AVA7-50

AVA7-50, HELIAX® Andrew Virtual Air™ Coaxial Cable, corrugated copper, 1-5/8 in, black PE jacket (Halogen free jacketing non-fire-retardant)

Product Classification

Brand	HELIAX®
Product Series	AVA7-50
Product Type	Coaxial wireless cable

Standards And Qualifications

EN50575 CPR Cable EuroClass	Fca

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	18.1610 mm | 0.7150 in
Outer Conductor OD	46.355 mm | 1.825 in

Electrical Specifications

Cable Impedance	50 ohm ±1 ohm
Capacitance	22.0 pF/ft | 72.2 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	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
Peak Power	302.0 kW
Velocity	92 %

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)

General Specifications

Ordering Note	CommScope® standard product in Asia Pacific | CommScope® standard product in Europe, the Middle East, and Africa | CommScope® standard product in Mexico, Central America, and South America | CommScope® standard product in the United States and Canada

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

Note

Performance Note	Values typical, unless otherwise stated

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/VSWR

Frequency Band	VSWR	Return Loss (dB)
680–800 MHz	1.13	24.30
806–960 MHz	1.13	24.30

1700–2170 MHz	1.13	24.30

Attenuation

Frequency (MHz)	Attenuation (dB/100 m)	Attenuation (dB/100 ft)	Average Power (kW)
0.5	0.044	0.013	166.49
1	0.062	0.019	117.56
1.5	0.076	0.023	95.88
2	0.088	0.027	82.96
10	0.197	0.06	36.78
20	0.281	0.086	25.84
30	0.346	0.105	21.00
50	0.45	0.137	16.14
85	0.593	0.181	12.25
88	0.603	0.184	12.03
100	0.645	0.197	11.26
108	0.672	0.205	10.81
150	0.798	0.243	9.09
174	0.864	0.263	8.41
200	0.93	0.284	7.81
204	0.94	0.287	7.72
300	1.156	0.352	6.28
400	1.351	0.412	5.37
450	1.441	0.439	5.04
460	1.459	0.445	4.98
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500	1.527	0.465	4.76
512	1.547	0.471	4.69
600	1.689	0.515	4.30
700	1.84	0.561	3.95
800	1.982	0.604	3.66
824	2.016	0.614	3.60
894	2.11	0.643	3.44
960	2.197	0.67	3.30
1000	2.249	0.685	3.23
1218	2.517	0.767	2.89
1250	2.554	0.779	2.84
1500	2.838	0.865	2.56
1700	3.053	0.93	2.38
1794	3.151	0.96	2.30
1800	3.157	0.962	2.30
2000	3.359	1.024	2.16
2100	3.457	1.054	2.10
2200	3.554	1.083	2.04
2300	3.649	1.112	1.99
2500	3.836	1.169	1.89
2700	4.017	1.224	1.81

** Values typical, guaranteed within 5%*

Regulatory Compliance/Certifications

Agency	Classification
RoHS 2011/65/EU	Compliant
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system
China RoHS SJ/T 11364-2014	Below Maximum Concentration Value (MCV)
CENELEC	EN 50575 compliant, Declaration of Performance (DoP) available