

AirCell®

PLENUM CABLES

Cable Specifications

50 Ohm Plenum, 1/2"

Description	Product Number
Plenum Cables	
1/2", Corrugated, Jacketed UL-910, CATVP	AP012J50
Physical Dimensions	
Center Conductor	Copper Clad Aluminum
Outer Conductor	Corrugated Aluminum
Dia. Over Outer Conductor, in (mm)	0.540 (13.72)
Dia. Over Jacket, in (mm)	0.615 (15.62)
Electrical Characteristics	
Impedance, Ohms	50
Maximum Frequency, GHz	10
Velocity of Propagation	93%
Peak Power Rating, kW	35
DC Res., Ohms/1000 ft (1000m)	
Center	0.46 (1.51)
Outer	0.51 (1.67)
DC Breakdown, kV	4
Jacket Spark, kV RMS	8
Capacitance, pF/ft (m)	22 (72.12)
Inductance, mH/ft (m)	0.057 (0.187)
Mechanical Characteristics	
Minimum Bending Radius, in (mm)	5 (127)
Number of Bends, minimum (typical)	15 (20)
Cable Weight, lb/ft (kg/m)	.129 (.192)
Tensile Strength, lb (kg)	250 (114)
Flat Plate Crush, lb/in (kg/mm)	78 (1.39)
Temperature, °F (°C)	
Recommended Install	+5 to 194 (-15 to 90)
Recommended Storage	+5 to 194 (-15 to 90)
Operating	+5 to 194 (-15 to 90)



Frequency MHz	Attenuation		Avg. Pwr. kW
	dB/100 ft	dB/100m	
5	0.159	0.56	17.6
10	0.225	0.82	12.0
20	0.319	1.10	8.95
30	0.391	1.35	7.29
50	0.507	1.74	5.66
88	0.676	2.30	4.28
100	0.722	2.47	3.98
108	0.751	2.56	3.84
150	0.889	3.03	3.20
174	0.960	3.26	3.03
200	1.03	3.50	2.80
300	1.27	4.32	2.27
400	1.48	5.01	1.96
450	1.57	5.32	1.85
500	1.66	5.62	1.75
512	1.68	5.70	1.73
600	1.83	6.20	1.58
700	1.99	6.70	1.47
800	2.13	7.17	1.37
824	2.19	7.28	1.35
894	2.26	7.61	1.29
960	2.35	7.90	1.24
1000	2.40	8.10	1.21
1250	2.71	9.09	1.08
1500	2.99	10.0	0.98
1700	3.20	10.0	0.98
1950	3.45	11.6	0.85
2000	3.50	11.7	0.84
2300	3.76	12.6	0.78
2400	3.92	12.9	0.77
3000	4.38	14.5	0.68
3300	4.52	14.8	0.61
3400	4.81	15.7	0.60
4000	5.45	17.8	0.55
4900	6.58	21.5	0.50
5000	6.28	20.5	0.49
5200	6.54	21.4	0.48
5300	6.10	20.0	0.47
5600	6.09	19.9	0.46
6000	6.38	20.9	0.45

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

AirCell® PLENUM CABLE - COPPER

Cable Specifications

50 Ohm Plenum, 1/2"
Copper Outer Conductor

Description	Product Code
Plenum Cable	
1/2" Corrugated Cable, Jacketed UL-910, CATVP	APC012J50
Physical Dimensions	
Center Conductor	Copper Clad Aluminum
Outer Conductor	Corrugated Copper
Dia. Over Outer Conductor, in (mm)	0.540 (13.72)
Dia. Over Jacket, in (mm)	0.615 (15.62)
Electrical Characteristics	
Impedance, Ohms	50
Maximum Frequency, GHz	10
Velocity of Propagation	96%
Peak Power Rating, kW	40
DC Res., Ohms/1000 ft (1000m)	
Center	0.46 (1.51)
Outer	0.39 (1.28)
DC Breakdown, kV	4
Jacket Spark, kV RMS	8
Capacitance, pF/ft (m)	22 (72.12)
Inductance, mH/ft (m)	0.057 (0.187)
Mechanical Characteristics	
Minimum Bending Radius, in (mm)	5 (127)
Number of Bends, minimum (typical)	15 (20)
Bending Moment, lb-ft (N.m)	3.0 (4.1)
Cable Weight, lb/ft (kg/m)	0.19 (0.28)
Tensile Strength, lb (kg)	275 (125)
Flat Plate Crush Strength, lb/in (kg/mm)	110 (2.0)
Temperature, °F (°C)	
Recommended Install	+5 to 194 (-15 to 90)
Recommended Storage	+5 to 194 (-15 to 90)
Operating	+5 to 194 (-15 to 90)



