/km |
| dc Resistance, Outer Conductor | 0.230 ohms/kft 0.750 ohms/km |
| dc Test Voltage | 8500 V |

AVA6-50

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| Inductance | 0.057 $\mu\text{H}/\text{ft}$ 0.187 $\mu\text{H}/\text{m}$ |
| Insulation Resistance | 100000 Mohms•km |
| Jacket Spark Test Voltage (rms) | 10000 V |
| Operating Frequency Band | 1 – 3700 MHz |
| Peak Power | 180.0 kW |
| Velocity | 92% |

Environmental Specifications

| | |
|---------------------------------|--------------------------------------|
| Installation Temperature | -40 °C to +60 °C (-40 °F to +140 °F) |
| Operating Temperature | -55 °C to +85 °C (-67 °F to +185 °F) |
| Storage Temperature | -70 °C to +85 °C (-94 °F to +185 °F) |

General Specifications

| | |
|----------------------|---|
| Ordering Note | CommScope® standard product in Asia Pacific CommScope® standard product in the United States and Canada |
|----------------------|---|

Mechanical Specifications

| | |
|--|------------------------|
| Bending Moment | 29.8 N-m 22.0 ft lb |
| Flat Plate Crush Strength | 75.0 lb/in 1.3 kg/mm |
| Minimum Bend Radius, Multiple Bends | 203.20 mm 8.00 in |
| Minimum Bend Radius, Single Bend | 152.40 mm 6.00 in |
| Number of Bends, minimum | 15 |
| Number of Bends, typical | 40 |
| Tensile Strength | 154 kg 340 lb |

Note

| | |
|-------------------------|---|
| Performance Note | Values typical, unless otherwise stated |
|-------------------------|---|

Standard Conditions

| | |
|---|-----------------|
| Attenuation, Ambient Temperature | 68 °F 20 °C |
| Average Power, Ambient Temperature | 104 °F 40 °C |
| Average Power, Inner Conductor Temperature | 212 °F 100 °C |

Return Loss/VSWR

| Frequency Band | VSWR | Return Loss (dB) |
|-----------------------|-------------|-------------------------|
| 680–800 MHz | 1.13 | 24.30 |
| 806–960 MHz | 1.13 | 24.30 |
| 1700–2170 MHz | 1.13 | 24.30 |

Attenuation

| Frequency (MHz) | Attenuation (dB/100 m) | Attenuation (dB/100 ft) | Average Power (kW) |
|-----------------|------------------------|-------------------------|--------------------|
| 0.5 | 0.056 | 0.017 | 117.01 |
| 1 | 0.079 | 0.024 | 82.63 |
| 1.5 | 0.097 | 0.03 | 67.41 |
| 2 | 0.113 | 0.034 | 58.33 |
| 10 | 0.253 | 0.077 | 25.89 |
| 20 | 0.36 | 0.11 | 18.21 |
| 30 | 0.443 | 0.135 | 14.80 |
| 50 | 0.576 | 0.176 | 11.39 |
| 85 | 0.758 | 0.231 | 8.66 |
| 88 | 0.772 | 0.235 | 8.51 |
| 100 | 0.825 | 0.251 | 7.96 |
| 108 | 0.858 | 0.262 | 7.65 |
| 150 | 1.019 | 0.311 | 6.44 |
| 174 | 1.102 | 0.336 | 5.96 |
| 200 | 1.186 | 0.361 | 5.53 |
| 204 | 1.198 | 0.365 | 5.48 |
| 300 | 1.471 | 0.448 | 4.46 |
| 400 | 1.717 | 0.523 | 3.82 |
| 450 | 1.829 | 0.558 | 3.59 |
| 460 | 1.851 | 0.564 | 3.54 |
| 460 | 1.851 | 0.564 | 3.54 |
| 500 | 1.937 | 0.59 | 3.39 |
| 512 | 1.962 | 0.598 | 3.34 |
| 600 | 2.14 | 0.652 | 3.07 |
| 700 | 2.329 | 0.71 | 2.82 |
| 800 | 2.507 | 0.764 | 2.62 |
| 824 | 2.548 | 0.777 | 2.58 |
| 894 | 2.666 | 0.813 | 2.46 |
| 960 | 2.774 | 0.846 | 2.37 |
| 1000 | 2.838 | 0.865 | 2.31 |
| 1218 | 3.171 | 0.967 | 2.07 |
| 1250 | 3.218 | 0.981 | 2.04 |
| 1500 | 3.569 | 1.088 | 1.84 |
| 1700 | 3.835 | 1.169 | 1.71 |
| 1794 | 3.955 | 1.206 | 1.66 |
| 1800 | 3.963 | 1.208 | 1.66 |
| 2000 | 4.212 | 1.284 | 1.56 |
| 2100 | 4.333 | 1.321 | 1.51 |
| 2200 | 4.452 | 1.357 | 1.47 |
| 2300 | 4.569 | 1.393 | 1.44 |
| 2500 | 4.798 | 1.463 | 1.37 |
| 2700 | 5.021 | 1.53 | 1.31 |
| 3000 | 5.345 | 1.629 | 1.23 |
| 3400 | 5.76 | 1.755 | 1.14 |
| 3700 | 6.06 | 1.847 | 1.08 |

* Values typical, guaranteed within 5%

Regulatory Compliance/Certifications

Agency

RoHS 2011/65/EU
China RoHS SJ/T 11364-2006
ISO 9001:2015
CENELEC

Classification

Compliant
Below Maximum Concentration Value (MCV)
Designed, manufactured and/or distributed under this quality management system
EN 50575 compliant, Declaration of Performance (DoP) available

