

SR141 Semi Rigid Cable

P/N: AT1SR141-1W



The **SR141** is a **robust, precision-engineered semi-rigid coaxial cable** with a nominal outer diameter of **0.141 inches**, widely considered an industry standard for **high-power RF and microwave applications**. Featuring a silver-plated copper center conductor and PTFE dielectric, it provides significantly **lower attenuation** and **higher power handling** than smaller variants, typically operating efficiently up to **25 GHz**. Its seamless outer jacket ensures **100% RF shielding**, allowing it to **maintain maximum signal integrity** while being bent into permanent, complex shapes for dense system integration. This makes it indispensable in **aerospace and defense** for radar arrays, **telecommunications** for high-power transmitters, and **medical electronics**. Furthermore, it is a primary choice for **test and measurement** setups and for connecting internal sub-assemblies in high-precision **microwave components** like high-power amplifiers and filters.

Construction Specifications

Description	Material & Plating	Diameter (mm)
Centre Conductor	Silver plated copper clad steel	0.92
Dielectric	PTFE	2.98±0.01
Outer Conductor	Seamless Copper Tube (Tin Plated)	3.58±0.01

Electrical Specifications

Parameter	Value	Unit
Operating Frequency	25	GHz
Impedance	50±2	Ω
Propagation Velocity	70	%
Capacitance	95.1	pF/m
Screening Effectiveness	≥100	dB@18GHz
Time Delay	4.7	nS/m
Max. Operating Voltage	1.9	kVrms
Peak Power	56.6	KW@20GHz



Technical Data Sheet

Mechanical Specifications

Parameter	Value	Unit
Weight	~47	kg/km
Single Bending Radius	≥ 8	mm
Repeated Bending Radius	≥ 40	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	7.92	26.0	436.5
1.0	11.89	39.0	303.4
5.0	28.04	92.0	126.7
10.0	42.06	138.0	85.5
20.0	64.01	210.0	56.6