Frequency MHz	Attenuation and Average Power	
	Attenuation dB/100 ft	Avg Pwr kW
30	0.34	8.24
50	0.44	6.34
88	0.59	4.75
100	0.63	4.46
108	0.65	4.29
150	0.77	3.63
174	0.83	3.36
200	0.89	3.13
300	1.10	2.54
400	1.28	2.19
450	1.36	2.06
500	1.43	1.95
512	1.45	1.92
600	1.58	1.77
700	1.71	1.63
800	1.84	1.52
824	1.86	1.50
894	1.95	1.44
900	1.95	1.43
960	2.02	1.38
1000	2.07	1.35
1250	2.33	1.20
1500	2.56	1.09
1700	2.74	1.02
1800	2.83	0.99
1950	2.95	0.95
2000	2.99	0.93
2300	3.23	0.86
2400	3.22	0.82
3000	3.73	0.75
3300	4.09	0.69
3400	4.12	0.68
4000	4.77	0.63
4900	6.04	0.57
5000	5.54	0.56
5200	5.37	0.55
5300	5.32	0.54
5600	5.43	0.53
6000	5.90	0.51

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

AirCell® PLENUM RADIATING CABLE

Cable Specifications

50 Ohm Plenum Radiating, 1/2"

Description	Product Code
Plenum Cables	
1/2" Corrugated Cable, Jacketed UL-910, CATVP	AQ012J50
Physical Deminsions	
Center Conductor	Copper Clad Aluminum
Outer Conductor	Corrugated Aluminum
Dia. Over Outer Conductor, in (mm)	0.540 (13.72)
Dia. Over Jacket, in (mm)	0.615 (15.62)
Electrical Characteristics	
Impedance, Ohms	50
Maximum Frequency, GHz	10
Velocity of Propagation	93%
Peak Power Rating, kW	35
DC Res., Ohms/1000 ft (1000 m)	
Center	0.46 (1.51)
Outer	0.51 (1.67)
DC Breakdown, kV	4
Jacket Spark, kV RMS	8
Capacitance, pF/ft (m)	22 (72.12)
Inductance, mH/ft (m)	0.057 (0.187)
Mechanical Characteristics	
Minimum Bending Radius, in (mm)	5 (127)
Number of Bends, minimum (typical)	10 (15)
Cable Weight, lb/ft (kg/m)	0.122 (0.181)
Tensile Strength, lb. (kg)	250 (114)
Flat Plate Crush Strength lb./in (kg/mm)	50 (0.89)
Temperature °F (°C)	
Recommended Install	+5 to 194 (-15 to 90)
Recommended Storage	+5 to 194 (-15 to 90)
Operating	+5 to 194 (-15 to 90)

Frequency MHz	Attenuation and Coupling Loss		Coupling Loss* dB
	Attenuation dB/100ft	Attenuation dB/100m	
30	0.55	1.81	49
50	0.64	2.11	49
88	0.90	2.96	49
100	0.97	3.19	49
108	1.02	3.35	49
150	1.27	4.15	49
174	1.40	4.60	50
200	1.54	5.06	50
300	2.04	6.70	51
400	2.40	7.88	58
450	2.60	8.52	61
500	2.78	9.13	61
512	2.82	9.26	61
600	3.13	10.30	62
700	3.46	11.36	62
800	3.77	12.38	63
824	3.84	12.61	63
894	4.07	13.37	63
900	4.09	13.40	63
960	4.20	13.79	64
1000	4.27	14.00	64
1250	4.83	15.86	64
1500	5.34	15.50	65
1700	5.66	18.60	65
1800	5.82	19.10	66
1950	6.29	20.60	69
2000	6.43	21.10	69
2300	7.12	23.38	70
2400	7.34	24.10	70
3000	8.82	29.00	70

* 50% Coupling Loss at 6ft (2m), ± 10dB

AirCell® PLENUM RADIATING CABLE - COPPER

Cable Specifications

50 Ohm Plenum Radiating, 1/2" Copper Outer Conductor

Description	Product Code
Plenum Cables	
1/2" Corrugated Cable, Jacketed UL-910, CATVP	AQC012J50
Physical Deminsions	
Center Conductor	Copper Clad Aluminum
Outer Conductor	Corrugated Copper
Dia. Over Outer Conductor, in (mm)	0.540 (13.72)
Dia. Over Jacket, in (mm)	0.615 (15.62)
Electrical Characteristics	
Impedance, Ohms	50
Maximum Frequency, GHz	10
Velocity of Propagation	96%
Peak Power Rating, kW	40
DC Res., Ohms/1000 ft (1000 m)	
Center	0.46 (1.51)
Outer	0.42 (1.38)
DC Breakdown, kV	4
Jacket Spark, kV RMS	8
Capacitance, pF/ft (m)	22 (72.12)
Inductance, mH/ft (m)	0.057 (0.187)
Mechanical Characteristics	
Minimum Bending Radius, in (mm)	5 (127)
Number of Bends, minimum (typical)	15 (20)
Bending Moment, lb-ft (N.m)	3.0 (4.1)
Cable Weight, lb/ft (kg/m)	0.17 (0.25)
Tensile Strength, lb. (kg)	250 (114)
Flat Plate Crush Strength lb/in (kg/mm)	110 (2.0)
Temperature °F (°C)	
Recommended Install	+5 to 194 (-15 to 90)
Recommended Storage	+5 to 194 (-15 to 90)
Operating	+5 to 194 (-15 to 90)

