

AVA5RK-50FX



AVA5RK-50FX, 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

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

General Specifications

Flexibility	Standard
Jacket Color	Black

Dimensions

Diameter Over Dielectric	24.13 mm 0.95 in
Diameter Over Jacket	27.991 mm 1.102 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

Cable Impedance	50 ohm ±1 ohm
Capacitance	73 pF/m 22.25 pF/ft
dc Resistance, Inner Conductor	2.888 ohms/km 0.88 ohms/kft
dc Resistance, Outer Conductor	1.53 ohms/km 0.466 ohms/kft
dc Test Voltage	6000 V
Inductance	0.184 µH/m 0.056 µH/ft

AVA5RK-50FX

Insulation Resistance	100000 MOhms-km
Jacket Spark Test Voltage (rms)	8000 V
Operating Frequency Band	1 – 5000 MHz
Peak Power	91 kW
Velocity	90 %

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
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

AVA5RK-50FX

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
4900.0	9.689	2.953	0.87
5000.0	9.806	2.989	0.86

VSWR/Return Loss

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

AVA5RK-50FX

1700–2200 MHz 1.13 24.3

Material Specifications

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

Mechanical Specifications

Minimum Bend Radius, multiple Bends	254 mm 10 in
Minimum Bend Radius, single Bend	127 mm 5 in
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)
Attenuation, Ambient Temperature	68 °F 20 °C
Average Power, Ambient Temperature	104 °F 40 °C
Average Power, Inner Conductor Temperature	212 °F 100 °C
EN50575 CPR Cable EuroClass Fire Performance	B2ca
EN50575 CPR Cable EuroClass Smoke Rating	s1b
EN50575 CPR Cable EuroClass Droplets Rating	d1
EN50575 CPR Cable EuroClass Acidity Rating	a1
Fire Retardancy Test Method	IEC 60332-1-2 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	0.48 kg/m 0.323 lb/ft
---------------------	-------------------------

AVA5RK-50FX

Regulatory Compliance/Certifications

Agency	Classification
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

