

# 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>Brand</b>	HELIAX®
<b>Product Series</b>	AVA5-50FX
<b>Product Type</b>	Coaxial wireless cable

## Standards And Qualifications

<b>EN50575 CPR Cable EuroClass</b>	Fca
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## Construction Materials

<b>Jacket Material</b>	PE
<b>Outer Conductor Material</b>	Corrugated copper
<b>Dielectric Material</b>	Foam PE
<b>Flexibility</b>	Standard
<b>Inner Conductor Material</b>	Copper
<b>Jacket Color</b>	Black

## Dimensions

<b>Nominal Size</b>	7/8 in
<b>Cable Weight</b>	0.29 lb/ft   0.43 kg/m
<b>Diameter Over Dielectric</b>	24.130 mm   0.950 in
<b>Diameter Over Jacket</b>	27.991 mm   1.102 in
<b>Inner Conductor OD</b>	9.4488 mm   0.3720 in
<b>Outer Conductor OD</b>	25.400 mm   1.000 in

## Electrical Specifications

<b>Cable Impedance</b>	50 ohm $\pm$ 1 ohm
<b>Capacitance</b>	22.0 pF/ft   73.0 pF/m
<b>dc Resistance, Inner Conductor</b>	0.825 ohms/kft   2.888 ohms/km
<b>dc Resistance, Outer Conductor</b>	0.400 ohms/kft   1.313 ohms/km
<b>dc Test Voltage</b>	6000 V

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<b>Inductance</b>	0.184 $\mu\text{H}/\text{m}$   0.056 $\mu\text{H}/\text{ft}$
<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>	91.0 kW
<b>Velocity</b>	90 %

## 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)

## General Specifications

<b>Ordering Note</b>	CommScope® non-standard product   Not available in the United States or Canada
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## Mechanical Specifications

<b>Bending Moment</b>	27.1 N-m   20.0 ft lb
<b>Flat Plate Crush Strength</b>	75.0 lb/in
<b>Minimum Bend Radius, Multiple Bends</b>	254.00 mm   10.00 in
<b>Minimum Bend Radius, Single Bend</b>	127.00 mm   5.00 in
<b>Number of Bends, minimum</b>	15
<b>Number of Bends, typical</b>	30
<b>Tensile Strength</b>	159 kg   350 lb

## Note

<b>Performance Note</b>	Values typical, unless otherwise stated
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## Standard Conditions

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

## Return Loss/VSWR

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

## 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
460	2.583	0.787	3.25
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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
3600	8.083	2.464	1.04

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3700	8.213	2.503	1.02
3800	8.342	2.543	1.01
3900	8.47	2.581	0.99
4000	8.596	2.62	0.98
4100	8.722	2.658	0.96
4200	8.846	2.696	0.95
4300	8.97	2.734	0.94
4400	9.092	2.771	0.92
4500	9.213	2.808	0.91
4600	9.334	2.845	0.90
4700	9.453	2.881	0.89
4800	9.572	2.917	0.88
4900	9.69	2.953	0.87
5000	9.807	2.989	0.86

\* Values typical, guaranteed within 5%

## Regulatory Compliance/Certifications

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

