

1-5/8" Leaky Cable

P/N: AT1L158-1S



The **1-5/8" radiating (leaky) cable** is the **most robust, ultra-low-loss coaxial** solution designed for maximum signal propagation in large-scale confined infrastructures. Featuring a massive, precision-slotted copper outer conductor, it functions as a **high-power linear antenna capable of broadcasting and receiving multi-band signals** with unparalleled efficiency. This diameter is the gold standard for mega-projects, providing the **lowest longitudinal attenuation** available to ensure consistent coverage over extreme distances in **expansive metro networks, massive road tunnels, and high-capacity industrial shafts**. Built with a specialized **fire-retardant jacket** and **ultra-low PIM** performance, it delivers the high-speed 5G throughput and mission-critical reliability essential for the world's most demanding wireless communication environments.

Construction Specifications

Description	Material & Plating	Diameter (mm)
Inner Conductor	Helical Copper Tube	17.40±0.02
Dielectric	Foamed Polyethylene	43.40±0.2
Outer Conductor	Overlapping Copper Foil	43.80±0.5
Jacket	Low Smoke Halogen-free Fire-Retardant PE	48.30±0.5

Electrical Specifications

Parameter	Value	Unit
Operating Frequency Band	75-3000	MHz
Characteristic Impedance	50±2	Ω
Propagation Velocity	88	%
Capacitance	75	pF/m
Jacket Spark	10.0	kV
Insulation Resistance	10000	MΩ-Km
Inner Conductor Resistance	≤ 0.85	Ω/km
Outer Conductor Resistance	≤ 1.00	Ω/km
Dielectric Strength	10.0	kV
Stop Bands	1030 MHz and its Multiples	MHz



Technical Data Sheet

Electrical Performance (VSWR)	
Frequency Range	Typical VSWR Value
698~960 MHz	-
800~1000 MHz	≤ 1.20
1700~2000 MHz	≤ 1.20
2000~2400 MHz	≤ 1.20
2500~2700 MHz	≤ 1.20

Mechanical Specifications		
Parameter	Value	Unit
Weight	1000	Kg/km
Single Bending Radius	≥ 510	mm
Repeated Bending Radius	≥ 900	mm
Tensile Strength	3300	N
Bending Moment	16.0	Nm
Number of Bends	15	
Recommended Clamp Spacing	1.0	m
Minimum Distance to Wall	50	mm

Environmental Specifications		
Parameter	Value	Unit
Storage Temperature	-55 ~ 85	°C
Installation Temperature	-40 ~ 60	°C
Operation Temperature	-55 ~ 85	°C
Relative Humidity	95	%

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Technical Data Sheet

Attenuation & Coupling loss vs Frequency		
Frequency (MHz)	Attenuation (dB/100 m)	Coupling Loss (2m) (95%) (dB)
700	2.00	85
800	2.20	82
900	2.40	81
1800	3.70	72
1900	3.80	73
2000	4.00	71
2200	4.50	71
2400	4.90	70
2600	5.50	68
2700	6.10	70

Standard Conditions

For Attenuation: VSWR: 1.0, Cable temperature: 20°C (68°F)

Note: Maximum attenuation value shall be 105% off nominal attenuation value.

Maximum coupling loss variation shall be ± 5 dB from the nominal value.