

PS540LS-25G-F

Low Loss Phase Stable RF Coaxial Cable (25 GHz)



- **Frequency Range:** DC to 25 GHz
- **Impedance:** $50 \Omega \pm 1 \Omega$
- **Dielectric:** Low Density PTFE (77% VP)
- **Phase Stability:** ± 0.2 °/GHz under bending
- **Protective Jacket:** High Temp Aqua FEP (-55~+165°C)
- **Direct Cross Ref:** UFA210B Equivalent

1. MECHANICAL & STRUCTURAL SPECIFICATIONS

Layer	Material	Construction Details	Nom. O.D. (mm)
Inner Conductor	Silver Plated Copper	19 / 0.29 mm	1.45 mm
Insulation	LD-PTFE	Low Density Dielectric	4.25 mm
Inner Shield	Flat Silver Plated Copper Tape	100% Coverage Wrapping	4.45 mm
Outer Shield	Round Silver Plated Copper Braid	High Shielding Braiding	4.90 mm
Outer Jacket	Aqua FEP	High Temp Fluoropolymer	5.40 mm

2. PHYSICAL & ENVIRONMENTAL CHARACTERISTICS

Min. Static Bending Radius	21.60 mm	Cable Weight	0.072 kg/m
Min. Dynamic Bending Radius	43.20 mm	Operating Temp Range	-55 °C to +165 °C

3. ELECTRICAL PERFORMANCE PARAMETERS

Impedance	50 Ω	Max Operating Frequency	25 GHz
Velocity of Propagation	77%	Screening Effectiveness	> 90 dB
Capacitance	87 pF/m	Dielectric Withstanding Voltage	2500 V @ DC
Phase Stability vs. Bending	± 0.2 °/GHz	Phase Stability vs. Temp (-45~+85°C)	≤ 1500 PPM

4. ATTENUATION & POWER HANDLING CHART (@25°C & SEA LEVEL)

Insertion Loss Calculation: $IL = K1 * \sqrt{F_MHz} + K2 * F_MHz$
Constants: $K1 = 0.795435$ | $K2 = 0.001179$

Frequency (MHz)	Nom. Attenuation (dB/m)	Nom. Attenuation (dB/100m)	Max Power Handling (W)
500	0.18	18.38	
1000	0.26	26.33	1001
2400	0.42	41.80	631
3000	0.47	47.11	560
6000	0.69	68.69	384
8000	0.81	80.58	327
10000	0.91	91.34	289
12400	1.03	103.20	256
15000	1.15	115.11	229
18000	1.28	127.95	206
20000	1.36	136.08	194