

# AVA5P-50-C | 520093702/00



AVA5-50, HELIAX® Andrew Virtual Air™ Coaxial Cable, corrugated copper, 7/8 in, black PE jacket (Halogen free jacketing non-fire-retardant) tested C-Band and CBRS qualified.

## Product Classification

<b>Product Type</b>	Coaxial wireless cable
<b>Product Brand</b>	HELIAX®
<b>Product Series</b>	AVA5-50
<b>Ordering Note</b>	CommScope® standard product (Global)

## General Specifications

<b>Flexibility</b>	Standard
<b>Jacket Color</b>	Black
<b>Performance Note</b>	Attenuation values typical, guaranteed within 5%
<b>Specification Sheet Revision Level</b>	B

## Dimensions

<b>Diameter Over Dielectric</b>	24.13 mm   0.95 in
<b>Diameter Over Jacket</b>	27.991 mm   1.102 in
<b>Inner Conductor OD</b>	9.449 mm   0.372 in
<b>Outer Conductor OD</b>	25.4 mm   1 in
<b>Nominal Size</b>	7/8 in

## Electrical Specifications

<b>Cable Impedance</b>	50 ohm ±1 ohm
<b>Capacitance</b>	73 pF/m   22.25 pF/ft
<b>dc Resistance, Inner Conductor</b>	1.435 ohms/km   0.437 ohms/kft
<b>dc Resistance, Outer Conductor</b>	1.116 ohms/km   0.34 ohms/kft
<b>dc Test Voltage</b>	6000 V
<b>Inductance</b>	0.184 µH/m   0.056 µH/ft
<b>Insulation Resistance</b>	100000 MOhms-km
<b>Jacket Spark Test Voltage (rms)</b>	8000 V

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<b>Operating Frequency Band</b>	1 – 5000 MHz
<b>Peak Power</b>	91 kW
<b>Velocity</b>	91 %

## VSWR/Return Loss

Frequency Band	VSWR	Return Loss (dB)	VSWR, typical	Return Loss, typical (dB)
450–680 MHz	1.288	18	1.083	28
680–800 MHz	1.135	24	1.083	28
800–960 MHz	1.13	24.3	1.083	28
1700–2200 MHz	1.13	24.3	1.083	28
2300–2700 MHz	1.222	20	1.083	28
3400–3800 MHz	1.222	20	1.135	24
3800–4200 MHz	1.288	18	1.173	22
4200–4850 MHz	1.433	15	1.222	20

## Attenuation

Frequency (MHz)	Attenuation (dB/100 m)	Attenuation (dB/100 ft)	Average Power (kW)
1.0	0.113	0.034	74.43
1.5	0.138	0.042	60.73
2.0	0.16	0.049	52.56
10.0	0.359	0.11	23.37
20.0	0.51	0.156	16.46
30.0	0.627	0.191	13.39
50.0	0.814	0.248	10.32
85.0	1.068	0.326	7.86
88.0	1.088	0.332	7.72
100.0	1.162	0.354	7.23
108.0	1.209	0.368	6.95
150.0	1.433	0.437	5.86
174.0	1.548	0.472	5.43
200.0	1.665	0.507	5.05
204.0	1.682	0.513	4.99
300.0	2.059	0.628	4.08
400.0	2.398	0.731	3.5
450.0	2.553	0.778	3.29

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<b>460.0</b>	2.583	0.787	3.25
<b>500.0</b>	2.7	0.823	3.11
<b>512.0</b>	2.735	0.834	3.07
<b>600.0</b>	2.977	0.907	2.82
<b>700.0</b>	3.235	0.986	2.6
<b>800.0</b>	3.478	1.06	2.42
<b>824.0</b>	3.534	1.077	2.38
<b>894.0</b>	3.694	1.126	2.27
<b>960.0</b>	3.841	1.171	2.19
<b>1000.0</b>	3.927	1.197	2.14
<b>1218.0</b>	4.377	1.334	1.92
<b>1250.0</b>	4.44	1.353	1.89
<b>1500.0</b>	4.912	1.497	1.71
<b>1700.0</b>	5.268	1.605	1.59
<b>1794.0</b>	5.429	1.655	1.55
<b>1800.0</b>	5.439	1.658	1.54
<b>2000.0</b>	5.771	1.759	1.46
<b>2100.0</b>	5.933	1.808	1.42
<b>2200.0</b>	6.091	1.856	1.38
<b>2300.0</b>	6.247	1.904	1.34
<b>2500.0</b>	6.55	1.996	1.28
<b>2700.0</b>	6.845	2.086	1.23
<b>3000.0</b>	7.272	2.217	1.15
<b>3400.0</b>	7.819	2.383	1.07
<b>3600.0</b>	8.083	2.464	1.04
<b>3700.0</b>	8.213	2.503	1.02
<b>3800.0</b>	8.342	2.542	1.01
<b>3900.0</b>	8.47	2.581	0.99
<b>4000.0</b>	8.596	2.62	0.98
<b>4100.0</b>	8.722	2.658	0.96
<b>4200.0</b>	8.846	2.696	0.95
<b>4300.0</b>	8.969	2.734	0.94
<b>4400.0</b>	9.092	2.771	0.92
<b>4500.0</b>	9.213	2.808	0.91
<b>4600.0</b>	9.333	2.845	0.9

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<b>4700.0</b>	9.453	2.881	0.89
<b>4800.0</b>	9.572	2.917	0.88
<b>4900.0</b>	9.689	2.953	0.87
<b>5000.0</b>	9.806	2.989	0.86

## Material Specifications

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

## Mechanical Specifications

<b>Minimum Bend Radius, multiple Bends</b>	254 mm   10 in
<b>Minimum Bend Radius, single Bend</b>	127 mm   5 in
<b>Number of Bends, minimum</b>	15
<b>Number of Bends, typical</b>	30
<b>Tensile Strength</b>	159 kg   350.535 lb
<b>Bending Moment</b>	19 N-m   168.164 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>	0.45 kg/m   0.302 lb/ft
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