

# AVA7RK-50



AVA7RK-50, HELIAX® Andrew Virtual Air™ Coaxial Cable, corrugated copper, 1-5/8 in, black non-halogenated, fire retardant polyolefin jacket Cca-s2, 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>	AVA7-50
<b>Ordering Note</b>	ANDREW® standard product in Asia Pacific   ANDREW® standard product in Europe, the Middle East, and Africa

## General Specifications

<b>Product Number</b>	520096802/00   SZ520096802/00
<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>	44.45 mm   1.75 in
<b>Diameter Over Jacket</b>	51.054 mm   2.01 in
<b>Inner Conductor OD</b>	18.161 mm   0.715 in
<b>Outer Conductor OD</b>	46.355 mm   1.825 in
<b>Nominal Size</b>	1-5/8 in

## Electrical Specifications

<b>Cable Impedance</b>	50 ohm ±1 ohm
<b>Capacitance</b>	72.2 pF/m   22.007 pF/ft
<b>dc Resistance, Inner Conductor</b>	1.435 ohms/km   0.437 ohms/kft
<b>dc Resistance, Outer Conductor</b>	0.525 ohms/km   0.16 ohms/kft
<b>dc Test Voltage</b>	15000 V
<b>Inductance</b>	0.187 µH/m   0.057 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 – 2700 MHz
<b>Peak Power</b>	302 kW
<b>Velocity</b>	92 %

## 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>806–960 MHz</b>	1.13	24.3
<b>1700–2170 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>	0.062	0.019	117.56
<b>1.5</b>	0.076	0.023	95.88
<b>2.0</b>	0.088	0.027	82.96
<b>10.0</b>	0.197	0.06	36.78
<b>20.0</b>	0.281	0.086	25.84
<b>30.0</b>	0.346	0.105	21
<b>50.0</b>	0.45	0.137	16.14
<b>85.0</b>	0.593	0.181	12.25
<b>88.0</b>	0.603	0.184	12.03
<b>100.0</b>	0.645	0.197	11.26
<b>108.0</b>	0.672	0.205	10.81
<b>150.0</b>	0.798	0.243	9.09
<b>174.0</b>	0.864	0.263	8.41
<b>200.0</b>	0.93	0.284	7.81
<b>204.0</b>	0.94	0.287	7.72
<b>300.0</b>	1.156	0.352	6.28
<b>400.0</b>	1.351	0.412	5.37
<b>450.0</b>	1.441	0.439	5.04
<b>460.0</b>	1.459	0.445	4.98
<b>500.0</b>	1.527	0.465	4.76
<b>512.0</b>	1.547	0.471	4.69
<b>600.0</b>	1.689	0.515	4.3

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700.0	1.84	0.561	3.95
800.0	1.982	0.604	3.66
824.0	2.016	0.614	3.6
894.0	2.11	0.643	3.44
960.0	2.197	0.67	3.3
1000.0	2.249	0.685	3.23
1218.0	2.517	0.767	2.89
1250.0	2.554	0.779	2.84
1500.0	2.838	0.865	2.56
1700.0	3.053	0.93	2.38
1794.0	3.151	0.96	2.3
1800.0	3.157	0.962	2.3
2000.0	3.359	1.024	2.16
2100.0	3.457	1.054	2.1
2200.0	3.554	1.083	2.04
2300.0	3.649	1.112	1.99
2500.0	3.836	1.169	1.89
2700.0	4.017	1.224	1.81

## Material Specifications

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

## Mechanical Specifications

<b>Minimum Bend Radius, multiple Bends</b>	381 mm   15 in
<b>Minimum Bend Radius, single Bend</b>	203.2 mm   8 in
<b>Number of Bends, minimum</b>	15
<b>Number of Bends, typical</b>	50
<b>Tensile Strength</b>	181 kg   399.036 lb
<b>Bending Moment</b>	47.5 N-m   420.41 in lb
<b>Flat Plate Crush Strength</b>	1.6 kg/mm   89.596 lb/in

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## 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>	Cca
<b>EN50575 CPR Cable EuroClass Smoke Rating</b>	s2
<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
<b>Smoke Index Test Method</b>	IEC 61034
<b>Toxicity Index Test Method</b>	IEC 60754-1   IEC 60754-2

## Packaging and Weights

<b>Cable weight</b>	1.2 kg/m   0.806 lb/ft
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## Regulatory Compliance/Certifications

<b>Agency</b>	<b>Classification</b>
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.andrew.com/ProductCompliance">www.andrew.com/ProductCompliance</a>
ROHS	Compliant
UK-ROHS	Compliant
UL/ETL Certification	CATVR

