AirCell®

RADIATING CABLE

Trilogy COMMUNICATIONS, INC.

Cable Specifications Summary

50 Ohm Radiating, 1/2", 7/8", 1-1/4" and 1-5/8" (5/8"-size cable is also available upon request)

Cable Size	1/2"	7/8"	1-1/4"	1-5/8"
Jacketing	**Product Code**	**Product Code**	**Product Code**	**Product Code**
Black Polyethylene Jacket	AR012J50	AR078J50	AR114J50	AR158J50
Low-Smoke, Non-Halogenated, Fire Retardant Jacket, IEC332-1	AR012FX50	AR078FX50	AR114FX50	AR158FX50
Low-Smoke, Non-Halogenated, Fire Retardant Jacket, IEC332-1, MSHA	AR012F50	-	-	-
Low-Smoke, Non-Halogenated, Fire Retardant Jacket, IEC332-1, IEC332-3C, UL-1666, CMR	AR012R50	AR078R50	AR114R50	AR158R50
Characteristics				
Dia. Over Dielectric, in (mm)	0.470 (11.94)	0.961 (24.58)	1.480 (37.59)	1.871 (47.52)
Dia. Over Outer Conductor, in (mm)	0.510 (12.95)	1.015 (25.70)	1.524 (38.71)	1.888 (47.96)
Max. Dia. Over Jacket, in (mm)	0.652 (16.56)	1.154 (29.31)	1.666 (42.32)	2.047 (51.99)
Cable Weight, lb/ft (kg/km)	0.12 (0.18)	0.29 (0.43)	0.53 (0.789)	0.67 (1.00)
Min. Bend. Radius, in (mm) – Single	2 (50.8)	5 (127)	6 (152.4)	8 (203)
Min. Bend. Radius, in (mm) – Multiple	6 (152)	10 (254)	15 (381)	20 (508)
Tensile Strength, lb (kg)	465 (211)	734 (333.6)	1124 (511)	1500 (682)
Flat Plate Crush, lb/in (kg/mm)	62 (1.11)	132 (2.36)	122 (2.18)	150 (2.68)
Impedance, Ohms	50	50	50	50
Velocity of Propagation	91%	91%	91%	91%
Maximum Frequency, GHz	11	5	3.4	3
Attenuation, dB/100 ft (db/100 m)				
150 MHz	1.10 (3.60)	0.40 (1.31)	0.28 (0.92)	0.28 (0.92)
450 MHz	1.86 (6.10)	0.78 (2.56)	0.54 (1.77)	0.52 (1.71)
700 MHz	2.28 (7.48)	1.03 (3.39)	0.73 (2.38)	0.68 (2.23)
900 MHz	2.55 (8.36)	1.22 (4.00)	0.86 (2.81)	0.75 (2.46)
1900 MHz	2.83 (9.28)	2.02 (6.62)	1.33 (4.36)	1.24 (4.07)
2200 MHz	3.92 (12.85)	2.22 (7.29)	1.47 (4.82)	1.38 (4.53)
2400 MHz	3.99 (13.09)	2.33 (7.66)	1.56 (5.13)	1.50 (4.92)
3000 MHz	4.32 (14.16)	2.66 (8.73)	1.83 (6.01)	1.80 (5.91)
95% Coupling Loss, dB, at 20ft (6m)				
150 MHz	64	64	64	64
450 MHz	66	66	66	66
700 MHz	67	67	67	67
900 MHz	67	67	67	67
1900 MHz	68	68	68	68
2200 MHz	68	68	68	68
2400 MHz	68	68	68	68
3000 MHz	69	69	69	69

