

# AVA5RK-50

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AVA5RK-50, HELIAX® Andrew Virtual Air™ Coaxial Cable, corrugated copper, 7/8 in, black non-halogenated, fire retardant polyolefin jacket B2ca- s1a, d2,a1 (CPR testing is conducted annually please reference the website for latest classification)

## Product Classification

<b>Product Type</b>	Coaxial wireless cable
<b>Product Brand</b>	HELIAX®
<b>Product Series</b>	AVA5-50

## General Specifications

<b>Product Number</b>	520097502/00   SZ520097502/00
<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>	27.94 mm   1.1 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 $\pm$ 1 ohm
<b>Capacitance</b>	73.2 pF/m   22.311 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

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<b>Inductance</b>	0.184 $\mu$ H/m   0.056 $\mu$ H/ft
<b>Insulation Resistance</b>	100000 MOhms-km
<b>Jacket Spark Test Voltage (rms)</b>	8000 V
<b>Operating Frequency Band</b>	1 – 5000 MHz
<b>Peak Power</b>	91 kW
<b>Velocity</b>	91 %

## 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>800–960 MHz</b>	1.13	24.3
<b>1700–2200 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>	0.113	0.034	74.43
<b>1.5</b>	0.138	0.042	60.73
<b>2.0</b>	0.16	0.049	52.56
<b>10.0</b>	0.359	0.11	23.37
<b>20.0</b>	0.51	0.156	16.46
<b>30.0</b>	0.627	0.191	13.39
<b>50.0</b>	0.814	0.248	10.32
<b>85.0</b>	1.068	0.326	7.86
<b>88.0</b>	1.088	0.332	7.72
<b>100.0</b>	1.162	0.354	7.23
<b>108.0</b>	1.209	0.368	6.95
<b>150.0</b>	1.433	0.437	5.86
<b>174.0</b>	1.548	0.472	5.43
<b>200.0</b>	1.665	0.507	5.05
<b>204.0</b>	1.682	0.513	4.99
<b>300.0</b>	2.059	0.628	4.08
<b>400.0</b>	2.398	0.731	3.5
<b>450.0</b>	2.553	0.778	3.29
<b>460.0</b>	2.583	0.787	3.25
<b>500.0</b>	2.7	0.823	3.11

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512.0	2.735	0.834	3.07
600.0	2.977	0.907	2.82
700.0	3.235	0.986	2.6
800.0	3.478	1.06	2.42
824.0	3.534	1.077	2.38
894.0	3.694	1.126	2.27
960.0	3.841	1.171	2.19
1000.0	3.927	1.197	2.14
1218.0	4.377	1.334	1.92
1250.0	4.44	1.353	1.89
1500.0	4.912	1.497	1.71
1700.0	5.268	1.605	1.59
1794.0	5.429	1.655	1.55
1800.0	5.439	1.658	1.54
2000.0	5.771	1.759	1.46
2100.0	5.933	1.808	1.42
2200.0	6.091	1.856	1.38
2300.0	6.247	1.904	1.34
2500.0	6.55	1.996	1.28
2700.0	6.845	2.086	1.23
3000.0	7.272	2.217	1.15
3400.0	7.819	2.383	1.07
3600.0	8.083	2.464	1.04
3700.0	8.213	2.503	1.02
3800.0	8.342	2.542	1.01
3900.0	8.47	2.581	0.99
4000.0	8.596	2.62	0.98
4100.0	8.722	2.658	0.96
4200.0	8.846	2.696	0.95
4300.0	8.969	2.734	0.94
4400.0	9.092	2.771	0.92
4500.0	9.213	2.808	0.91
4600.0	9.333	2.845	0.9
4700.0	9.453	2.881	0.89
4800.0	9.572	2.917	0.88

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4900.0	9.689	2.953	0.87
5000.0	9.806	2.989	0.86

## Material Specifications

<b>Dielectric Material</b>	Foam PE
<b>Jacket Material</b>	Non-halogenated, fire retardant polyolefin
<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>	-40 °C to +60 °C (-40 °F to +140 °F)
<b>Storage Temperature</b>	-40 °C to +60 °C (-40 °F to +140 °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
<b>EN50575 CPR Cable EuroClass Fire Performance</b>	B2ca
<b>EN50575 CPR Cable EuroClass Smoke Rating</b>	s1a
<b>EN50575 CPR Cable EuroClass Droplets Rating</b>	d2
<b>EN50575 CPR Cable EuroClass Acidity Rating</b>	a1
<b>Fire Retardancy Test Method</b>	IEC 60332-1-2   NFPA 130-2010   UL 1666/CATVR/CMR
<b>Smoke Index Test Method</b>	IEC 61034
<b>Toxicity Index Test Method</b>	IEC 60754-1   IEC 60754-2

## Packaging and Weights

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**Cable weight**

0.53 kg/m | 0.356 lb/ft

## 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.commscope.com/ProductCompliance">www.commscope.com/ProductCompliance</a>
ROHS	Compliant
UK-ROHS	Compliant
UL/ETL Certification	CATVR/CMR

