PS810L-18G-F

18GHz Low Loss Phase Stable Coaxial Cable (8.1mm)

The PS810L-18G-F is a 50 Ohm high-grade RF coaxial cable designed for stable microwave performance up to 18 GHz. Constructed with an LD-PTFE dielectric layer and silver-plated copper double shielding, it offers superior power handling, low attenuation, and high phase tracking.

- **Frequency Range:** DC to 18 GHz
- **Velocity of Propagation:** 83%
- **Screening Effectiveness:** > 90 dB
- **Withstanding Voltage:** 3000 V DC
- **Nominal Outer Diameter:** 8.10 mm

Structure & Mechanical Construction

Layer	Material	Nom. O.D. (mm)
Inner Conductor	Silver Plated Copper (1/2.43mm)	2.43
Insulation	LD-PTFE	6.60
Inner Shield	Silver Plated Copper Strip	6.90
Outer Shield	Silver Plated Copper Braid	7.40
Jacket	Gray FEP	8.10

Parameter	Specification Value
Min. Bend Radius (Static)	40.5 mm
Min. Bend Radius (Dynamic)	81.0 mm
Nominal Weight	0.146 kg/m
Operating Temp. Range	-55 ℃ to +165 ℃

Electrical Characteristics

Electrical Parameter	Standard Value	Electrical Parameter	Standard Value
Impedance	50 Ω	Capacitance	80 pF/m
Velocity Ratio	83%	Max Operating Frequency	18 GHz
Screening Effectiveness	> 90 dB	Dielectric Voltage	3000 V DC
Phase Change vs Bending	±0.3 °/GHz	Phase Change vs Temp.	≤ 750 PPM (-45~+85℃)

Attenuation & Power Handling (@ 25℃ & Sea Level)

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Insertion Loss Formula: IL = K1 * sqrt(F_MHz) + K2 * F_MHz (dB/100m) | K1 = 0.40800, K2 = 0.00033
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Frequency (MHz)	Nom. Attenuation (dB/100m)	Max. Power Handling (W @ 40°C)
300	7.17	3499
500	9.29	2699
1000	13.23	1895
2000	18.91	1326
3000	23.34	1074
6000	33.58	747
10000	44.10	569
12000	48.65	515
12400	49.52	506
15000	54.92	457
18000	60.68	413