AirCell®

75 Ohm Radiating

RADIATING CABLES

Cable Specifications Summary

Cable Size	1/2"	5/8"	7/8"
Jacketing	**Product Code**	**Product Code**	**Product Code**
Black Polyethylene Jacket	AR012J75	AR058J75	AR078J75
Low-Smoke, Non-Halogenated, Fire Retardant Jacket, IEC332-1	AR012FX75	AR058FX75	AR078FX75
Low-Smoke, Non-Halogenated, Fire Retardant Jacket, IEC332-1, MSHA	AR012F75	-	-
Low-Smoke, Non-Halogenated, Fire Retardant Jacket, IEC332-1, IEC332-3C, UL-1666, CMR	AR012R75	AR058R75	AR078R75
Characteristics			
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)
Max. Dia. Over Jacket, in (mm)	0.642 (16.30)	0.840 (21.34)	1.095 (27.81)
Weight, lb/ft (kg/m)	0.103 (0.156)	0.197 (0.302)	0.321 (0.464)
Min. Bend. Rad. in (mm) – Single	2 (50.8)	3 (76.2)	5 (127)
Min. Bend. Rad. In (mm) – Multiple	6 (152)	8 (203)	13 (330)
Tensile Strength, lb (kg)	465 (211)	920 (417)	1400 (635)
Flat Plate Crush, lb/in (kg/mm)	62 (1.11)	140 (2.50)	132 (2.36)
Impedance, Ohms	75	75	75
Velocity of Propagation	91%	91%	91%
Maximum Frequency, GHz	12	8	6
Attenuation, dB/100 ft (dB/100 m)			
150 MHz	1.02 (3.35)	0.72 (2.36)	0.54 (1.77)
450 MHz	1.80 (5.91)	1.26 (4.13)	0.97 (3.18)
960 MHz	2.68 (8.79)	1.85 (6.07)	1.46 (4.79)
1700 MHz	3.57 (11.71)	2.47 (8.10)	1.98 (6.50)
1920 MHz	3.79 (12.43)	2.60 (8.53)	2.10 (6.89)
2000 MHz	3.86 (12.66)	2.68 (8.79)	2.14 (7.02)
2300 MHz	4.13 (13.55)	2.80 (9.18)	2.30 (7.55)
3000 MHz	4.70 (15.42)	3.20 (10.5)	2.60 (8.53)
50% Coupling Loss, dB, at 6 ft (2 m)			
150 MHz	59	61	64
450 MHz	60	58	63
960 MHz	62	64	64
1700 MHz	69	69	67
1920 MHz	71	71	68
2000 MHz	71	71	68
2300 MHz	73	74	70
3000 MHz	73	75	70

AirCell®

RADIATING CABLE

Trilogy COMMUNICATIONS, INC.

Cable Specifications

50 Ohm Radiating Cable 1/2" – AR012J50/ AR012FX50/ AR012F50

Description	Product Number
Standard Cable	
½", Black Polyethylene Jacket	AR012J50
Fire Retardant Cable	
½", Low-Smoke, Non-Halogenated, Fire Retardant Jacket, IEC332-1	AR012FX50
½", Low-Smoke, Non-Halogenated, Fire Retardant Jacket, IEC332-1, MSHA	AR012F50
Physical Dimensions	
Center Dia., in (mm)	0.188 (4.78)
Dia. Over Dielectric, in (mm)	0.470 (11.94)
Dia. Over Outer Conductor, in (mm)	0.510 (12.95)
Max. Dia. Over Jacket, in (mm)	0.652 (16.56)
Center Conductor	Copper Clad Aluminum
Outer Conductor	Dual Slotted Solid Aluminum
Electrical Characteristics	
Maximum Frequency, GHz	11
Peak Power Rating, KW	32
DC Res, Ohms/1000 ft (1000m)	
Center	0.46 (1.51)
Outer	0.52 (1.71)
DC Breakdown, kV	3.2
Capacitance, pF/ft (m)	22.3 (73.16)
Inductance, mH/ft (m)	0.056 (0.184)
Jacket Spark, kV RMS	8
VSWR Installed, typical, optimized bands	1.30
VSWR Installed, typical, broadband	1.38
Impedance, Ohms	50
Velocity of Propagation	91%
Mechanical Characteristics	
Min. Bend. Rad., in (mm) – Single	2 (50.8)
Min. Bend. Rad., in (mm) – Multiple	6 (152)
Cable Weight, lb/ft (kg/m)	0.12 (0.18)
Bending Moment, ft.lb (N·m)	7.5 (10.2)
Tensile Strength, lb (kg)	465 (211)
Flat Plate Crush, lb/in (kg/mm)	62 (1.11)
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)

