

RG142 Coaxial Cable

P/N: AT1RG142-1B



RG142 is a high-performance, **50-ohm** coaxial cable engineered for demanding RF and microwave applications requiring exceptional thermal stability and shielding. It features a **silver-plated copper-clad steel** inner conductor and a double silver-plated copper braid, ensuring superior conductivity and a screening effectiveness often exceeding **40 dB** or higher.

Its high-grade **PTFE** dielectric and durable **FEP** jacket provide outstanding resistance to chemicals, moisture, and extreme temperatures ranging from **-55°C to +200°C**. Highly reliable and robust, RG142 is ideal for military avionics, telecommunications base stations, medical electronics, and high-temperature industrial environments where low-loss performance and interference immunity are critical.

Construction Specifications

Description	Material & Plating	Diameter (mm)
Centre Conductor	silver plated copper clad steel	0.94
Dielectric	PTFE	2.95
1 st Outer Conductor	Silver plated copper wire Braid	3.60
2 nd Outer Conductor	Silver plated copper wire Braid	4.20
Jacket	Black PVC	4.95

Electrical Specifications

Parameter	Value	Unit
Frequency Range	DC-12.4	GHz
Impedance	50 ±2	Ω
Propagation Velocity	69	%
Capacitance	97	pF/m
Screening Effectiveness	85	dB
Insulation Resistance	5000	MΩ-Km
Inner Conductor Resistance	63	Ω/km
Outer Conductor Resistance	7.5	Ω/km
Operating Voltage (at sea level)	≤ 1.9	kVrms
Peak Power Rating	10	KW



Technical Data Sheet

Mechanical Specifications

Parameter	Value	Unit
Weight	200	Kg/km
Single Bending Radius	≥ 29	mm
Repeated Bending Radius	≥ 55	mm

Environmental Specifications

Parameter	Value	Unit
Operation Temperature	-55 ~ 200	°C
Installation Temperature	-20 ~ 60	°C

Attenuation

Frequency (GHz)	dB/100m
0.4	30.2
0.9	36.5
1.0	43.0
1.5	65.3
2.0	74.7
3.0	87.8
4.0	97.9
6.0	113.0
12.5	145.5