

PSE760L-18G-BF

High Frequency Low Loss Phase Stable Coaxial Cable

The PSE760L-18G-BF is engineered for microwave signal transmission requiring ultra-low insertion loss and high phase stability. Built with an expanded LD-PTFE dielectric and multi-layer shielding, it ensures low phase deviation under dynamic dynamic bending and thermal stress up to 18 GHz.



- **Frequency Range:** DC to 18 GHz
- **Dielectric:** Low-Density PTFE (Velocity of Propagation: 78%)
- **Phase Stability vs Flexure:** ±0.2 °/GHz
- **Thermal Phase Stability:** ≤ 1500 PPM (-45°C to +85°C)
- **Shielding Effectiveness:** > 90 dB

1. STRUCTURAL CONSTRUCTION SPECIFICATIONS

Layer	Material	Construction Details	Nom. O.D. (mm)
Inner Conductor	Silver Plated Copper	1 / 2.10 mm	2.10
Insulation	LD-PTFE (Low-Density PTFE)	--	6.10
Inner Shield	Silver Plated Copper Strip Tape	--	6.30
Interlayer	LD-PTFE Tape	--	6.60
Outer Shield	Silver Plated Copper Wire Braid	--	7.13
Outer Jacket	Blue FEP	--	7.60

2. ELECTRICAL, MECHANICAL & ENVIRONMENTAL CHARACTERISTICS

Electrical Property	Value	Mechanical / Environmental	Value
Impedance	50 Ω	Min. Static Bend Radius	38.00 mm
Capacitance	88 pF/m	Min. Dynamic Bend Radius	76.00 mm
Velocity of Propagation	78%	Cable Weight	0.121 kg/m
Max Operating Frequency	18 GHz	Operating Temperature	-55°C to +165°C
Screening Effectiveness	> 90 dB	Phase Change VS Flexure	±0.2 °/GHz
Dielectric Voltage	2500 V DC	Phase Change VS Temp	≤ 1500 PPM

3. ATTENUATION & POWER HANDLING PERFORMANCE (@ SEA LEVEL)

Insertion Loss Formula: $IL = K1 * \sqrt{F_MHz} + K2 * F_MHz$ [dB/100m] Constants: K1 = 0.512582 K2 = 0.000591

Frequency (MHz)	Nom. Attenuation (@25°C) [dB/100m]	Max. Power Handling (@40°C) [W]
500	11.76	2805
1000	16.80	1963
3000	29.85	1105
4000	34.78	948
6000	43.25	763
8000	50.57	652
10000	57.17	577
12000	63.24	521
14000	68.92	478
16000	74.29	444
18000	79.41	415

Cross-Reference / Replacement: HUBER+SUHNER SUCOFLEX106 (Form-Fit-Function Equivalent)