

SR047 Semi Rigid Cable

P/N: AT1SR047-1W



The **SR047** is a **precision-engineered, semi-rigid coaxial cable** with a nominal outer diameter of **0.047 inches**, designed for **high-performance RF and microwave applications** requiring **minimal signal loss** and **excellent phase stability**. Its construction typically features a silver-plated copper-clad steel center conductor, a PTFE dielectric, and a seamless copper or aluminum outer jacket, allowing it to operate efficiently at frequencies up to **20 GHz** and beyond. Because of its rigid nature, it can be **hand-formed or machine-bent into complex**, permanent shapes to fit into extremely tight spaces without compromising electrical performance making it indispensable in **aerospace and defense, Medical Electronics, Microwave Components** and **Test and Measurement**.

Construction Specifications

Description	Material & Plating	Diameter (mm)
Centre Conductor	Silver plated copper clad steel	0.28
Dielectric	PTFE	0.92±0.01
Outer Conductor	Seamless Copper Tube (Tin Plated)	1.19±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	≥95	dB@18GHz
Time Delay	4.7	nS/m
Max. Operating Voltage	1.5	kVrms
Peak Power	9.2	KW@20GHz



Technical Data Sheet

Mechanical Specifications

Parameter	Value	Unit
Weight	~6	g/m
Single Bending Radius	≥ 4	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	24.1	79.0	62.2
1.0	34.4	113.0	43.7
5.0	78.9	259.0	19.1
10.0	114.0	374.0	13.3
20.0	165.8	544.0	9.2