

SR086 Semi Rigid Cable

P/N: AT1SR086-1W



The **SR086** is a precision **semi-rigid coaxial cable** with a nominal outer diameter of **0.086 inches**, optimized for **high-performance RF and microwave systems**. Featuring a silver-plated copper-clad steel conductor and PTFE dielectric, it offers **superior shielding and lower attenuation** compared to smaller variants, operating efficiently up to **20 GHz**. Its rigid outer jacket allows for complex, permanent shaping to fit dense hardware configurations without sacrificing electrical integrity. It is widely used in **satellite communications, radar systems, and base station infrastructure**. Additionally, it is a standard choice for **test and measurement** assemblies and connecting sub-modules in **microwave components** like high-power amplifiers.

Construction Specifications

Description	Material & Plating	Diameter (mm)
Centre Conductor	Silver plated copper clad steel	0.51
Dielectric	PTFE	1.67±0.01
Outer Conductor	Seamless Copper Tube (Tin Plated)	2.20±0.01

Electrical Specifications

Parameter	Value	Unit
Operating Frequency	20	GHz
Impedance	50±2	Ω
Propagation Velocity	69.5	%
Capacitance	95	pF/m
Screening Effectiveness	≥100	dB@18GHz
Time Delay	4.7	nS/m
Max. Operating Voltage	1.5	kVrms
Peak Power	24.3	KW@20GHz



Technical Data Sheet

Mechanical Specifications

Parameter	Value	Unit
Weight	~0.015	g/m
Single Bending Radius	≥ 6	mm
Repeated Bending Radius	≥ 20	mm

Environmental Specifications

Parameter	Value	Unit
Operation Temperature	-55 ~ 125	°C
Installation Temperature	-30 ~ 70	°C

Attenuation and Power Rating vs Frequency

Frequency (GHz)	Attenuation (dB/100ft)	Attenuation (dB/100m)	Avg. Power Rating (kW)
0.5	13.7	45.0	173.5
1.0	19.5	64.0	121.5
5.0	46.0	151.0	52.2
10.0	67.7	222.0	35.8
20.0	100.3	329.0	24.3