Attenuation and Coupling Loss (95%)			
Frequency MHz	**Attenuation dB/100 ft	dB/100m	*Coupling Loss dB
150	1.10	3.60	64
450	1.86	6.10	66
500	1.98	6.50	66
700	2.28	7.48	67
800	2.42	7.93	67
870	1.68	5.52	67
900	2.55	8.36	67
960	2.62	8.60	67
1700	3.52	11.56	68
1800	2.70	8.85	68
1900	2.83	9.28	68
2000	3.88	12.72	68
2100	3.90	12.79	68
2200	3.92	12.85	68
2400	3.99	13.09	68
2600	4.10	13.45	68
2650	4.21	13.81	68

Standard Conditions:

Test per IEC61196-4

*95% Coupling Loss at 6 ft (2 m), ± 5 dB
The coupling loss values given are average values of all three antenna orientations (radial, parallel, and orthogonal) of dipole antenna.

**Attenuation ± 10% at 68°F

AirCell®

RADIATING CABLE

Trilogy COMMUNICATIONS, INC.

Cable Specifications

50 Ohm Radiating Cable 5/8" – AR058J50/ AR058FX50

Description	Product Number
Standard Cable	
5/8", Black Polyethylene Jacket	AR058J50
Fire Retardant Cable	
5/8", Low-Smoke, Non-Halogenated, Fire Retardant Jacket, IEC332-1	AR058FX50
Physical Dimensions	
Center Dia., in (mm)	0.283 (7.19)
Dia. Over Dielectric, in (mm)	0.712 (18.08)
Dia. Over Outer Conductor, in (mm)	0.760 (19.30)
Max. Dia. Over Jacket, in (mm)	0.902 (22.90)
Center Conductor	Solid Copper Tube
Outer Conductor	Dual Slotted Solid Aluminum Tube
Electrical Characteristics	
Maximum Frequency, GHz	7
Peak Power Rating, KW	65
DC Res, Ohms/1000 ft (1000m)	
Center	0.36 (1.18)
Outer	0.31 (1.02)
DC Breakdown, kV	5.0
Capacitance, pF/ft (m)	22.3 (73.16)
Inductance, mH/ft (m)	0.056 (0.184)
Jacket Spark, kV RMS	8
VSWR Installed, typical, optimized bands	1.30
VSWR Installed, typical, broadband	1.38
Impedance, Ohms	50
Velocity of Propagation	91%
Mechanical Characteristics	
Min. Bend. Rad., in (mm) – Single	3 (76.2)
Min. Bend. Rad., in (mm) – Multiple	8 (203)
Cable Weight, lb/ft (kg/m)	0.25 (0.38)
Bending Moment, ft.lb (N·m)	21 (28.5)
Tensile Strength, lb (kg)	920 (417)
Flat Plate Crush, lb/in (kg/mm)	140 (2.50)
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)

Attenuation and Coupling Loss (95%)			
Frequency MHz	**Attenuation dB/100 ft	dB/100m	*Coupling Loss dB
150	0.61	2.01	64
450	1.14	3.75	66
500	1.25	4.09	66
700	1.45	4.76	67
800	1.63	5.34	67
870	1.68	5.52	67
900	1.71	5.61	67
960	1.76	5.77	67
1700	2.56	8.39	68
1800	2.70	8.85	68
1900	2.83	9.28	68
2000	2.99	9.82	68
2100	3.06	10.04	68
2200	3.13	10.28	68
2400	3.27	10.74	68
2600	3.40	11.15	68
2650	3.53	12.02	68

Standard Conditions:

Test per IEC61196-4

*95% Coupling Loss at 6 ft (2 m), ± 5 dB
The coupling loss values given are average values of all three antenna orientations (radial, parallel, and orthogonal) of dipole antenna.

**Attenuation ± 10% at 68°F

AirCell®

RADIATING CABLE

Trilogy COMMUNICATIONS, INC.

