

AVA5RK-50



AVA5RK-50, HELIAX® Andrew Virtual Air™ Coaxial Cable, corrugated copper, 7/8 in, black non-halogenated, fire retardant polyolefin jacket B2ca- s1a, d1,a1 (CPR testing is conducted annually please reference the website for latest classification)

Product Classification

Product Type	Coaxial wireless cable
Product Brand	HELIAX®
Product Series	AVA5-50

General Specifications

Flexibility	Standard
Jacket Color	Black
Performance Note	Values typical, guaranteed within 5% Values typical, unless otherwise stated
Specification Sheet Revision Level	B

Dimensions

Diameter Over Dielectric	24.13 mm 0.95 in
Diameter Over Jacket	27.94 mm 1.1 in
Inner Conductor OD	9.449 mm 0.372 in
Outer Conductor OD	25.4 mm 1 in
Nominal Size	7/8 in

Electrical Specifications

Attenuation, Ambient Temperature	68 °F 20 °C
Cable Impedance	50 ohm ±1 ohm
Capacitance	73.2 pF/m 22.311 pF/ft
dc Resistance, Inner Conductor	1.435 ohms/km 0.437 ohms/kft
dc Resistance, Outer Conductor	1.116 ohms/km 0.34 ohms/kft
dc Test Voltage	6000 V

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Inductance	0.184 μ H/m 0.056 μ H/ft
Insulation Resistance	100000 Mohms•km
Jacket Spark Test Voltage (rms)	8000 V
Operating Frequency Band	1 – 5000 MHz
Peak Power	91 kW
Power Attenuation	2.56
Pulse Reflection	0.5%
Velocity	91 %

VSWR/Return Loss

Frequency Band	VSWR	Return Loss (dB)
680–800 MHz	1.13	24.3
800–960 MHz	1.13	24.3
1700–2200 MHz	1.13	24.3

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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460.0	2.583	0.787	3.25
500.0	2.7	0.823	3.11
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

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4800.0	9.572	2.917	0.88
4900.0	9.689	2.953	0.87
5000.0	9.806	2.989	0.86

Material Specifications

Dielectric Material	Foam PE
Jacket Material	Non-halogenated, fire retardant polyolefin
Inner Conductor Material	Copper tube
Outer Conductor Material	Corrugated copper

Mechanical Specifications

Minimum Bend Radius, multiple Bends	10 in 254 mm
Minimum Bend Radius, single Bend	5 in 127 mm
Number of Bends, minimum	15
Number of Bends, typical	30
Tensile Strength	159 kg 350.535 lb
Bending Moment	19 N-m 168.164 in lb
Flat Plate Crush Strength	1.3 kg/mm 72.797 lb/in

Environmental Specifications

Installation temperature	-40 °C to +60 °C (-40 °F to +140 °F)
Operating Temperature	-40 °C to +60 °C (-40 °F to +140 °F)
Storage Temperature	-40 °C to +60 °C (-40 °F to +140 °F)
Average Power, Ambient Temperature	104 °F 40 °C
Average Power, Inner Conductor Temperature	212 °F 100 °C
EN50575 CPR Cable EuroClass	B2ca a1 d1 s1a
Fire Retardancy Test Method	NFPA 130-2010 UL 1666/CATVR/CMR
Smoke Index Test Method	IEC 61034
Toxicity Index Test Method	IEC 60754-1 IEC 60754-2

Packaging and Weights

Cable weight	0.53 kg/m 3.833 lb/ft
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Regulatory Compliance/Certifications

Agency	Classification
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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 www.commscope.com/ProductCompliance
ROHS	Compliant
UL/ETL Certification	CATVR/CMR

