

# AVA5RK-50

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AVA5-50, HELIAX® Andrew Virtual Air™ Coaxial Cable, corrugated copper, 7/8 in, black non-halogenated, fire retardant polyolefin jacket  
B2ca- s1a, d1,a1

## Product Classification

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

## Standards And Qualifications

<b>EN50575 CPR Cable EuroClass</b>	B2ca   s1a   d1   a1
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## Construction Materials

<b>Jacket Material</b>	Non-halogenated, fire retardant polyolefin
<b>Outer Conductor Material</b>	Corrugated copper
<b>Dielectric Material</b>	Foam PE
<b>Flexibility</b>	Standard
<b>Inner Conductor Material</b>	Copper tube
<b>Jacket Color</b>	Black

## Dimensions

<b>Nominal Size</b>	7/8 in
<b>Cable Weight</b>	0.35 lb/ft   0.53 kg/m
<b>Diameter Over Dielectric</b>	24.130 mm   0.950 in
<b>Diameter Over Jacket</b>	27.940 mm   1.100 in
<b>Inner Conductor OD</b>	9.4488 mm   0.3720 in
<b>Outer Conductor OD</b>	25.400 mm   1.000 in

## Electrical Specifications

<b>Cable Impedance</b>	50 ohm ±1 ohm
<b>Capacitance</b>	22.3 pF/ft   73.2 pF/m
<b>dc Resistance, Inner Conductor</b>	0.410 ohms/kft   1.435 ohms/km
<b>dc Resistance, Outer Conductor</b>	0.340 ohms/kft   1.116 ohms/km
<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

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<b>Jacket Spark Test Voltage (rms)</b>	8000 V
<b>Operating Frequency Band</b>	1 – 5000 MHz
<b>Peak Power</b>	91.0 kW
<b>Velocity</b>	91%

## 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)

## General Specifications

<b>Specification Sheet Revision Level</b>	B
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## Mechanical Specifications

<b>Bending Moment</b>	19.0 N-m   14.0 ft lb
<b>Fire Retardancy Test Method</b>	NFPA 130-2010   UL 1666/CATVR/CMR
<b>Flat Plate Crush Strength</b>	75.0 lb/in
<b>Minimum Bend Radius, Multiple Bends</b>	254.00 mm   10.00 in
<b>Minimum Bend Radius, Single Bend</b>	127.00 mm   5.00 in
<b>Number of Bends, minimum</b>	15
<b>Number of Bends, typical</b>	30
<b>Smoke Index Test Method</b>	IEC 61034
<b>Tensile Strength</b>	159 kg   350 lb
<b>Toxicity Index Test Method</b>	IEC 60754-1   IEC 60754-2

## Note

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

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

## Return Loss/VSWR

<b>Frequency Band</b>	<b>VSWR</b>	<b>Return Loss (dB)</b>
680–800 MHz	1.13	24.30
800–960 MHz	1.13	24.30
1700–2200 MHz	1.13	24.30

## Attenuation

Frequency (MHz)	Attenuation (dB/100 m)	Attenuation (dB/100 ft)	Average Power (kW)
0.5	0.08	0.024	91.00
1	0.113	0.034	74.43
1.5	0.138	0.042	60.73
2	0.16	0.049	52.56
10	0.359	0.11	23.37
20	0.51	0.156	16.46
30	0.627	0.191	13.39
50	0.814	0.248	10.32
85	1.068	0.326	7.86
88	1.088	0.332	7.72
100	1.162	0.354	7.23
108	1.209	0.368	6.95
150	1.433	0.437	5.86
174	1.548	0.472	5.43
200	1.665	0.507	5.05
204	1.682	0.513	4.99
300	2.059	0.628	4.08
400	2.398	0.731	3.50
450	2.553	0.778	3.29
460	2.583	0.787	3.25
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500	2.7	0.823	3.11
512	2.735	0.834	3.07
600	2.977	0.907	2.82
700	3.235	0.986	2.60
800	3.478	1.06	2.42
824	3.534	1.077	2.38
894	3.694	1.126	2.27
960	3.841	1.171	2.19
1000	3.927	1.197	2.14
1218	4.377	1.334	1.92
1250	4.44	1.353	1.89
1500	4.912	1.497	1.71
1700	5.268	1.606	1.59
1794	5.429	1.655	1.55
1800	5.439	1.658	1.54
2000	5.771	1.759	1.46
2100	5.933	1.808	1.42
2200	6.091	1.856	1.38
2300	6.247	1.904	1.34
2500	6.551	1.996	1.28
2700	6.845	2.086	1.23
3000	7.273	2.217	1.15
3400	7.819	2.383	1.07
3700	8.213	2.503	1.02

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3800	8.342	2.543	1.01
4000	8.596	2.62	0.98
5000	9.807	2.989	0.86

\* Values typical, guaranteed within 5%

## Regulatory Compliance/Certifications

### Agency

UL/ETL Certification

RoHS 2011/65/EU

ISO 9001:2015

CENELEC

China RoHS SJ/T 11364-2014

### Classification

CATVR/CMR

Compliant

Designed, manufactured and/or distributed under this quality management system

EN 50575 compliant, Declaration of Performance (DoP) available

Above Maximum Concentration Value (MCV)

