

Product Specification

50 Ohm Transline Cable, 1-1/4" - AT114J50

Description	Product Number
Standard Cable	
1-1/4", Black Polyethylene Jacket	AT114J50
Physical Dimensions	
Center Diameter, in (mm)	0.589 (14.96)
Diameter Over Dielectric, in (mm)	1.498 (38.05)
Diameter Over Outer Conductor, in (mm)	1.517 (38.53)
Maximum Diameter Over Jacket, in (mm)	1.604 (40.74)
Center Conductor	Solid Copper Tube
Outer Conductor	Solid Aluminum Tube
Jacket Color	Black
Electrical Characteristics	
Maximum Frequency, GHz	3.4
Peak Power Rating, KW	211
DC Resistance, Ohms/1,000 ft (1,000 m)	
Center	0.30 (0.99)
Outer	0.12 (0.42)
DC Breakdown, kV	9
Capacitance, pF/ft (m)	22.3 (73.16)
Inductance, mH/ft (m)	0.056 (0.184)
Jacket Spark, kV RMS	8
VSWR min, (dB)	1.25 (19.0)
VSWR in-band, (dB)	1.13 (24.3)
Impedance, Ohms	50 ± 2
Velocity of Propagation	91%
Mechanical Characteristics	
Minimum Bend Radius, in (mm) - Single	6 (152.4)
Minimum Bend Radius, in (mm) - Multiple	15 (381)
Cable Weight, lb/ft (kg/m)	0.58 (0.86)
Bending Moment, ft lb (N m)	50 (67.5)
Tensile Strength, lb (kg)	1124 (511)
Flat Plate Crush, lb/in (kg/mm)	122 (2.18)
Number of Bends	20
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°)
Standard Conditions	
For Attenuation: VSWR 1.0, Ambient Temperature 20°C (68°F)	
For Average Power: VSWR 1.0, Ambient Temperature 40°C (104°F), Inner Conductor Temperature 100°C (212°F), No Solar Loading	
Product Certifications	
Transline Cables and Connectors are certified to exceed the strict Verizon Wireless PIM [Passive Inter Modulation] and Motorola 25kW PIP [Peak Instantaneous Power] Specifications	
Regulatory Compliance/Certifications	
RoHS 2011/65/EU Compliant	
TL 9000 H-V - All Cables designed and manufactured under this quality management system	



Attenuation and Average Power			
Frequency, MHz	Attenuation		Average Power kW
	dB/100 ft	dB/100 m	
100	0.24	0.79	14.78
108	0.25	0.82	14.19
150	0.29	0.95	12.24
174	0.32	1.05	11.09
200	0.34	1.12	10.44
300	0.43	1.41	8.25
400	0.51	1.67	6.96
450	0.54	1.77	6.57
500	0.58	1.90	6.12
512	0.59	1.94	6.01
600	0.64	2.10	5.54
700	0.70	2.30	5.07
800	0.76	2.49	4.67
824	0.77	2.53	4.61
894	0.81	2.66	4.38
960	0.85	2.79	4.17
1000	0.87	2.85	4.08
1250	0.99	3.25	3.58
1500	1.11	3.64	3.20
1800	1.25	4.10	2.87
1900	1.29	4.23	2.76
2000	1.33	4.36	2.67
2300	1.45	4.76	2.44
3000	1.84	6.04	1.93

Trilogy AirCell® Cable

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