

Cable Specifications

50 Ohm Transline Cable 1-5/8"

Description	Product Number
Standard Cable	
1-5/8", Black Polyethylene Jacket	AT158J50
Fire Retardant Jacket	
1-5/8", Low-Smoke, Non-Halogenated, Fire Retardant Jacket, IEC332-1	AT158FX50
Riser Rated Cable	
1-5/8", Low-Smoke, Non-Halogenated, Fire Retardant Jacket, UL-1666, CMR, IEC332-1, IEC332-3C	AT158R50
Physical Dimensions	
Center Dia., in (mm)	0.728 (18.49)
Dia. Over Dielectric, in (mm)	1.871 (47.52)
Dia. Over Outer Conductor, in (mm)	1.888 (47.96)
Max. Dia. Over Jacket, in (mm)	2.035 (51.69)
Center Conductor	Solid Copper Tube
Outer Conductor	Solid Aluminum Tube
Electrical Characteristics	
Maximum Frequency, GHz	3
Peak Power Rating, KW	315
DC Res, Ohms/1000 ft (1000m)	
Center	0.22 (0.72)
Outer	0.10 (0.33)
DC Breakdown, kV	11
Capacitance, pF/ft (m)	22.3 (73.16)
Inductance, mH/ft (m)	0.056 (0.184)
Jacket Spark, kV RMS	8
Typical VSWR	< 1.1
Impedance, Ohms	50
Velocity of Propagation	91%
Mechanical Characteristics	
Min. Bend. Rad., in (mm) – Single	8 (203)
Min. Bend. Rad., in (mm) – Multiple	20 (508)
Cable Weight, lb/ft (kg/m)	0.70 (1.037)
Bending Moment, ft.lb (N'm)	60 (81)
Tensile Strength, lb (kg)	1500 (682)
Flat Plate Crush, lb/in (kg/mm)	150 (2.68)
Number of Bends	20
Temperature, °F (°C)	
Recommended Install	-40 to 170 (-40 to 77)
Recommended Storage	-94 to 170 (-70 to 77)
Operating	-40 to 170 (-40 to 77)

Frequency MHz	Attenuation		Avg. Pwr. kW
	dB/100 ft	dB/100m	
30	0.09	0.33	39.16
50	0.13	0.43	30.16
88	0.17	0.57	24.87
100	0.18	0.61	20.67
108	0.19	0.64	20.00
150	0.23	0.76	16.55
174	0.25	0.82	12.65
200	0.27	0.89	14.09
300	0.33	1.10	11.19
400	0.39	1.29	9.47
450	0.42	1.39	8.85
500	0.44	1.46	8.31
512	0.45	1.49	8.19
600	0.49	1.62	7.46
700	0.54	1.78	6.80
800	0.58	1.93	6.26
824	0.59	1.97	6.24
894	0.62	2.04	5.93
960	0.64	2.13	5.56
1000	0.67	2.20	5.46
1250	0.75	2.47	4.75
1500	0.85	2.80	4.23
1800	0.96	3.02	3.76
1900	0.99	3.26	3.62
2000	1.01	3.34	3.51
2300	1.10	3.61	3.20
3000	1.36	4.46	2.44

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

