

PS520L-28G-BF

High Frequency Low Loss Phase Stable Coaxial Cable

The PS520L-28G-BF is engineered for high-frequency microwave applications requiring ultra-low insertion loss and high phase stability up to 28 GHz. Constructed with a solid silver-plated copper conductor, LD-PTFE dielectric, and blue FEP jacket.



- **Frequency Range:** DC to 28 GHz
- **Inner Conductor:** Silver Plated Copper (1/1.29mm)
- **Dielectric:** Low-Density PTFE (Velocity of Propagation: 76%)
- **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 / 1.29 mm	1.29
Insulation	LD-PTFE (Low-Density PTFE)	--	3.85
Inner Shield	Silver Plated Copper Strip Tape	--	4.05
Interlayer	LD-PTFE Tape	--	4.35
Outer Shield	Silver Plated Copper Wire Braid	--	4.75
Outer Jacket	Blue FEP	--	5.20

2. ELECTRICAL, MECHANICAL & ENVIRONMENTAL CHARACTERISTICS

Electrical Property	Value	Mechanical / Environmental	Value
Impedance	50 Ω	Min. Static Bend Radius	18.40 mm
Capacitance	88 pF/m	Min. Dynamic Bend Radius	46.00 mm
Velocity of Propagation	76%	Cable Weight	0.067 kg/m
Max Operating Frequency	28 GHz	Operating Temperature	-55°C to +165°C
Screening Effectiveness	> 90 dB	Phase Change VS Flexure	±0.2 °/GHz
Dielectric Voltage	1800 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: $K1 = 0.770610$ $K2 = 0.000590$

Frequency (MHz)	Nom. Attenuation (@25°C) [dB/100m]	Max. Power Handling (@40°C) [W]
500	17.53	1066
1000	24.96	749
2000	35.64	524
3000	43.98	425
6000	63.23	295
8000	73.65	254
10000	82.96	225
12000	91.50	204
18000	114.01	164
26500	141.08	132
28000	145.47	128

Cross-Reference / Replacement: HUBER+SUHNER SUCOFLEX104 (Form-Fit-Function Equivalent)