

Part Number: AT114R50

## Features

- Air-Dielectric design
- Cable Sizes ½” through 1-⅝” Diameters, Aluminum Outer Conductor, Jacketed to Meet Customers’ Low Smoke, Non-Halogenated Fire-Retardant Wireless Applications, Gray Jacket

## Performance Standards

- NFPA-70, Article 810, Communication Systems, UL1666, UL-444, CMR
- IEC 60332-1, IEC 60332-3C
- TL9000 H-V - All Cables designed and manufactured under this quality management system
- RoHS 2011/65/EU Compliant

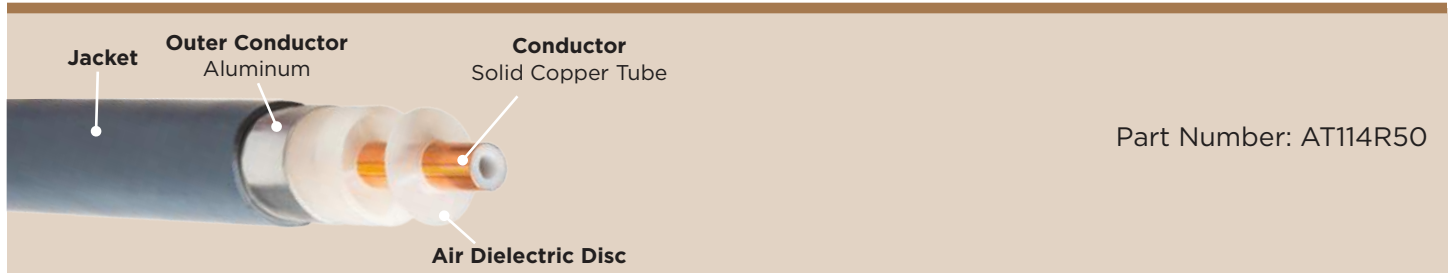
## Scope

Trilogy® Transline Cable represents a significant advancement in transmission line cable technology.

The cable’s innovative design provides exceptional RF performance, low attenuation, and superior durability, which are critical for modern telecommunications systems. Its air dielectric design prevents water migration and enhances signal quality, ensuring reliable service in various environments.

Furthermore, adherence to the TL9000 H-V quality management system standards signifies that the cable has undergone rigorous testing and manufacturing processes, ensuring that it meets the highest industry benchmarks for reliability and performance.

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)	1.654 (42.01)
Center Conductor	Solid Copper Tube
Outer Conductor	Solid Aluminum Tube
Jacket Color	Grey
Mechanical Characteristics	
Minimum Bend Radius, in (mm) - Single	6 (152.4)
Cable Weight, lb/ft (kg/m)	0.72 (1.07)
Tensile Strength, lb (kg)	1124 (511)
Flat Plate Crush, lb/in (kg/mm)	122 (2.18)
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°)



Electrical Characteristics	
Maximum Frequency, GHz	3.4
Peak Power Rating, KW	211
Capacitance, pF/ft (m)	23 (73.16)
Inductance, $\mu$ H/ft (m)	0.056 (0.184)
VSWR min, (dB)	1.25 (19.0)
Impedance, Ohms	$50 \pm 2$
Velocity of Propagation	91%
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	

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