Cable Specifications

50 Ohm Radiating Cable 7/8" - AR078J50/ AR078FX50

Description	Product Number
Standard Cable	
7/8", Black Polyethylene Jacket	AR078J50
Fire Retardant Cable	
7/8", Low-Smoke, Non-Halogenated, Fire Retardant Jacket, IEC332-1	AR078FX50
Physical Dimensions	
Center Dia., in (mm)	0.383 (9.73)
Dia. Over Dielectric, in (mm)	0.961 (24.58)
Dia. Over Outer Conductor, in (mm)	1.015 (25.70)
Max. Dia. Over Jacket, in (mm)	1.154 (29.31)
Center Conductor	Solid Copper Tube
Outer Conductor	Dual Slotted Solid Aluminum Tube
Electrical Characteristics	
Maximum Frequency, GHz	5
Peak Power Rating, KW	90
DC Res, Ohms/1000 ft (1000m)	
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 Installed, typical, optimized bands	1.30
VSWR Installed, typical, broadband	1.38
Impedance, Ohms	50
Velocity of Propagation	91%
Mechanical Characteristics	
Min. Bend. Rad., in (mm) – Single	5 (127)
Min. Bend. Rad., in (mm) – Multiple	10 (254)
Cable Weight, lb/ft (kg/m)	0.29 (0.43)
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)
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)

Attenuation and Coupling Loss (95%)			
Frequency MHz	**Attenuation dB/100 ft	dB/100m	*Coupling Loss dB
150	0.40	1.31	64
450	0.78	2.56	66
500	0.83	2.72	66
700	1.03	3.39	67
800	1.13	3.69	67
870	1.19	3.91	67
900	1.22	4.00	67
960	1.26	4.15	67
1700	1.87	6.13	68
1800	1.94	6.38	68
1900	2.02	6.62	68
2000	2.10	6.90	68
2100	2.16	7.08	68
2200	2.22	7.29	68
2400	2.33	7.66	68
2600	2.44	8.00	68
2650	2.47	8.10	68

Standard Conditions:

Test per IEC61196-4

*95% Coupling Loss at 6 ft (2 m), ± 5 dB
The coupling loss values given are average values of all three antenna orientations (radial, parallel, and orthogonal) of dipole antenna.

**Attenuation ± 10% at 68°F

AirCell®

RADIATING CABLE

Trilogy COMMUNICATIONS, INC.

Cable Specifications

50 Ohm Radiating Cable 7/8", Riser Rated Only (AR078R50)

Description	Product Number
Riser Rated Cable	
7/8", Low-Smoke, Non-Halogenated, Fire Retardant Jacket, IEC332-1, IEC332-3C, UL-1666, CMR	AR078R50
Physical Dimensions	
Center Dia., in (mm)	0.383 (9.73)
Dia. Over Dielectric, in (mm)	0.961 (24.58)
Dia. Over Outer Conductor, in (mm)	1.015 (25.70)
Max. Dia. Over Jacket, in (mm)	1.154 (29.31)
Center Conductor	Solid Copper Tube
Outer Conductor	Dual Slotted Solid Aluminum Tube
Electrical Characteristics	
Maximum Frequency, GHz	5
Peak Power Rating, KW	90
DC Res, Ohms/1000 ft (1000m)	
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 Installed, typical, optimized bands	1.30
VSWR Installed, typical, broadband	1.38
Impedance, Ohms	50
Velocity of Propagation	91%
Mechanical Characteristics	
Min. Bend. Rad., in (mm) – Single	5 (127)
Min. Bend. Rad., in (mm) – Multiple	10 (254)
Cable Weight, lb/ft (kg/m)	0.29 (0.43)
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)
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)

Attenuation and Coupling Loss (95%)			
Frequency MHz	**Attenuation dB/100 ft	dB/100m	*Coupling Loss dB
150	0.47	1.54	64
450	0.97	3.18	66
500	1.07	3.40	66
700	1.33	4.36	67
800	1.47	4.82	67
870	1.59	5.22	67
900	1.61	5.28	67
960	1.69	5.54	67
1700	2.49	8.17	68
1800	2.61	8.56	68
1900	2.68	8.79	68
2000	2.83	9.28	68
2100	2.93	9.61	68
2200	3.10	10.17	68
2400	3.43	11.25	68
2600	3.69	12.10	68
2650	3.89	12.76	68

Standard Conditions:

Test per IEC61196-4

*95% Coupling Loss at 6 ft (2 m), ± 5 dB
The coupling loss values given are average values of all three antenna orientations (radial, parallel, and orthogonal) of dipole antenna.

