

PSE460L-31G-F

High Frequency Low Loss Phase Stable Coaxial Cable

- **Frequency Range:** DC to 31 GHz
- **Dielectric:** Low Density PTFE (LD-PTFE)
- **Velocity of Propagation:** 76%
- **Phase Stability vs Bend:** $\pm 0.2^\circ$ / GHz
- **Screening Effectiveness:** > 90 dB



1. CONSTRUCTION & MECHANICAL SPECIFICATIONS

Construction Layer	Material	Construction Details	Nom. O.D. (mm)
Inner Conductor	Silver Plated Copper (SPC)	1 / 1.02 mm	1.02
Insulation	LD-PTFE	-	3.07
Inner Shield	Silver Plated Copper Strip	-	3.27
Interlayer	High Temperature Aluminum Foil	-	3.41
Outer Shield	Silver Plated Copper Braid	-	3.92
Jacket	Light Blue FEP	-	4.60

Min. Bending Radius (Static)	18.40 mm	Min. Bending Radius (Dynamic)	46.00 mm
Cable Weight	0.050 kg/m	Operating Temp. Range	-55°C to +200°C

2. ELECTRICAL CHARACTERISTICS

Impedance	50 Ω	Max Operating Frequency	31 GHz
Velocity of Propagation	76%	Capacitance	88 pF/m
Screening Effectiveness	> 90 dB	Dielectric Withstanding Voltage	1500 V DC
Phase Change vs. Bending	$\pm 0.2^\circ$ / GHz	Phase Change vs. Temp (-45~+85°C)	≤ 1500 PPM

3. ATTENUATION & POWER HANDLING (@ 25°C SEA LEVEL)

Attenuation Formula: $IL = K1 * \sqrt{F_MHz} + K2 * F_MHz$ (K1=1.0994853, K2=0.0005906)

Frequency (MHz)	Attenuation (dB/100m)	Power Handling (W @ 40°C)
500	24.88	742
1000	35.36	522
2400	55.28	334
3000	61.99	298
6000	88.71	208
8000	103.07	179
10000	115.85	159
12400	129.76	142
18000	158.14	117
26500	194.63	95
31000	211.89	87

4. INDUSTRY CROSS REFERENCE

Replaceable Type: Standard SFT-142 coaxial cable equivalent.