PS400L-40G-F

Phase Stable Coaxial Cable Technical Datasheet

Key Performance Features

- Ultra-low loss performance with LD-PTFE dielectric technology (77% VP).
- Excellent phase stability vs. bending (±0.2°/GHz) across DC-40 GHz.
- Dual-shield structure delivering high screening effectiveness (>90 dB).
- Thermally stable, chemical-resistant Aqua FEP outer jacket (-55~165℃).

1. CABLE CONSTRUCTION & DIMENSIONS

Construction Layer	Material Selection	Construction Details	Nom. O.D. (mm)
Inner Conductor	Silver Plated Copper	1 / 0.93 mm	0.93
Insulation	Low Density PTFE (LD-PTFE)	—	2.75
Inner Shield	Silver Plated Copper Strip	—	2.95
Outer Shield	Silver Plated Copper Wire	—	3.35
Jacket	Aqua FEP	—	4.00

2. ELECTRICAL PARAMETERS

Impedance	50 Ω
Capacitance	88 pF/m
Velocity of Prop.	77%
Max Operating Freq.	40 GHz
Screening Effect.	>90 dB
Withstanding Volts	1000 V DC
Phase vs Bending	±0.2 °/GHz
Phase vs Temp.	≤1500 PPM

3. MECHANICAL & ENVIRONMENTAL

Static Min. Bend Radius	16.00 mm
Dynamic Min. Bend Radius	38.00 mm
Weight	0.036 kg/m
Operating Temp. Range	-55 ~ +165 ℃

4. INTERCHANGEABILITY

Replaceable Equivalent	Micro-Coax FA147A

Insertion Loss (IL) Formula:

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IL = K1 * sqrt(F_MHz) + K2 * F_MHz    (K1 = 1.11183141, K2 = 0.000943596)
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5. ATTENUATION & POWER HANDLING PERFORMANCE MATRIX

Frequency (MHz)	Nom. Attenuation (dB/100m @ 25℃)	Max Power Handling (W @ 40℃)
500	25.33	651
1000	36.10	457
2400	56.73	291
3000	63.73	259
6000	91.78	180
8000	106.99	154
10000	120.62	137
12400	135.51	122
18000	166.15	99
26500	206.00	80
40000	260.11	63