

# 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>Product Type</b>	Coaxial wireless cable
<b>Product Brand</b>	HELIAX®
<b>Product Series</b>	AVA6-50
<b>Ordering Note</b>	North America alternative part number is AVA6P-50-C (520092002 /00)   Not available in the United States or Canada

## General Specifications

<b>Product Number</b>	520097802/00   SZ520097802/00
<b>Flexibility</b>	Standard
<b>Jacket Color</b>	Black
<b>Performance Note</b>	Attenuation values typical, guaranteed within 5%

## Dimensions

<b>Diameter Over Dielectric</b>	34.036 mm   1.34 in
<b>Diameter Over Jacket</b>	39.624 mm   1.56 in
<b>Inner Conductor OD</b>	14.021 mm   0.552 in
<b>Outer Conductor OD</b>	36.068 mm   1.42 in
<b>Nominal Size</b>	1-1/4 in

## Electrical Specifications

<b>Cable Impedance</b>	50 ohm ±1 ohm
<b>Capacitance</b>	72 pF/m   21.946 pF/ft
<b>dc Resistance, Inner Conductor</b>	1.74 ohms/km   0.53 ohms/kft
<b>dc Resistance, Outer Conductor</b>	0.75 ohms/km   0.229 ohms/kft
<b>dc Test Voltage</b>	8500 V
<b>Inductance</b>	0.187 µH/m   0.057 µH/ft
<b>Insulation Resistance</b>	100000 MOhms-km

# AVA6-50

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<b>Jacket Spark Test Voltage (rms)</b>	10000 V
<b>Operating Frequency Band</b>	1 – 4000 MHz
<b>Peak Power</b>	180 kW
<b>Velocity</b>	92 %

## VSWR/Return Loss

<b>Frequency Band</b>	<b>VSWR</b>	<b>Return Loss (dB)</b>
<b>680–800 MHz</b>	1.13	24.3
<b>806–960 MHz</b>	1.13	24.3
<b>1700–2170 MHz</b>	1.13	24.3

## Attenuation

<b>Frequency (MHz)</b>	<b>Attenuation (dB/100 m)</b>	<b>Attenuation (dB/100 ft)</b>	<b>Average Power (kW)</b>
<b>1.0</b>	0.079	0.024	82.63
<b>1.5</b>	0.097	0.03	67.41
<b>2.0</b>	0.113	0.034	58.33
<b>10.0</b>	0.253	0.077	25.89
<b>20.0</b>	0.36	0.11	18.21
<b>30.0</b>	0.443	0.135	14.8
<b>50.0</b>	0.576	0.176	11.39
<b>85.0</b>	0.758	0.231	8.66
<b>88.0</b>	0.772	0.235	8.51
<b>100.0</b>	0.825	0.251	7.96
<b>108.0</b>	0.858	0.262	7.65
<b>150.0</b>	1.019	0.311	6.44
<b>174.0</b>	1.102	0.336	5.96
<b>200.0</b>	1.186	0.361	5.53
<b>204.0</b>	1.198	0.365	5.48
<b>300.0</b>	1.471	0.448	4.46
<b>400.0</b>	1.717	0.523	3.82
<b>450.0</b>	1.829	0.558	3.59
<b>460.0</b>	1.851	0.564	3.54
<b>500.0</b>	1.937	0.59	3.39
<b>512.0</b>	1.962	0.598	3.34
<b>600.0</b>	2.14	0.652	3.07

# AVA6-50

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700.0	2.329	0.71	2.82
800.0	2.507	0.764	2.62
824.0	2.548	0.777	2.58
894.0	2.666	0.813	2.46
960.0	2.774	0.846	2.37
1000.0	2.838	0.865	2.31
1218.0	3.171	0.967	2.07
1250.0	3.218	0.981	2.04
1500.0	3.569	1.088	1.84
1700.0	3.835	1.169	1.71
1794.0	3.955	1.206	1.66
1800.0	3.963	1.208	1.66
2000.0	4.212	1.284	1.56
2100.0	4.333	1.321	1.51
2200.0	4.452	1.357	1.47
2300.0	4.569	1.393	1.44
2500.0	4.798	1.462	1.37
2700.0	5.021	1.53	1.31
3000.0	5.345	1.629	1.23
3400.0	5.76	1.755	1.14
3600.0	5.961	1.817	1.1
3700.0	6.06	1.847	1.08
3800.0	6.16	1.877	1.07
4000.0	6.36	1.94	1.03

## Material Specifications

<b>Dielectric Material</b>	Foam PE
<b>Jacket Material</b>	PE
<b>Inner Conductor Material</b>	Corrugated copper tube
<b>Outer Conductor Material</b>	Corrugated copper

## Mechanical Specifications

<b>Minimum Bend Radius, multiple Bends</b>	203.2 mm   8 in
<b>Minimum Bend Radius, single Bend</b>	152.4 mm   6 in
<b>Number of Bends, minimum</b>	15

# AVA6-50

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<b>Number of Bends, typical</b>	40
<b>Tensile Strength</b>	154 kg   339.511 lb
<b>Bending Moment</b>	29.8 N-m   263.752 in lb
<b>Flat Plate Crush Strength</b>	1.3 kg/mm   72.797 lb/in

## 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)
<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

## Packaging and Weights

<b>Cable weight</b>	0.68 kg/m   0.457 lb/ft
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## Regulatory Compliance/Certifications

<b>Agency</b>	<b>Classification</b>
CENELEC	EN 50575 compliant, Declaration of Performance (DoP) available
CHINA-ROHS	Below maximum concentration value
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system
REACH-SVHC	Compliant as per SVHC revision on <a href="http://www.andrew.com/ProductCompliance">www.andrew.com/ProductCompliance</a>
ROHS	Compliant
UK-ROHS	Compliant

