AVA7P-50-43B

AVA7-50, HELIAX® Andrew Virtual Air™ Premium Coaxial Cable, corrugated copper, 1-5/8 in, black PE jacket

Product Classification

Product Type	Coaxial wireless cable
Product Brand	HELIAX®
Product Series	AVA7-50
Ordering Note	Not available in the United States or Canada

General Specifications

Flexibility	Standard
Jacket Color	Black
Performance Note	Attenuation values typical, guaranteed within 5%

Dimensions

Diameter Over Dielectric	44.45 mm | 1.75 in
Diameter Over Jacket	51.054 mm | 2.01 in
Inner Conductor OD	18.161 mm | 0.715 in
Outer Conductor OD	46.355 mm | 1.825 in
Nominal Size	1-5/8 in

Electrical Specifications

Cable Impedance	50 ohm ±1 ohm
Capacitance	72.2 pF/m | 22.007 pF/ft
dc Resistance, Inner Conductor	1.435 ohms/km | 0.437 ohms/kft
dc Resistance, Outer Conductor	0.525 ohms/km | 0.16 ohms/kft
dc Test Voltage	15000 V
Inductance	0.187 µH/m | 0.057 µH/ft
Insulation Resistance	100000 MOhms-km
Jacket Spark Test Voltage (rms)	10000 V
Operating Frequency Band	1 – 2700 MHz

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Peak Power	302 kW
Velocity	92 %

VSWR/Return Loss

Frequency Band	VSWR	Return Loss (dB)
710–806 MHz	1.2	20.83
806–970 MHz	1.15	23.13
1420–1530 MHz	1.15	23.13
1700–2180 MHz	1.15	23.13
2535–2655 MHz	1.2	20.83

Attenuation

Frequency (MHz)	Attenuation (dB/100 m)	Attenuation (dB/100 ft)	Average Power (kW)
1.0	0.062	0.019	117.56
1.5	0.076	0.023	95.88
2.0	0.088	0.027	82.96
10.0	0.197	0.06	36.78
20.0	0.281	0.086	25.84
30.0	0.346	0.105	21
50.0	0.45	0.137	16.14
85.0	0.593	0.181	12.25
88.0	0.603	0.184	12.03
100.0	0.645	0.197	11.26
108.0	0.672	0.205	10.81
150.0	0.798	0.243	9.09
174.0	0.864	0.263	8.41
200.0	0.93	0.284	7.81
204.0	0.94	0.287	7.72
300.0	1.156	0.352	6.28
400.0	1.351	0.412	5.37
450.0	1.441	0.439	5.04
460.0	1.459	0.445	4.98
500.0	1.527	0.465	4.76
512.0	1.547	0.471	4.69
600.0	1.689	0.515	4.3

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

Dielectric Material	Foam PE
Jacket Material	PE
Inner Conductor Material	Corrugated copper tube
Outer Conductor Material	Corrugated copper

Mechanical Specifications

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

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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	1.07 kg/m | 0.719 lb/ft

Regulatory Compliance/Certifications

Agency	**Classification**
CENELEC	EN 50575 compliant, Declaration of Performance (DoP) available