

PS450L-40G-P

Flexible Low Loss Phase Stable Coaxial Cable (40GHz / 50 Ohm)



Max Frequency: 40 GHz
Phase vs Bending: ±0.3 °/GHz

Velocity of Prop.: 83%
Outer Jacket: Black TPU

1. Structural Construction

Item	Material	Construction (mm)	Nom. O.D. (mm)
Inner Conductor	Silver Plated Copper (SPC)	1 / 0.96	0.96
Insulation	Low Density PTFE (LD-PTFE)	-	2.65
Inner Shield	Silver Plated Copper Strip	-	2.85
Outer Shield	Silver Plated Copper Wire Braid	-	3.35
Jacket	Black Thermoplastic Polyurethane (TPU)	-	4.50

2. Electrical Characteristics

Impedance	50 Ω	Capacitance	80 pF/m
Max Operating Frequency	40 GHz	Velocity of Propagation	83 %
Screening Effectiveness	> 90 dB	Dielectric Withstanding Voltage	1000 V DC
Phase Stability vs Bending	±0.3 °/GHz	Phase Stability vs Temp (-45~+85°C)	≤ 750 PPM

3. Mechanical & Environmental Specifications

Min. Bending Radius (Static)	19.0 mm	Operating Temperature	-55 °C to +85 °C
Min. Bending Radius (Dynamic)	38.0 mm	Nominal Weight	0.033 kg/m

4. Attenuation & Power Handling Characteristics

Attenuation Formula: $IL = K1 * \sqrt{F_MHz} + K2 * F_MHz$ $K1 = 0.986836837, K2 = 0.000547893$		
Frequency (MHz)	Nom. Attenuation (dB/100m @ 25°C)	Max Power Handling (W @ 40°C)
500	22.34	783
1000	31.75	551
3000	55.69	314
6000	79.73	219
8000	92.65	189
10000	104.16	168
12000	114.68	153
16000	133.59	131
18000	142.26	123
26500	175.16	100
40000	219.28	80