**Attenuation ± 10% at 68°F

AirCell®

RADIATING CABLE

Trilogy COMMUNICATIONS, INC.

Cable Specifications

50 Ohm Radiating Cable 1-1/4" – AR114J50/ AR114FX50

Description	Product Number
Standard Cable	
1-1/4", Black Polyethylene Jacket	AR114J50
Fire Retardant Cable	
1-1/4", Low-Smoke, Non-Halogenated, Fire Retardant Jacket, IEC332-1	AR114FX50
Physical Dimensions	
Center Dia., in (mm)	0.590 (14.98)
Dia. Over Dielectric, in (mm)	1.480 (37.59)
Dia. Over Outer Conductor, in (mm)	1.524 (38.71)
Max. Dia. Over Jacket, in (mm)	1.666 (42.32)
Center Conductor	Solid Copper Tube
Outer Conductor	Dual Slotted Solid Aluminum Tube
Electrical Characteristics	
Maximum Frequency, GHz	3.4
Peak Power Rating, KW	211
DC Res, Ohms/1000 ft (1000m)	
Center	0.30 (0.99)
Outer	0.16 (0.52)
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 Installed, typical, optimized bands	1.30
VSWR Installed, typical, broadband	1.38
Impedance, Ohms	50
Velocity of Propagation	91%
Mechanical Characteristics	
Min. Bend. Rad., in (mm) – Single	6 (152.4)
Min. Bend. Rad., in (mm) – Multiple	15 (381)
Cable Weight, lb/ft (kg/m)	0.53 (0.789)
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
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)

Attenuation and Coupling Loss (95%)			
Frequency MHz	**Attenuation dB/100 ft	dB/100m	*Coupling Loss dB
150	0.28	0.92	64
450	0.54	1.77	66
500	0.58	1.89	66
700	0.73	2.38	67
800	0.79	2.59	67
870	0.84	2.75	67
900	0.86	2.81	67
960	0.90	2.96	67
1700	1.23	4.03	68
1800	1.28	4.21	68
1900	1.33	4.36	68
2000	1.38	4.52	68
2100	1.43	4.69	68
2200	1.47	4.82	68
2400	1.56	5.13	68
2600	1.65	5.41	68
2650	1.74	5.71	68

Standard Conditions:

Test per IEC61196-4

*95% Coupling Loss at 6 ft (2 m), ± 5 dB
The coupling loss values given are average values of all three antenna orientations (radial, parallel, and orthogonal) of dipole antenna.

**Attenuation ± 10% at 68°F

AirCell®

RADIATING CABLE

Trilogy COMMUNICATIONS, INC.

Cable Specifications

50 Ohm Radiating Cable 1-5/8" - AR158J50/ AR158FX50/ AR158FV50

Description	Product Number
Standard Cable	
1-5/8", Black Polyethylene Jacket	AR158J50
Fire Retardant Cable	
1-5/8", Low-Smoke, Non-Halogenated, Fire Retardant Jacket, IEC332-1	AR158FX50
Fire Retardant Cable	
1-5/8", Low-Smoke, Non-Halogenated, Fire Retardant Jacket, IEC332-1, IEC332-3C, UL 1685-12 (FT4/IEEE1202, NFPA-130)	AR158FV50
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)	2.047 (51.99)
Center Conductor	Solid Copper Tube
Outer Conductor	Dual Slotted Solid Aluminum Tube
Electrical Characteristics	
Maximum Frequency, GHz	2650
Peak Power Rating, KW	306
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
VSWR Installed, typical, optimized bands	1.30
VSWR Installed, typical, broadband	1.38
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)	0.67 (1.00)
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)

