

# AVA5RK-50FX

---



AVA5RK-50FX, HELIAX® Andrew Virtual Air™ Coaxial Cable, corrugated copper, 7/8 in, black, Non-halogenated, fire retardant polyolefin jacket B2ca- s1, 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>	AVA5-50FX
<b>Ordering Note</b>	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

<b>Product Number</b>	520097603/00   SZ520097603/00
<b>Flexibility</b>	Standard
<b>Jacket Color</b>	Black
<b>Performance Note</b>	Attenuation values typical, guaranteed within 5%

## Dimensions

<b>Diameter Over Dielectric</b>	24.13 mm   0.95 in
<b>Diameter Over Jacket</b>	27.991 mm   1.102 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 ±1 ohm
<b>Capacitance</b>	73 pF/m   22.25 pF/ft
<b>dc Resistance, Inner Conductor</b>	2.888 ohms/km   0.88 ohms/kft
<b>dc Resistance, Outer Conductor</b>	1.53 ohms/km   0.466 ohms/kft

# AVA5RK-50FX

<b>dc Test Voltage</b>	6000 V
<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>	90 %

## 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

# AVA5RK-50FX

---

<b>500.0</b>	2.7	0.823	3.11
<b>512.0</b>	2.735	0.834	3.07
<b>600.0</b>	2.977	0.907	2.82
<b>700.0</b>	3.235	0.986	2.6
<b>800.0</b>	3.478	1.06	2.42
<b>824.0</b>	3.534	1.077	2.38
<b>894.0</b>	3.694	1.126	2.27
<b>960.0</b>	3.841	1.171	2.19
<b>1000.0</b>	3.927	1.197	2.14
<b>1218.0</b>	4.377	1.334	1.92
<b>1250.0</b>	4.44	1.353	1.89
<b>1500.0</b>	4.912	1.497	1.71
<b>1700.0</b>	5.268	1.605	1.59
<b>1794.0</b>	5.429	1.655	1.55
<b>1800.0</b>	5.439	1.658	1.54
<b>2000.0</b>	5.771	1.759	1.46
<b>2100.0</b>	5.933	1.808	1.42
<b>2200.0</b>	6.091	1.856	1.38
<b>2300.0</b>	6.247	1.904	1.34
<b>2500.0</b>	6.55	1.996	1.28
<b>2700.0</b>	6.845	2.086	1.23
<b>3000.0</b>	7.272	2.217	1.15
<b>3400.0</b>	7.819	2.383	1.07
<b>3600.0</b>	8.083	2.464	1.04
<b>3700.0</b>	8.213	2.503	1.02
<b>3800.0</b>	8.342	2.542	1.01
<b>3900.0</b>	8.47	2.581	0.99
<b>4000.0</b>	8.596	2.62	0.98
<b>4100.0</b>	8.722	2.658	0.96
<b>4200.0</b>	8.846	2.696	0.95
<b>4300.0</b>	8.969	2.734	0.94
<b>4400.0</b>	9.092	2.771	0.92
<b>4500.0</b>	9.213	2.808	0.91
<b>4600.0</b>	9.333	2.845	0.9
<b>4700.0</b>	9.453	2.881	0.89

# AVA5RK-50FX

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

<b>Dielectric Material</b>	Foam PE
<b>Jacket Material</b>	Non-halogenated, fire retardant polyolefin
<b>Inner Conductor Material</b>	Copper
<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>	s1
<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

# AVA5RK-50FX

---

## Packaging and Weights

**Cable weight** 0.48 kg/m | 0.323 lb/ft

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

