

# AVA6-50

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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

<b>Brand</b>	HELIAX®
<b>Product Series</b>	AVA6-50
<b>Product Type</b>	Coaxial wireless cable

## Standards And Qualifications

<b>EN50575 CPR Cable EuroClass</b>	Fca
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## Construction Materials

<b>Jacket Material</b>	PE
<b>Outer Conductor Material</b>	Corrugated copper
<b>Dielectric Material</b>	Foam PE
<b>Flexibility</b>	Standard
<b>Inner Conductor Material</b>	Corrugated copper tube
<b>Jacket Color</b>	Black

## Dimensions

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

## Electrical Specifications

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

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

## Environmental Specifications

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

## General Specifications

<b>Ordering Note</b>	CommScope® standard product in Asia Pacific   CommScope® standard product in the United States and Canada
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## Mechanical Specifications

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

## Note

<b>Performance Note</b>	Values typical, unless otherwise stated
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## Standard Conditions

<b>Attenuation, Ambient Temperature</b>	68 °F   20 °C
<b>Average Power, Ambient Temperature</b>	104 °F   40 °C
<b>Average Power, Inner Conductor Temperature</b>	212 °F   100 °C

## Return Loss/VSWR

<b>Frequency Band</b>	<b>VSWR</b>	<b>Return Loss (dB)</b>
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
3700	6.06	1.847	1.08

\* Values typical, guaranteed within 5%

## Regulatory Compliance/Certifications

### Agency

RoHS 2011/65/EU  
ISO 9001:2015  
CENELEC  
China RoHS SJ/T 11364-2014

### Classification

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

