

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

Product Type Coaxial wireless cable

Product Brand HELIAX®
Product Series AVA7-50

Ordering Note ANDREW® standard product in Asia Pacific | ANDREW® standard product

in Europe, the Middle East, and Africa | ANDREW® standard product in Mexico, Central America, and South America | ANDREW® standard product

in the United States and Canada

General Specifications

Product Number 520096502/00 | SZ520096502/00

Flexibility Standard

Jacket Color Black

Performance NoteAttenuation 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 Conductor1.435 ohms/km0.437 ohms/kftdc Resistance, Outer Conductor0.525 ohms/km0.16 ohms/kft

dc Test Voltage 15000 V

Inductance 0.187 μ H/m | 0.057 μ H/ft

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Insulation Resistance 100000 MOhms-km

Jacket Spark Test Voltage (rms) 10000 V

Operating Frequency Band 1 – 2700 MHz

Peak Power302 kWVelocity92 %

VSWR/Return Loss

Frequency Band	VSWR	Return Loss (dB)
680-800 MHz	1.13	24.3
806-960 MHz	1.13	24.3
1700-2170 MHz	1.13	24.3

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

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6	00.0	1.689	0.515	4.3
7	00.0	1.84	0.561	3.95
8	00.0	1.982	0.604	3.66
8	24.0	2.016	0.614	3.6
8	94.0	2.11	0.643	3.44
9	60.0	2.197	0.67	3.3
1	000.0	2.249	0.685	3.23
1	218.0	2.517	0.767	2.89
1	250.0	2.554	0.779	2.84
1	500.0	2.838	0.865	2.56
1	700.0	3.053	0.93	2.38
1	794.0	3.151	0.96	2.3
1	800.0	3.157	0.962	2.3
2	000.0	3.359	1.024	2.16
2	100.0	3.457	1.054	2.1
2	200.0	3.554	1.083	2.04
2	300.0	3.649	1.112	1.99
2	500.0	3.836	1.169	1.89
2	700.0	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 Bends381 mm | 15 inMinimum Bend Radius, single Bend203.2 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 $-40 \,^{\circ}\text{C}$ to $+60 \,^{\circ}\text{C}$ ($-40 \,^{\circ}\text{F}$ to $+140 \,^{\circ}\text{F}$)

Operating Temperature $-55 \,^{\circ}\text{C}$ to $+85 \,^{\circ}\text{C}$ ($-67 \,^{\circ}\text{F}$ to $+185 \,^{\circ}\text{F}$)

Storage Temperature -70 °C to +85 °C (-94 °F to +185 °F)

Attenuation, Ambient Temperature $68 \,^{\circ}\text{F}$ | $20 \,^{\circ}\text{C}$ Average Power, Ambient Temperature $104 \,^{\circ}\text{F}$ | $40 \,^{\circ}\text{C}$ Average Power, Inner Conductor Temperature $212 \,^{\circ}\text{F}$ | $100 \,^{\circ}\text{C}$

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

CHINA-ROHS Below maximum concentration value

ISO 9001:2015 Designed, manufactured and/or distributed under this quality management system

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

ROHS Compliant UK-ROHS Compliant