Attenuation and Coupling Loss (95%)			
Frequency MHz	**Attenuation dB/100 ft	dB/100m	*Coupling Loss dB
150	0.40	0.92	70
450	0.52	1.71	70
500	0.55	1.80	70
700	0.68	2.23	70
800	0.68	2.23	70
870	0.73	2.39	70
900	0.75	2.46	70
960	0.77	2.53	70
1700	1.13	3.71	71
1800	1.19	3.90	71
1900	1.24	4.07	71
2000	1.28	4.20	71
2100	1.33	4.37	71
2200	1.38	4.53	71
2400	1.50	4.92	71
2600	1.60	5.26	71
2650	1.64	5.39	71

Standard Conditions:

Test per IEC61196-4

*95% Coupling Loss at 6 ft (2 m), ± 5 dB
The coupling loss values given are average values of all three antenna orientations (radial, parallel, and orthogonal) of dipole antenna.

**Attenuation ± 10% at 68°F

AirCell®

RADIATING CABLE

Trilogy COMMUNICATIONS, INC.

Cable Specifications

50 Ohm Radiating Cable 1-5/8", Riser Rated Only (AR158R50)

Description	Product Number
Riser Rated Cable	
1-5/8", Low-Smoke, Non-Halogenated, Fire Retardant Jacket, IEC332-1, IEC332-3C, UL-1666, CMR	AR158R50
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)	2.047 (51.99)
Center Conductor	Solid Copper Tube
Outer Conductor	Dual Slotted Solid Aluminum Tube
Electrical Characteristics	
Maximum Frequency, GHz	2650
Peak Power Rating, KW	306
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
VSWR Installed, typical, optimized bands	1.30
VSWR Installed, typical, broadband	1.38
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)	0.67 (1.00)
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)

Attenuation and Coupling Loss (95%)			
Frequency MHz	**Attenuation dB/100 ft	dB/100m	*Coupling Loss dB
150	0.42	1.38	70
450	0.67	2.20	70
500	0.71	2.33	70
700	0.88	2.89	70
800	0.96	3.15	70
870	1.01	3.32	70
900	1.03	3.38	70
960	1.08	3.55	70
1700	1.69	5.55	71
1800	1.77	5.81	71
1900	1.85	6.08	71
2000	1.94	6.37	71
2100	2.02	6.64	71
2200	2.10	6.90	71
2400	2.27	7.46	71
2600	2.46	8.08	71
2650	2.50	8.21	71

Standard Conditions:

Test per IEC61196-4

*95% Coupling Loss at 6 ft (2 m), ± 5 dB
The coupling loss values given are average values of all three antenna orientations (radial, parallel, and orthogonal) of dipole antenna.

**Attenuation ± 10% at 68°F

AirCell®

RADIATING CABLE

Trilogy COMMUNICATIONS, INC.

Cable Specifications

75 Ohm Radiating Cable 1/2″

Description	Product Number
Standard Cable	
½", Black Polyethylene Jacket	AR012J75
Fire Retardant Cable	
½", Low-Smoke, Non-Halogenated, Fire Retardant Jacket, IEC332-1	AR012FX75
½", Low-Smoke, Non-Halogenated, Fire Retardant Jacket, IEC332-1, MSHA	AR012F75
Riser Rated Cable	
½", Low-Smoke, Non-Halogenated, Fire Retardant Jacket, IEC332-1, IEC332-3C, UL-1666, CMR	AR012R75
Physical Dimensions	
Center Dia., in (mm)	0.123 (3.12)
Dia. Over Dielectric, in (mm)	0.470 (11.94)
Dia. Over Outer Conductor, in (mm)	0.510 (12.95)
Max. Dia. Over Jacket, in (mm)	0.642 (16.30)
Center Conductor	Copper-Clad Aluminum
Outer Conductor	Dual Slotted Solid Aluminum
Electrical Characteristics	
Maximum Frequency, GHz	12
Peak Power Rating, KW	32
DC Res, Ohms/1000 ft (1000m)	
Center	1.09 (3.58)
Outer	0.57 (1.87)
DC Breakdown, kV	3.2
Capacitance, pF/ft (m)	14.9 (48.9)
Inductance, mH/ft (m)	0.082 (0.269)
Jacket Spark, kV RMS	8
Typical VSWR	1.3
Impedance, Ohms	75
Velocity of Propagation	91%
Mechanical Characteristics	
Min. Bend. Rad., in (mm) – Single	2 (50.8)
Min. Bend. Rad., in (mm) – Multiple	6 (152)
Cable Weight, lb/ft (kg/m)	0.103 (0.156)
Bending Moment, ft.lb (N·m)	7.5 (10.2)
Tensile Strength, lb (kg)	465 (211)
Flat Plate Crush, lb/in (kg/mm)	62 (1.11)
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)

