

PSE360L-50G-F

50GHz Low Loss Phase Stable Coaxial Cable (FEP Jacket)

Key Features & Overview

- **Max Operating Frequency:** DC to 50 GHz.
- **Velocity of Propagation:** 76% (LD-PTFE Dielectric).
- **Phase Stability:** ±0.2 °/GHz vs Bending.
- **Shielding Effectiveness:** >90 dB (Strip + Braid Dual Shield).
- **Temperature Range:** -55°C to +165°C (Blue FEP Jacket).



Designed for high-frequency test interconnects, radar subsystems, and satellite communication equipment where low attenuation and phase stability are required.

Structural Properties

Layer	Material	Construction (mm)	Nom. O.D. (mm)
Inner Conductor	Silver Plated Copper	1 / 0.72	0.72
Insulation	LD-PTFE	-	2.15
Inner Shield	Silver Plated Copper Strip	-	2.35
Interlayer	LD-PTFE	-	2.65
Outer Shield	Silver Plated Copper Wire	-	3.05
Jacket	Blue FEP	-	3.60

Electrical Characteristics

Impedance	50 Ohm	Velocity of Propagation	76%
Max Operating Frequency	50 GHz	Capacitance	88 pF/m
Screening Effectiveness	> 90 dB	Dielectric Withstanding Voltage	1000 V DC
Phase Change vs Bending	±0.2 °/GHz	Phase Change vs Temp (-45~+85°C)	≤ 1500 PPM

Insertion Loss Formula: $IL = K1 * \sqrt{F_MHz} + K2 * F_MHz$ (dB/100m)
Constants: K1 = 1.3707349, K2 = 0.00044

Mechanical & Environmental Properties

Min. Static Bending Radius	18.0 mm	Min. Dynamic Bending Radius	36.0 mm
Weight	0.033 kg/m	Operating Temperature	-55°C to +165°C

Attenuation & Power Handling (@ 25°C Sea Level)

Frequency (MHz)	Nom. Attenuation (dB/100m)	Max Power Handling (W @ 40°C)
300	23.87	885
500	30.87	684
1000	43.79	483
3000	76.40	277
6000	108.82	194
8000	126.12	168
10000	141.47	149
12400	158.09	134
18000	191.82	110
26500	234.80	90
40000	291.75	72
50000	328.51	64

Replaceable Type Cross-Reference: Direct equivalent to [HUBER+SUHNER](#) SUCOFLEX 101.