

Product Specifications



AVA7-50

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



CHARACTERISTICS

Construction Materials

Jacket Material	PE
Outer Conductor Material	Corrugated copper
Dielectric Material	Foam PE
Flexibility	Standard
Inner Conductor Material	Corrugated copper tube
Jacket Color	Black

Dimensions

Nominal Size	1-5/8 in
Cable Weight	0.72 lb/ft 1.07 kg/m
Diameter Over Dielectric	44.450 mm 1.750 in
Diameter Over Jacket	51.054 mm 2.010 in
Inner Conductor OD	18.161 mm 0.715 in
Outer Conductor OD	46.355 mm 1.825 in

Electrical Specifications

Cable Impedance	50 ohm \pm 1 ohm
Capacitance	22 pF/ft 72 pF/m
dc Resistance, Inner Conductor	0.410 ohms/kft 1.435 ohms/km
dc Resistance, Outer Conductor	0.160 ohms/kft 0.525 ohms/km
dc Test Voltage	11000 V
Inductance	0.187 μ H/m 0.057 μ H/ft
Insulation Resistance	100000 MOhm
Jacket Spark Test Voltage (rms)	10000 V
Operating Frequency Band	1 – 2700 MHz
Peak Power	302.0 kW
Pulse Reflection	0.5%
Velocity	92%

Environmental Specifications

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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)

General Specifications

Brand	HELIAX®
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Mechanical Specifications

Bending Moment	47.5 N-m 35.0 ft lb
Flat Plate Crush Strength	90.0 lb/in 1.6 kg/mm
Minimum Bend Radius, Multiple Bends	381.00 mm 15.00 in
Minimum Bend Radius, Single Bend	203.20 mm 8.00 in
Number of Bends, minimum	15
Number of Bends, typical	50
Tensile Strength	181 kg 400 lb

Standard Conditions

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

Return Loss

Frequency Band	VSWR	Return Loss (dB)
806–960 MHz	1.13	24.30
1700–2170 MHz	1.13	24.30

Attenuation

Frequency (MHz)	Attenuation (dB/100 ft)	Attenuation (dB/100 m)	Average Power (kW)
0.5	0.013	0.044	166.49
1	0.019	0.062	117.56
1.5	0.023	0.076	95.88
2	0.027	0.088	82.96
10	0.06	0.197	36.78
20	0.086	0.281	25.84
30	0.105	0.346	21.00
50	0.137	0.45	16.14
88	0.184	0.603	12.03
100	0.197	0.645	11.26
108	0.205	0.672	10.81
150	0.243	0.798	9.09
174	0.263	0.864	8.41
200	0.284	0.93	7.81
300	0.352	1.156	6.28
400	0.412	1.351	5.37
450	0.439	1.441	5.04
500	0.465	1.527	4.76
512	0.471	1.547	4.69
600	0.515	1.689	4.30
700	0.561	1.84	3.95

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800	0.604	1.982	3.66
824	0.614	2.016	3.60
894	0.643	2.11	3.44
960	0.67	2.197	3.30
1000	0.685	2.249	3.23
1250	0.779	2.554	2.84
1500	0.865	2.838	2.56
1700	0.93	3.053	2.38
1800	0.962	3.157	2.30
2000	1.024	3.359	2.16
2100	1.054	3.457	2.10
2200	1.083	3.554	2.04
2300	1.112	3.649	1.99
2500	1.169	3.836	1.89
2700	1.224	4.017	1.81

Regulatory Compliance/Certifications

Agency

RoHS 2002/95/EC
China RoHS SJ/T 11364-2006

Classification

Compliant
Below Maximum Concentration Value (MCV)

