

## Cable Selection Guide

### 50 Ohm

Cable Size Jacketing	Transline				
	1/2" Prod Code	5/8" Prod Code	7/8" Prod Code	1-1/4" Prod Code	1-5/8" Prod Code
Black Polyethylene Jacket	AT012J50	AT058J50	AT078J50	AT114J50	AT158J50
Black Polyethylene Jacket, Burial Flooded					
Low-Smoke, Non-Halogenated, Fire Retardant Jacket. UL-1666, CMX / UL VW1, CMX	AT012F50	AT058F50	AT078F50	AT114F50	AT158F50
Low-Smoke, Non-Halogenated, Fire Retardant Jacket. UL-1666, CMR	AT012R50	AT058R50	AT078R50	AT114R50	AT158R50
Unjacketed, UL-910					
Jacketed UL-910, CATVP					
<b>Characteristics</b>					
Dia. Over Dielectric, in (mm)	0.470 (11.94)	0.712 (18.08)	0.968 (24.58)	1.480 (37.59)	1.871 (47.52)
Dia. Over Outer Conductor, in (mm)	0.510 (12.95)	0.760 (19.30)	1.012 (25.70)	1.524 (38.71)	1.888 (47.96)
Max. Dia. Over Jacket, in (mm)	0.640 (16.26)	0.890 (22.61)	1.142 (29.01)	1.654 (42.01)	2.035 (51.69)
Cable Weight, lb/ft (kg/m)					
Jacketed	0.129 (0.192)	0.256 (0.381)	0.333 (0.496)	0.579 (0.863)	0.701 (1.045)
Min. Bending Radius, in (mm)	6 (152)	8 (203)	10 (254)	15 (381)	20 (508)
Impedance, Ohms	50	50	50	50	50
Velocity of Propagation	91%	91%	91%	91%	91%
Maximum Frequency, GHz	11	7	5	3.4	3
Peak Power Ratings, kW	32	65	90	211	315
<b>Attenuation, dB/100 ft (dB/100 m)</b>					
50 MHz	0.48 (1.57)	0.36 (1.17)	0.23 (0.75)	0.16 (0.52)	0.13 (0.43)
100 MHz	0.68 (2.23)	0.50 (1.64)	0.33 (1.07)	0.24 (0.79)	0.19 (0.61)
450 MHz	1.49 (4.89)	1.08 (3.54)	0.73 (2.40)	0.54 (1.77)	0.42 (1.39)
1000 MHz	2.29 (7.51)	1.64 (5.38)	1.15 (3.76)	0.87 (2.85)	0.67 (2.20)
2000 MHz	3.38 (11.1)	2.47 (8.10)	1.72 (5.64)	1.33 (4.36)	1.02 (3.34)
3000 MHz	4.29 (14.1)	3.24 (10.6)	2.20 (7.21)	1.84 (6.04)	1.68 (5.51)
<b>Average Power Rating, kW</b>					
50 MHz	3.18	6.46	8.95	22.18	30.16
100 MHz	2.24	4.56	6.31	14.78	20.67
450 MHz	1.05	2.13	2.93	6.57	8.85
1000 MHz	0.70	1.41	1.94	4.08	5.46
2000 MHz	0.49	0.99	1.35	2.67	3.51
3000 MHz	0.40	0.80	1.09	1.93	2.44

# AirCell® COAXIAL CABLE

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50 Ohm

Radiating					Plenum		Plenum Radiating		Applications
1/2"	5/8"	7/8"	1-1/4"	1-5/8"	1/2"	1/2"	1/2"	1/2"	
Prod Code	Prod Code	Prod Code	Prod Code	Prod Code	Prod Code	Prod Code	Prod Code	Prod Code	
AR012J50	AR058J50	AR078J50	AR114J50	AR158J50					Primary outdoor installations.
AR012B50	AR058B50	AR078B50							Primary outdoor installations for rugged environments.
AR012F50	AR058F50	AR078F50	AR114F50	AR158F50					Meet fire retardancy requirements of UL, IEC, NES, IEEE MSHA, and ICEA as shown below.
AR012R50	AR058R50	AR078R50	AR114R50	AR158R50					Meet all riser requirements of UL-1666, UL-444 and UL-1655.
					AP012U50				In-building applications, specifically in air handling spaces. Meet fire retardancy requirements of UL, NEC, and CSA.
					AP012J50	APC012J50 Copper	AQ012J50	AQC012J50 Copper	In-building applications, specifically in air handling spaces. Meet fire retardancy requirements of UL, NEC, and CSA.

