

# AVA5P-50FX-42



AVA5P-50FX-42, HELIAX® Andrew Virtual Air™ Coaxial Cable, corrugated copper, 7/8 in, black PE jacket

## Alternative products available:

AVA5-50FX

AVA5-50FX, HELIAX® Andrew Virtual Air™ Coaxial Cable, corrugated copper, 7/8 in, black PE jacket (Halogen free jacketing non-fire-retardant)

## Product Classification

<b>Product Type</b>	Coaxial wireless cable
<b>Product Brand</b>	HELIAX®
<b>Product Series</b>	AVA5-50FX
<b>Ordering Note</b>	ANDREW® standard product in Europe, the Middle East, and Africa   Not available in the United States or Canada

## General Specifications

<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>	3.1 ohms/km   0.945 ohms/kft
<b>dc Resistance, Outer Conductor</b>	1.53 ohms/km   0.466 ohms/kft

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<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>800–960 MHz</b>	1.101	26.36
<b>1700–2200 MHz</b>	1.101	26.36

## 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
<b>500.0</b>	2.7	0.823	3.11

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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
4800.0	9.572	2.917	0.88

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<b>4900.0</b>	9.689	2.953	0.87
<b>5000.0</b>	9.806	2.989	0.86

## Material Specifications

<b>Dielectric Material</b>	Foam PE
<b>Jacket Material</b>	PE
<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>	27.1 N-m   239.855 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>	-55 °C to +70 °C (-67 °F to +158 °F)
<b>Storage Temperature</b>	-70 °C to +70 °C (-94 °F to +158 °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

## Packaging and Weights

<b>Cable weight</b>	0.46 kg/m   0.309 lb/ft
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## Regulatory Compliance/Certifications

<b>Agency</b>	<b>Classification</b>
CENELEC	EN 50575 compliant, Declaration of Performance (DoP) available
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system

