AVA6P-50-43B

AVA6-50, HELIAX® Andrew Virtual Air™ Coaxial Cable, corrugated copper, 1-1/4 in, black PE jacket

Product Classification

Product Type	Coaxial wireless cable
Product Brand	HELIAX®
Product Series	AVA6-50

General Specifications

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

Dimensions

Diameter Over Dielectric	34.036 mm | 1.34 in
Diameter Over Jacket	39.624 mm | 1.56 in
Inner Conductor OD	14.021 mm | 0.552 in
Outer Conductor OD	36.068 mm | 1.42 in
Nominal Size	1-1/4 in

Electrical Specifications

Cable Impedance	50 ohm ±1 ohm
Capacitance	72 pF/m | 21.946 pF/ft
dc Resistance, Inner Conductor	1.74 ohms/km | 0.53 ohms/kft
dc Resistance, Outer Conductor	0.75 ohms/km | 0.229 ohms/kft
dc Test Voltage	8500 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 – 4000 MHz
Peak Power	180 kW

AVA6P-50-43B

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	0.079	0.024	82.63
1.5	0.097	0.03	67.41
2.0	0.113	0.034	58.33
10.0	0.253	0.077	25.89
20.0	0.36	0.11	18.21
30.0	0.443	0.135	14.8
50.0	0.576	0.176	11.39
85.0	0.758	0.231	8.66
88.0	0.772	0.235	8.51
100.0	0.825	0.251	7.96
108.0	0.858	0.262	7.65
150.0	1.019	0.311	6.44
174.0	1.102	0.336	5.96
200.0	1.186	0.361	5.53
204.0	1.198	0.365	5.48
300.0	1.471	0.448	4.46
400.0	1.717	0.523	3.82
450.0	1.829	0.558	3.59
460.0	1.851	0.564	3.54
500.0	1.937	0.59	3.39
512.0	1.962	0.598	3.34
600.0	2.14	0.652	3.07
700.0	2.329	0.71	2.82

800.0	2.507	0.764	2.62
824.0	2.548	0.777	2.58
894.0	2.666	0.813	2.46
960.0	2.774	0.846	2.37
1000.0	2.838	0.865	2.31
1218.0	3.171	0.967	2.07
1250.0	3.218	0.981	2.04
1500.0	3.569	1.088	1.84
1700.0	3.835	1.169	1.71
1794.0	3.955	1.206	1.66
1800.0	3.963	1.208	1.66
2000.0	4.212	1.284	1.56
2100.0	4.333	1.321	1.51
2200.0	4.452	1.357	1.47
2300.0	4.569	1.393	1.44
2500.0	4.798	1.462	1.37
2700.0	5.021	1.53	1.31
3000.0	5.345	1.629	1.23
3400.0	5.76	1.755	1.14
3600.0	5.961	1.817	1.1
3700.0	6.06	1.847	1.08
3800.0	6.16	1.877	1.07
4000.0	6.36	1.94	1.03

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	203.2 mm | 8 in
Minimum Bend Radius, single Bend	152.4 mm | 6 in
Number of Bends, minimum	15
Number of Bends, typical	40

AVA6P-50-43B

Tensile Strength	154 kg | 339.511 lb
Bending Moment	29.8 N-m | 263.752 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	0.68 kg/m | 0.457 lb/ft

Regulatory Compliance/Certifications

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