**Characteristics**

0.470 (11.94)	0.712 (18.08)	0.968 (24.58)	1.480 (37.59)	1.871 (47.52)	0.485 (12.32)	0.485 (12.32)	0.485 (12.32)	0.485 (12.32)
0.510 (12.95)	0.760 (19.30)	1.012 (25.70)	1.524 (38.71)	1.905 (48.38)	0.540 (13.72)	0.540 (13.72)	0.540 (13.72)	0.540 (13.72)
0.652 (16.56)	0.902 (22.90)	1.154 (29.31)	1.666 (42.32)	2.047 (51.99)	0.615 (15.62)	0.615 (15.62)	0.615 (15.62)	0.615 (15.62)
0.127 (0.189)	0.252 (0.375)	0.299 (0.445)	0.564 (0.840)	0.675 (1.004)	0.129 (0.192)	0.19 (0.28)	0.122 (0.181)	0.17 (.25)
6 (152)	8 (203)	10 (254)	15 (381)	20 (508)	5 (127)	5 (127)	5 (127)	5 (127)
50	50	50	50	50	50	50	50	50
91%	91%	91%	91%	91%	93%	96%	93%	96%
11	7	5	3.4	3	10	96%	10	10
32	65	90	211	306	35	40	35	40

**Attenuation, dB/100 ft (dB/100 m)**

0.76 (2.49)	0.38 (1.25)	0.23 (0.76)	0.16 (0.52)	0.19 (0.62)	0.51 (1.74)	0.44 (1.44)	0.64 (2.11)	0.65 (2.12)
1.08 (3.54)	0.53 (1.74)	0.33 (1.08)	0.24 (0.77)	0.24 (0.80)	0.72 (2.47)	0.63 (2.05)	0.97 (3.19)	0.92 (3.01)
2.00 (6.59)	1.23 (4.04)	0.84 (2.75)	0.58 (1.91)	0.56 (1.82)	1.57 (5.32)	1.36 (4.46)	2.60 (8.52)	1.96 (6.42)
2.89 (9.51)	1.94 (6.36)	1.40 (4.60)	0.99 (3.26)	0.83 (2.73)	2.40 (8.10)	2.07 (6.78)	4.27 (14.0)	2.94 (9.63)
4.17 (13.7)	3.22 (10.6)	2.26 (7.40)	1.48 (4.85)	1.37 (4.48)	3.50 (11.7)	2.99 (9.82)	6.43 (21.1)	4.18 (13.72)
4.64 (15.2)	3.94 (12.9)	2.86 (9.38)	1.97 (6.46)	2.06 (6.77)	4.38 (14.4)	3.73 (12.25)	8.82 (29.0)	5.15 (16.90)

**Coupling Loss, dB, at 6 ft (2 m)**

**Avg Power Rating, kW**

**Coupling Loss, dB, at 6 ft (2 m)**

61	61	66	65	64	5.66	6.34	49	55
62	63	67	65	65	3.98	4.46	49	55
63	63	68	67	67	1.85	2.06	61	63
69	68	70	69	69	1.21	1.35	64	65
76	76	71	70	70	0.84	0.93	69	67
78	81	74	71	71	0.68	0.75	70	69

AirCell® Fire Retardancy Ratings*	
IEC 332-1	Vertical Single Cable Test
IEC 754-1	Halogen Acid Gas Test
IEC 754-2	Acid Gas Test
ULVW1/CMX	Vertical Wire Flame Test
UL 1581/CATV	Vertical Tray Flame Test
UL 1666/CMR	Riser Cable Test
UL 910/CMP	Steiner Tunnel Test
IEEE 383	Vertical Tray Flame Test
CSA C222/FT6	Canadian Plenum Test
MSHA	Approval for Use in Underground Mines as Signal Cable
ICEA S-19-1981	Horizontal Flame Test for Transmission and Distribution of Electrical Energy