Attenuation and Coupling Loss			
Frequency MHz	**Attenuation dB/100 ft	dB/100m	*Coupling Loss dB
30	0.45	1.48	57
50	0.58	1.90	57
88	0.77	2.53	57
100	0.83	2.72	57
108	0.86	2.82	57
150	1.02	3.35	59
174	1.10	3.61	59
200	1.18	3.87	59
300	1.46	4.79	59
400	1.70	5.58	60
450	1.80	5.91	60
500	1.91	6.27	60
512	1.93	6.33	60
600	2.10	6.89	61
700	2.28	7.48	61
800	2.45	8.04	61
824	2.48	8.14	61
894	2.58	8.46	61
900	2.61	8.56	61
960	2.68	8.79	62
1000	2.76	9.06	64
1250	3.06	10.04	64
1500	3.37	11.06	67
1700	3.57	11.71	69
1800	3.92	12.86	70
1920	3.79	12.43	71
2000	3.86	12.66	71
2300	4.13	13.55	73
3000	4.70	15.42	73

Standard Conditions:

Test per IEC61196-4

*50% Coupling Loss at 6 ft (2 m), ± 5 dB
**Attenuation ± 10% at 68°F

AirCell®

RADIATING CABLE

Trilogy COMMUNICATIONS, INC.

Cable Specifications

75 Ohm Radiating Cable 5/8″

Description	Product Number
Standard Cable	
5/8", Black Polyethylene Jacket	AR058J75
Fire Retardant Cable	
5/8", Low-Smoke, Non-Halogenated, Fire Retardant Jacket, IEC332-1	AR058FX75
Riser Rated Cable	
5/8", Low-Smoke, Non-Halogenated, Fire Retardant Jacket, IEC332-1, IEC332-3C, UL-1666, CMR	AR058R75
Physical Dimensions	
Center Dia., in (mm)	0.185 (4.70)
Dia. Over Dielectric, in (mm)	0.712 (18.08)
Dia. Over Outer Conductor, in (mm)	0.760 (19.30)
Max. Dia. Over Jacket, in (mm)	0.840 (21.34)
Center Conductor	Copper Clad Aluminum
Outer Conductor	Dual Slotted Solid Aluminum Tube
Electrical Characteristics	
Maximum Frequency, GHz	8
Peak Power Rating, KW	65
DC Res, Ohms/1000 ft (1000m)	
Center	0.46 (1.51)
Outer	0.32 (1.05)
DC Breakdown, kV	5.0
Capacitance, pF/ft (m)	14.9 (48.9)
Inductance, mH/ft (m)	0.082 (0.269)
Jacket Spark, kV RMS	8
Typical VSWR	1.3
Impedance, Ohms	75
Velocity of Propagation	91%
Mechanical Characteristics	
Min. Bend. Rad., in (mm) – Single	3 (76.2)
Min. Bend. Rad., in (mm) – Multiple	8 (203)
Cable Weight, lb/ft (kg/m)	0.197 (0.302)
Bending Moment, ft.lb (N˙m)	21 (2.90)
Tensile Strength, lb (kg)	920 (417)
Flat Plate Crush, lb/in (kg/mm)	140 (2.50)
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)

