

PS520L-25G-F

High Frequency Phase Stable Coaxial Cable



Product Overview: PS520L-25G-F is a 50 Ohm high-frequency microwave coaxial cable featuring LD-PTFE dielectric insulation and a blue FEP jacket. Designed for phase stability and low attenuation across frequencies up to 25 GHz.

- Frequency Range:** DC to 25 GHz
- Impedance:** $50 \pm 1 \Omega$
- Velocity Ratio:** 76%
- Outer Jacket:** Thermal & Chemical Resistant Blue FEP
- Shielding:** > 90 dB screening effectiveness

1. Structure Characteristics

Layer	Item	Material	Nom. O.D. (mm)
Inner Conductor	1/1.45 mm Solid Wire	Silver Plated Copper	1.45
Insulation	Low Density Dielectric	LD-PTFE	4.25
Inner Shield	Helical Tape Wrap	Self-adhesive Aluminium Foil	4.32
Outer Shield	Outer Braid Wire	Silver Plated Copper Wire	4.75
Jacket	Protective Outer Layer	Blue FEP	5.20

2. Electrical & Mechanical Specifications

Electrical Parameter	Value	Mechanical / Env. Parameter	Value
Impedance	50 Ω	Min. Bending Radius (Static)	26.00 mm
Capacitance	88 pF/m	Min. Bending Radius (Dynamic)	53.00 mm
Velocity of Propagation	76%	Weight	0.054 kg/m
Shielding Effectiveness	> 90 dB	Operating Temperature	-55°C to +85°C
Dielectric Withstanding Voltage	2000 V DC	Max Operating Frequency	25 GHz

3. Attenuation & Power Handling Performance

Attenuation Formula: $IL = K1 * \sqrt{F_MHz} + K2 * F_MHz$ | $K1 = 0.718000$, $K2 = 0.001088$

Frequency (MHz)	Nom. Attenuation (dB/100m)	Max Power Handling (W @ 40°C & Sea Level)
500	16.60	1098
1000	23.79	766
2400	37.79	482
3000	42.59	428
6000	62.14	293
8000	72.92	250
10000	82.68	220
12400	93.44	195
18000	115.91	157
20000	123.30	148
25000	140.73	130