



AVA5RK-50FX

AVA5RK-50FX, HELIAX® Andrew Virtual Air™ Coaxial Cable, corrugated copper, 7/8 in, black, Non-halogenated, fire retardant polyolefin jacket B2ca-s1a,d1

Product Classification

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

Standards And Qualifications

EN50575 CPR Cable EuroClass	B2ca s1a d1
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Construction Materials

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

Dimensions

Nominal Size	7/8 in
Cable Weight	0.31 lb/ft 0.46 kg/m
Diameter Over Dielectric	24.130 mm 0.950 in
Diameter Over Jacket	27.991 mm 1.102 in
Inner Conductor OD	9.4488 mm 0.3720 in
Outer Conductor OD	25.400 mm 1.000 in

Electrical Specifications

Cable Impedance	50 ohm ±1 ohm
Capacitance	22.0 pF/ft 73.0 pF/m
dc Resistance, Inner Conductor	0.825 ohms/kft 2.888 ohms/km
dc Resistance, Outer Conductor	0.400 ohms/kft 1.313 ohms/km
dc Test Voltage	6000 V
Inductance	0.184 µH/m 0.056 µH/ft
Insulation Resistance	100000 Mohms•km
Jacket Spark Test Voltage (rms)	8000 V
Operating Frequency Band	1 – 5000 MHz
Peak Power	91.0 kW

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Velocity 90%

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)

General Specifications

Brand	HELIAX®
Ordering Note	CommScope® standard product in Asia Pacific CommScope® standard product in Europe, the Middle East, and Africa Not available in the United States or Canada

Mechanical Specifications

Bending Moment	27.1 N-m 20.0 ft lb
Fire Retardancy Test Method	NFPA 130-2010 UL 1666/CATVR/CMR
Flat Plate Crush Strength	75.0 lb/in
Minimum Bend Radius, Multiple Bends	254.00 mm 10.00 in
Minimum Bend Radius, Single Bend	127.00 mm 5.00 in
Number of Bends, minimum	15
Number of Bends, typical	30
Smoke Index Test Method	IEC 61034
Tensile Strength	159 kg 350 lb
Toxicity Index Test Method	IEC 60754-1 IEC 60754-2

Note

Performance Note Values typical, unless otherwise stated

Standard Conditions

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

Return Loss/VSWR

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

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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
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
4000	8.596	2.62	0.98
5000	9.807	2.989	0.86

* Values typical, guaranteed within 5%

Regulatory Compliance/Certifications

Agency	Classification
UL/ETL Certification	CATVR/CMR
RoHS 2011/65/EU	Compliant

Product Specifications



AVA5RK-50FX

China RoHS SJ/T 11364-2006
ISO 9001:2008
CENELEC

Compliant
Designed, manufactured and/or distributed under this quality management system
EN 50575 compliant, Declaration of Performance (DoP) available