

7/8" Al Feeder/Flex Cable

P/N: AT1F78-2S



The **7/8" Al feeder cable** is a high-performance, **ultra-low-loss 50-ohm coaxial cable** hardline engineered for high-capacity RF transmission over extended vertical and horizontal runs. Utilizing a corrugated Aluminium outer conductor, it provides **100% EMI shielding** and superior mechanical strength compared to smaller 1/2" variants. Its larger diameter significantly reduces signal attenuation and enhances power handling, making it the

industry standard for **macro cell sites (3G/4G/5G/LTE)**, **high-power broadcast systems**, **microwave backhaul** and **feedlines for broadcast and terrestrial microwave antennas**. Featuring a **UV-resistant jacket** and **low Passive Intermodulation (PIM)**, it ensures high reliability in extreme outdoor environments and large-scale **Distributed Antenna Systems (DAS)**.

Construction Specifications

Description	Material & Plating	Diameter (mm)
Inner Conductor	Smooth Copper Tube	9.00±0.05
Dielectric	Foamed Polyethylene	22.30±0.4
Outer Conductor	Corrugated Aluminum Tube	24.90±0.5
Jacket	Low Smoke Halogen-free Fire-Retardant PE	27.50±0.5

Electrical Specifications

Parameter	Value	Unit
Operating Frequency	≤ 5.2	GHz
Impedance	50±1	Ω
Propagation Velocity	88	%
Capacitance	75	pF/m
Screening Effectiveness	≥120	dB
Insulation Resistance	5000	MΩ-Km
Inner Conductor Resistance	≤ 2.2	Ω/km
Outer Conductor Resistance	≤ 1.55	Ω/km
RF Peak Voltage	3.0	kV
Dielectric Strength	10.0	kV
Peak Power Rating	82	kW
PIM	≤ -160	dBc@(2×43dBm)



Technical Data Sheet

Electrical Performance (VSWR)

Frequency Range	Typical VSWR Value
800~1000 MHz	≤ 1.15
1700~2200 MHz	≤ 1.15
2200~2700 MHz	≤ 1.15
3300~3800 MHz	≤ 1.15

Mechanical Specifications

Parameter	Value	Unit
Weight	480	Kg/km
Single Bending Radius	≥ 130	mm
Repeated Bending Radius	≥ 250	mm
Tensile Strength	1350	N
Number of Bends	15	
Recommended Clamp Spacing	1.0	m

Environmental Specifications

Parameter	Value	Unit
Storage Temperature	-55 ~ 85	°C
Installation Temperature	-40 ~ 60	°C
Operation Temperature	-55 ~ 85	°C



Technical Data Sheet

Attenuation & Power Rating vs Frequency			
Frequency (MHz)	Attenuation (dB/100m)	Attenuation (dB/100 ft)	Average Power Rating (kW)
100	1.25	0.38	6.50
200	1.80	0.55	4.50
450	2.77	0.84	3.00
800	3.83	1.17	2.20
900	4.08	1.24	2.10
1000	4.30	1.31	2.00
1500	5.45	1.66	1.70
1800	6.05	1.84	1.60
2000	6.45	1.97	1.50
2200	6.85	2.09	1.40
2400	7.15	2.18	1.30
2500	7.35	2.24	1.20
3000	8.20	2.50	1.10

Standard Conditions

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

For Average Power: VSWR: 1.0, Ambient temperature: 40°C (104°F), Inner conductor temperature: 100°C (212°F)

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

Ground floor, Plot No -20, (KH No-160/1,street No-3/2, samta Vihar, Mukandpur Extn., North West Delhi, Delhi-110042
 Contact: +91 9643592149 Email: info@aetherx.in , Website: www.aetherx.in