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 ±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

Inductance	0.057 µH/ft | 0.187 µH/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
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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
3600	5.961	1.817	1.10

3700	6.06	1.847	1.08

** Values typical, guaranteed within 5%*

Regulatory Compliance/Certifications

Agency	Classification
RoHS 2011/65/EU	Compliant
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system
China RoHS SJ/T 11364-2014	Below Maximum Concentration Value (MCV)
CENELEC	EN 50575 compliant, Declaration of Performance (DoP) available