\* Ratings based on cable diameters and construction

## Cable Selection Guide

### 75 Ohm

Cable Size Jacketing	Transline		
	1/2" Product Code	5/8" Product Code	7/8" Product Code
Black Polyethylene Jacket	AT012J75	AT058J75	AT078J75
Black Polyethylene Jacket, Burial Flooded	AT012B75	AT058B75	AT078B75
Low-Smoke, Non-Halogenated, Fire Retardant Jacket. UL-1666, CMX / UL VVW1, CMX	AT012F75	AT058F75	AT078F75
Low-Smoke, Non-Halogenated, Fire Retardant Jacket. UL-1666, CMR	AT012R75	AT058R75	AT078R75
Unjacketed UL-910			
Jacketed UL-910, CATVP			
<b>Characteristics</b>			
Dia. Over Dielectric, in (mm)	0.470 (11.94)	0.712 (18.08)	0.961 (24.41)
Dia. Over Outer Conductor, in (mm)	0.510 (12.95)	0.760 (19.30)	1.015 (25.78)
Dia. Over Jacket, in (mm)	0.590 (14.99)	0.840 (21.34)	1.095 (27.81)
Cable Weight, lb/ft (kg/m)			
Unjacketed			
Jacketed	104 (155)	200 (298)	325 (484)
Min. Bending Radius, in (mm)	6 (152)	8 (203)	13 (330)
Impedance, Ohms	75	75	75
Velocity of Propagation	93%	93%	93%
Maximum Frequency, GHz	12	8	6
Peak Power Ratings, kW	16	38	68
<b>Attenuation, dB/100 ft (dB/100 m)</b>			
50 MHz	0.45 (1.48)	0.32 (1.05)	0.23 (0.75)
100 MHz	0.65 (2.13)	0.46 (1.51)	0.32 (1.05)
450 MHz	1.40 (4.60)	0.97 (3.18)	0.74 (2.43)
1000 MHz	2.15 (7.07)	1.47 (4.84)	1.16 (3.82)
2000 MHz	3.03 (9.94)	2.07 (6.79)	1.74 (5.71)
3000 MHz	3.72 (12.2)	2.62 (8.59)	2.16 (7.08)
<b>Average Power Rating, kW</b>			
50 MHz	2.50	4.50	7.41
100 MHz	1.73	3.13	5.32
450 MHz	0.80	1.48	2.30
1000 MHz	0.52	0.99	1.49
2000 MHz	0.37	0.70	0.98
3000 MHz	0.30	0.55	0.79

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### 75 Ohm

Radiating			Plenum	Applications
1/2"	5/8"	7/8"	1/2"	
Product Code	Product Code	Product Code	Product Code	
AR012J75	AR058J75	AR078J75		Primary outdoor installations.
AR012B75				Primary outdoor installations for rugged environments.
AR012F75	AR058F75	AR078F75		Meet fire retardancy requirements of UL, IEC, NES, IEEE MSHA, and ICEA as shown below.
			AP012U75	In-building applications, specifically in air handling spaces Meet fire retardancy requirements of UL, NEC, and CSA.
			AP012J75	In-building applications, specifically in air handling spaces Meet fire retardancy requirements of UL, NEC, and CSA.
Characteristics				
0.470 (11.94)	0.712 (18.08)	0.961 (24.41)	0.488 (12.40)	
0.510 (12.95)	0.760 (19.30)	1.015 (25.78)	0.540 (13.72)	
0.590 (14.99)	0.840 (21.34)	1.095 (27.81)	0.615 (15.62)	
			0.058 (0.086)	
103 (156)	197 (302)	321 (464)	104 (155)	
6 (152)	8 (203)	13 (330)	5 (127)	
75	75	75	75	
91%	91%	91%	95%	
12	8	6	12	
32	65	90	36	
Attenuation, dB/100 ft (dB/100 m)				
0.58 (1.90)	0.41 (1.35)	0.30 (0.98)	0.48 (1.57)	
0.83 (2.72)	0.59 (1.94)	0.44 (1.44)	0.71 (2.32)	
1.80 (5.91)	1.26 (4.13)	0.97 (3.18)	1.48 (4.87)	
2.76 (9.06)	1.90 (6.23)	1.52 (4.99)	2.26 (7.41)	
3.86 (12.7)	2.68 (8.79)	2.14 (7.02)	3.29 (10.8)	
4.70 (15.4)	3.20 (10.5)	2.60 (8.53)	4.03 (13.2)	
Coupling Loss, dB, at 6 ft (2 m)		Average Power Rating, kW		
57	58	61	2.93	
57	58	63	1.97	
60	58	63	0.94	
64	64	67	0.62	
71	71	68	0.43	
75	75	70	0.35	

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IEC 332-1	Vertical Single Cable Test
IEC 754-1	Halogen Acid Gas Test
IEC 754-2	Acid Gas Test
UL VW1/CMX	Vertical Wire Flame Test
UL 1581/CATV	Vertical Tray Flame Test
UL 1666/CMR	Riser Cable Test
UL 910/CMP	Steiner Tunnel Test
IEEE 383	Vertical Tray Flame Test
CSA C22.2/FT6	Canadian Plenum Test
MSHA	Approval for Use in Underground Mines as Signal Cable
ICEA S-19-1981	Horizontal Flame Test for Transmission and Distribution of Electrical Energy

\* Ratings based on cable diameters and construction