Attenuation and Coupling Loss			
Frequency MHz	Attenuation dB/100ft dB/100m		Coupling Loss* dB
30	0.50	1.64	55
50	0.65	2.82	55
88	0.86	2.82	55
100	0.92	3.01	55
108	0.95	3.13	56
150	1.12	3.69	56
174	1.21	3.97	63
200	1.30	4.26	63
300	1.59	5.23	63
400	1.84	6.05	63
450	1.96	6.42	63
500	2.06	6.77	64
512	2.09	6.85	64
600	2.26	7.43	64
700	2.45	8.03	64
800	2.62	8.60	64
824	2.66	8.73	64
894	2.77	9.10	64
900	2.78	9.13	65
960	2.87	9.43	65
1000	2.94	9.63	65
1250	3.29	10.79	65
1500	3.61	11.84	66
1700	3.85	12.63	66
1800	3.96	13.00	66
1950	4.13	13.55	66
2000	4.18	13.72	67
2300	4.49	14.74	68
2400	4.59	15.07	68
3000	5.15	16.90	69

* 50% Coupling Loss at 6ft (2m), ± 10dB



AirCell[®] PLENUM CABLES

Cable Specifications

75 Ohm Plenum, 1/2"

Description	Product Code
Plenum Cables	
1/2" Corrugated Cable, Unjacketed UL-910	AP012U75
1/2" Corrugated Cable, Jacketed UL-910, CATVP	AP012J75
Physical Dimensions	
Center Conductor	Copper Clad Aluminum
Outer Conductor	Corrugated Aluminum
Dia. Over Outer Conductor, in (mm)	0.540 (13.72)
Dia. Over Jacket, in (mm)	0.615 (15.62)
Electrical Characteristics	
Impedance, Ohms	75
Maximum Frequency, GHz	12
Velocity of Propagation	95%
Peak Power Rating, kW	35
DC Res., Ohms/1000 ft (1000 m)	
Center	1.09 (3.58)
Outer	0.51 (1.67)
DC Breakdown, kV	4
Jacket Spark, kV RMS	8
Capacitance, pF/ft (m)	14.84 (48.68)
Inductance, mH/ft (m)	0.080 (0.264)
Mechanical Characteristics	
Minimum Bending Radius, in (mm)	5.0 (127)
Number of Bends, minimum (typical)	15 (20)
Cable Weight, lb/ft (kg/m)	
Unjacketed	0.058 (0.086)
Jacketed	0.104 (0.155)
Tensile Strength, lb (kg)	145 (66)
Flat Plate Crush Strength lb/in (kg/mm)	78 (1.39)
Temperature °F (°C)	
Recommended Install	+5 to 194 (-15 to 90)
Recommended Storage	+5 to 194 (-15 to 90)
Operating	+5 to 194 (-15 to 90)

Attenuation and Average Power			
Frequency MHz	Attenuation		Avg. Pwr. kW
	dB/100ft	dB/100m	
5	0.15	0.49	9.33
10	0.21	0.70	6.60
20	0.30	0.98	4.66
30	0.37	1.21	3.78
50	0.48	1.57	2.93
88	0.66	2.18	2.10
100	0.71	2.32	1.97
108	0.74	2.42	1.90
150	0.87	2.85	1.61
174	0.93	3.07	1.50
200	1.00	3.29	1.40
300	1.20	3.94	1.17
400	1.40	4.59	1.00
450	1.48	4.87	0.94
500	1.57	5.15	0.89
512	1.59	5.21	0.88
600	1.73	5.68	0.81
700	1.87	6.13	0.75
800	2.02	6.62	0.69
824	2.05	6.73	0.68
894	2.14	7.01	0.66
960	2.21	7.25	0.63
1000	2.26	7.41	0.62
1250	2.57	8.43	0.54
1500	2.81	9.22	0.50
1700	3.01	9.88	0.46
1950	3.25	10.7	0.43
2000	3.29	10.8	0.43
2300	3.52	11.6	0.40
2400	3.60	11.8	0.39
3000	4.03	13.2	0.35

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