

PS610L-23G-F

High Frequency Low Loss Phase Stable Coaxial Cable (23GHz, FEP)

- Frequency Range:** DC to 23 GHz with 50 Ohm impedance.
- Low Loss Dielectric:** Low-Density PTFE (LD-PTFE) with 83% VP.
- Phase Stability:** Phase change vs. bending ± 0.3 °/GHz and temp. ≤ 750 PPM.
- Dual Shielding & FEP Outer Jacket:** SPC Strip + SPC Braid (>90 dB) with Gray FEP jacket.



1. PHYSICAL & CONSTRUCTION SPECIFICATIONS

Construction Element	Material Specification	Construction (mm)	Nom. O.D. (mm)
Inner Conductor	Silver Plated Copper (SPC)	1 / 1.78	1.78
Insulation Dielectric	Low-Density PTFE (LD-PTFE)	-	4.85
Inner Shield	Silver Plated Copper Strip	Helical Wrap	5.05
Outer Shield	Silver Plated Copper Braid Wire	Coverage $\geq 90\%$	5.55
Outer Jacket	Fluorinated Ethylene Propylene (Gray FEP)	-	6.10

2. MECHANICAL & ENVIRONMENTAL CHARACTERISTICS

Parameter	Specification Value	Parameter	Specification Value
Min. Bend Radius (Static)	25.5 mm	Cable Weight	0.098 kg/m
Min. Bend Radius (Dynamic)	51.0 mm	Operating Temperature	-55 °C to +165 °C

3. ELECTRICAL PERFORMANCE PARAMETERS

Parameter	Value	Parameter	Value
Impedance	50 Ω	Dielectric Withstanding Voltage	2000 V DC
Capacitance	80 pF/m	Phase Change vs. Bending	± 0.3 °/GHz
Velocity of Propagation (VP)	83%	Phase Change vs. Temperature	≤ 750 PPM (-45~+85°C)
Max. Operating Frequency	23 GHz	Screening Effectiveness	> 90 dB

4. ATTENUATION & POWER HANDLING DATA

Frequency (MHz)	Nom. Attenuation (@25°C, Sea Level) (dB/100m)	Max. Power Handling (@40°C, Sea Level) (W)
300	9.87	2348
500	12.84	1805
1000	18.42	1258
3000	33.02	702
6000	48.24	481
8000	56.64	409
10000	64.25	361
12400	72.65	319
18000	90.22	257
20000	96.00	241
23000	104.31	222

Insertion Loss Formula: $IL = K1 * \sqrt{F_MHz} + K2 * F_MHz$ (dB/100m) | $K1 = 0.554832, K2 = 0.000877$

Cross Reference Replacement: Direct alternative to SFCFK-50-5-53.