AVA5-50

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

Product Classification

Product Type	Coaxial wireless cable
Product Brand	HELIAX®
Product Series	AVA5-50
Ordering Note	North America alternative part number is AVA5P-50-C (520093702 /00) | Not available in the United States or Canada

General Specifications

Product Number	520096102/00 | SZ520096102/00
Flexibility	Standard
Jacket Color	Black
Performance Note	Attenuation values typical, guaranteed within 5%
Specification Sheet Revision Level	B

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	1.435 ohms/km | 0.437 ohms/kft
dc Resistance, Outer Conductor	1.116 ohms/km | 0.34 ohms/kft

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dc Test Voltage	6000 V
Inductance	0.184 µH/m | 0.056 µH/ft
Insulation Resistance	100000 MOhms-km
Jacket Spark Test Voltage (rms)	8000 V
Operating Frequency Band	1 – 5000 MHz
Peak Power	91 kW
Velocity	91 %

VSWR/Return Loss

Frequency Band	VSWR	Return Loss (dB)
680–800 MHz	1.13	24.3
800–960 MHz	1.13	24.3
1700–2200 MHz	1.13	24.3

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
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

Material Specifications

Dielectric Material	Foam PE
Jacket Material	PE
Inner Conductor Material	Copper tube
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	-55 °C to +85 °C (-67 °F to +185 °F)
Storage Temperature	-70 °C to +85 °C (-94 °F to +185 °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

Packaging and Weights

Cable weight	0.45 kg/m | 0.302 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

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REACH-SVHC	Compliant as per SVHC revision on www.andrew.com/ProductCompliance
ROHS	Compliant
UK-ROHS	Compliant