HELIAX® AVA5-50 Coaxial Cable

7/8" Andrew Virtual Air™ Cable for Wireless Applications

NEW PRODUCT ANNOUNCEMENT

UMTS and GSM 1800 System Users—Lower attenuation means less line loss!

HELIAX AVA5-50 from Andrew Corporation is the lowest attenuation coaxial cable in the industry.

With HELIAX AVA5-50, system designers and operators can cut cable subsystem costs by up to 30% and gain tower height at the same time. Engineers can now meet system link budgets using HELIAX AVA5-50 7/8" coaxial cable in certain taller tower applications, instead of a 1-1/4" cable which would have previously been required.

Manufactured worldwide, HELIAX AVA5-50 cables can be at your site quickly via our global distribution network. Or simply order an Andrew OnePack℠ Site Kit with AVA5-50 for even faster, more consistent site buildouts.

Designed and engineered with both your link and cost budgets in mind, AVA5-50 cable continues the long-standing tradition of quality and excellence that HELIAX has delivered to the communication industry for decades.

UMTS and GSM 1800 System users—lower attenuation means less line loss:

GSM 1800 mid-band (1798 MHz)
LDF5-50A @ 30 m = 1.72 dB
AVA5-50 @ 30 m = 1.65 dB

UMTS mid-band (2035 MHz)
LDF5-50A @ 30 m = 1.85 dB
AVA5-50 @ 30 m = 1.70 dB

Also available in 1-5/8" (AVA7-50). Patent pending.

One Company. A World of Solutions.

SPECIFICATIONS

Specifications for HELIAX® AVA5-50 Low Density Foam Dielectric Coaxial Cable

Mechanical

Nominal size	7/8 inch
Jacket O.D, in (mm)	1.102 (27.99)
Outer conductor O.D, in (mm)	1.000 (25.4)
Foam dielectric O.D, in (mm)	0.950 (24.13)
Inner conductor O.D, in (mm)	0.372 (9.45)
Weight, lb/ft (kg/m)	0.30 (0.44)
Tensile strength, lb (kg)	325 (147)
Crush, lb/in (kg/mm)	60 (1.1)
Minimum bend radius, in (mm)	10 (250)
One time minimum bend radius, in (mm)	5 (127)
Bending moment, lb-ft (N-m)	11 (15.2)
Number of bends, min. (typical)	15 (30)

Environmental

Storage temperature, °F (°C)	-94 to +185° (-70 to +85°)
Installation temperature, °F (°C)	-40 to +140° (-40 to +60°)
Operating temperature, °F (°C)	-67 to +185° (-55 to +85°)

Electrical

Impedance, ohms		50 ±1
Pulse reflection, maximum %		0.5
Frequency, maximum MHz		4900
Velocity, %		91
Peak power, kW		91
DC resistance, ohm/kft (ohm/km)	inner	0.41 (1.35)
	outer	0.34 (1.12)
Capacitance, pF/ft (pF/m)		22.3 (73.2)
Inductance, microH/ft (microH/m)		0.05 (0.18)
DC breakdown, volts		6,000
Jacket spark, volts RMS		8,000
Insulation resistance, Mohm		100,000
Lengths to 610 m (2000 ft)		
Phase trim, degrees minimum/GHz		±4.540
3rd order IM, 20 W carriers,1900 MHz		-120.0 (dBm, typical)

Order Andrew OnePack℠ Site Kit with AVA5-50 for even faster, more consistent site buildouts.

Frequency MHz	Attenuation dB/100 ft	Attenuation dB/100 m	Average Power, kW
30	0.183	0.599	14.00
150	0.417	1.37	6.14
450	0.744	2.44	3.44
824	1.03	3.38	2.49
894	1.08	3.53	2.38
960	1.12	3.67	2.29
1500	1.43	4.70	1.79
1700	1.54	5.04	1.67
2000	1.68	5.53	1.52
2300	1.82	5.98	1.41
3000	2.12	6.97	1.21
4900	2.83	9.29	0.905

Rating temperature (attenuation), °F (°C)	68 (20)
Rating temperature (power)-inner, °F (°C)	212 (100)
Rating temperature (power)-ambient, °F (°C)	104 (40)

Accessories

Standard Hangers, kit of 10	42396A-5
Hardware, kit of 10	
3/4" (19 mm) long	31769-5
1" (25 mm) long	31769-1
SnapStak™ Hangers, kit of 10	SSH-78
Click-On Hangers, kit of 10	L5CLICKB
Support Hoisting Grip	
Grip with one clamp	L5SGRIP
Support clamp, kit of 10	L5SGRIP-5IK
Standard Hoisting Grip	19256B
SureGround™ Grounding Kit	
one-hole lug	SGL5-06B1
two-hole lug	SGL5-06B2
three-hole lug	SGL5-15B4
3M™ Cold Shrink™ Weatherproofing Kit	
7/8" to 1/2" cables	245171
Entry Systems	
Standard 4" cable entry boot, 1 hole	20479A-2
Standard 4" cable entry boot, 3 holes	20479A-15

AVA5-50 Connectors

Connectors	Part Number
N Female RingFlare™	A5PNF-RCN
N Female OnePiece™	A5PNF-RPC
N Male RingFlare	A5PNM-RCN
N Male OnePiece	A5PNM-RPC
DIN Female RingFlare	A5PDF-RCN
DIN Female OnePiece	A5PDF-RPC
DIN Male RingFlare	A5PDM-RCN
DIN Male OnePiece	A5PDM-RPC
N Female Positive Stop™	A5TDF-PS
7/8" EIA	A5PE78-RCN

ANDREW®

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