Attenuation and Coupling Loss

Frequency MHz	**Attenuation dB/100 ft	dB/100m	*Coupling Loss dB
30	0.32	1.05	58
50	0.41	1.35	58
88	0.54	1.79	58
100	0.59	1.94	58
108	0.61	2.00	58
150	0.72	2.36	61
174	0.77	2.53	58
200	0.83	2.72	57
300	1.02	3.45	56
400	1.18	3.87	58
450	1.26	4.13	58
500	1.33	4.36	58
512	1.34	4.41	58
600	1.46	4.79	59
700	1.58	5.18	60
800	1.69	5.54	60
824	1.71	5.61	61
894	1.78	5.84	61
960	1.85	6.07	64
1000	1.90	6.23	64
1250	2.10	6.89	64
1500	2.30	7.55	67
1700	2.47	8.10	69
1920	2.60	8.53	71
2000	2.68	8.79	71
2300	2.80	9.18	74
3000	3.20	10.5	75

Standard Conditions:

Test per IEC61196-4

*50% Coupling Loss at 6 ft (2 m), ± 5 dB
**Attenuation ± 10% at 68°F

AirCell®

RADIATING CABLE

Trilogy COMMUNICATIONS, INC.

Cable Specifications

75 Ohm Radiating Cable 7/8″

Description	Product Number
Standard Cable	
7/8", Black Polyethylene Jacket	AR078J75
Fire Retardant Cable	
7/8", Low-Smoke, Non-Halogenated, Fire Retardant Jacket, IEC332-1	AR078FX75
Riser Rated Cable	
7/8", Low-Smoke, Non-Halogenated, Fire Retardant Jacket, IEC332-1, IEC332-3C, UL-1666, CMR	AR078R75
Physical Dimensions	
Center Dia., in (mm)	0.248 (6.30)
Dia. Over Dielectric, in (mm)	0.961 (24.41)
Dia. Over Outer Conductor, in (mm)	1.015 (25.78)
Max. Dia. Over Jacket, in (mm)	1.095 (27.81)
Center Conductor	Copper Clad Aluminum
Outer Conductor	Dual Slotted Solid Aluminum Tube
Electrical Characteristics	
Maximum Frequency, GHz	6
Peak Power Rating, KW	90
DC Res, Ohms/1000 ft (1000m)	
Center	0.26 (0.85)
Outer	0.29 (0.95)
DC Breakdown, kV	6.7
Capacitance, pF/ft (m)	14.9 (48.9)
Inductance, mH/ft (m)	0.082 (0.269)
Jacket Spark, kV RMS	8
Typical VSWR	1.3
Impedance, Ohms	75
Velocity of Propagation	91%
Mechanical Characteristics	
Min. Bend. Rad., in (mm) – Single	5 (127)
Min. Bend. Rad., in (mm) – Multiple	13 (330)
Cable Weight, lb/ft (kg/m)	0.321 (0.464)
Bending Moment, ft.lb (N˙m)	35 (4.80)
Tensile Strength, lb (kg)	1400 (635)
Flat Plate Crush, lb/in (kg/mm)	132 (2.36)
Number of Bends	20
Temperature, ^{o}F (^{o}C)	
Recommended Install	-40 to 170 (-40 to 77)
Recommended Storage	-94 to 170 (-70 to 77)
Operating	-40 to 170 (-40 to 77)

Attenuation and Coupling Loss			
Frequency MHz	**Attenuation dB/100 ft	dB/100m	*Coupling Loss dB
30	0.23	0.76	61
50	0.30	0.98	61
88	0.41	1.33	62
100	0.44	1.44	63
108	0.45	1.49	63
150	0.54	1.77	64
174	0.58	1.90	65
200	0.63	2.07	65
300	0.78	2.56	63
400	0.91	2.99	63
450	0.97	3.18	63
500	1.03	3.38	63
512	1.04	3.42	63
600	1.14	3.74	63
700	1.24	4.07	65
800	1.34	4.40	65
824	1.35	4.43	64
894	1.41	4.63	64
960	1.46	4.79	64
1000	1.52	4.99	67
1250	1.69	5.54	65
1500	1.86	6.10	66
1700	1.98	6.50	67
1920	2.10	6.89	68
2000	2.14	7.02	68
2300	2.30	7.55	70
3000	2.60	8.53	70

Standard Conditions:

Test per IEC61196-4

*50% Coupling Loss at 6 ft (2 m), ± 5 dB
**Attenuation ± 10% at 68^{o}F