

### Product Specification

#### 50 Ohm Radiating Cable, 7/8" - AR078FV50-3D

Description	Product Number
<b>Fire Retardant Cable</b>	
7/8", Low-Smoke, Non-Halogenated, Fire Retardant Jacket, Conforms to IEC332-1, IEC332-3C, UL1685-12, FT4/IEEE1202 (NFPA-130), CMG-LS	AR078FV50-3D
<b>Features &amp; Benefits</b>	
100% Made in the USA (Buy America, Title 49 Compliant)	
NFPA-130/NFPA-502 Compliant (2017 Edition) & CMG-LS Listed	
No Water Migration 15 Year Warranty	
Indication of Slot Alignment	None
Recommended Hanger Spacing, ft (m)	6 (2)
Minimum Distance to Wall, in (mm)	2 (50.8)
Jacket Color	Black
<b>Physical Dimensions</b>	
Center Diameter, in (mm)	0.383 (9.73)
Diameter Over Dielectric, in (mm)	0.980 (24.89)
Diameter Over Outer Conductor, in (mm)	1.007 (25.58)
Maximum Diameter Over Jacket, in (mm)	1.104 (28.04)
Center Conductor	Solid Copper Tube
Outer Conductor	Dual Slotted Solid Aluminum Tube
<b>Electrical Characteristics</b>	
Operating Frequency, MHz	1500 - 3700 MHz
Peak Power Rating, KW	90
DC Resistance, Ohms/1,000 ft (1,000 m)	
Center	0.47 (1.54)
Outer	0.24 (0.78)
DC Breakdown, kV	6.7
Capacitance, pF/ft (m)	22.3 (73.16)
Inductance, mH/ft (m)	0.056 (0.184)
Jacket Spark, kV RMS	8
VSWR min, (dB)	1.38 (16.0)
VSWR in-band, (dB)	1.30 (17.7)
Impedance, Ohms	50 ± 2
Velocity of Propagation	91%
Stop Bands, MHz	821, 1045, 1645, 2465, 2685, 3010, 3280, 3412
<b>Mechanical Characteristics</b>	
Minimum Bend Radius, in (mm) - Single	13 (330.2)
Cable Weight, lb/ft (kg/m)	0.33 (0.50)
Bending Moment, ft lb (N m)	26 (35.1)
Tensile Strength, lb (kg)	734 (333.6)
Flat Plate Crush, lb/in (kg/mm)	132 (2.36)
Recommended Install Temp., °F (°C)	-10° to 170° (-23° to 77°)
Recommended Storage Temp., °F (°C)	-40° to 170° (-40° to 77°)
Recommended Operating Temp., °F (°C)	-40° to 170° (-40° to 77°)
<b>Regulatory Compliance/Certifications</b>	
RoHS 2011/65/EU Compliant	
TL 9000 H-V - All Cables designed and manufactured under this quality management system	



Electrical Performance			
Frequency, MHz	Attenuation		Coupling Loss 95%, dB
	dB/100 ft	dB/100 m	
1575	1.64	5.38	65 (69)
1700	1.76	5.76	69 (72)
1800	1.84	6.04	68 (71)
1900	1.95	6.39	69 (71)
2000	2.03	6.67	67 (70)
2100	2.13	6.99	65 (69)
2200	2.25	7.38	67 (70)
2300	2.41	7.90	66 (69)
2400	2.63	8.61	67 (69)
2500	2.79	9.16	67 (69)
2600	2.97	9.73	67 (69)
2700	3.23	10.58	66 (68)
3500	5.64	18.50	69 (73)
3600	6.46	21.18	71 (74)
3700	7.14	23.41	68 (72)

**Notes:**

- Coupling Loss and Attenuation Values are measured in accordance with the IEC 61196-4 Free Space Test Method
- Coupling Loss values are measured with a orthogonal (above 1600 MHz) orientated dipole antenna
- The Coupling Loss values in parentheses are the mean values of all three spatial orientations (radial, parallel and orthogonal) of dipole antenna
- Coupling Loss Tolerance of ± 10 dB at 6 ft (2m), 95%
- Attenuation Tolerance of ± 10% at 68°F
- As is the case with all radiating cables, performance in RF confined areas may differ from values in a free space.

**Trilogy AirCell® Cable**

Proud to be 100% Made in the USA

