

PS480L-31G-F

High-frequency, low-loss, phase-stable flexible RF coaxial cable designed for demanding microwave systems operating up to 31 GHz.



- Low Loss Dielectric:** Expanded LD-PTFE insulation ensures high propagation velocity (83%).
- Phase Stability:** Phase change vs. bending held within $\pm 0.3^\circ/\text{GHz}$.
- Dual Shielding:** Silver-plated copper tape + wire braid provides $>90\text{ dB}$ shielding.
- Durable Jacket:** FEP outer sheath for excellent environmental resistance (-55°C to $+165^\circ\text{C}$).

1. CONSTRUCTION & DIMENSION SPECIFICATIONS

Layer	Component Description	Material	Nom. O.D. (mm)
1. Inner Conductor	Center Conductor (1/1.40mm)	Silver Plated Copper	1.40
2. Insulation	Dielectric Core	LD-PTFE	3.75
3. Inner Shield	Helical Tape Shield	Silver Plated Copper Strip	3.95
4. Outer Shield	Braided Shield	Silver Plated Copper Wire	4.35
5. Jacket	Protective Outer Sheath	Gray FEP	4.80

2. ELECTRICAL PARAMETERS

Impedance	50 Ω
Velocity of Propagation	83%
Capacitance	80 pF/m
Max Operating Freq.	31 GHz
Screening Effectiveness	$>90\text{ dB}$
Dielectric Withstanding Voltage	1500 V DC
Phase Change vs Bending	$\pm 0.3^\circ/\text{GHz}$
Phase Change vs Temp.	$\leq 750\text{ PPM}$

3. MECHANICAL & ENVIRONMENTAL

Min. Bend Radius (Static)	24.0 mm
Min. Bend Radius (Dynamic)	48.0 mm
Cable Weight	0.055 kg/m
Operating Temp. Range	-55°C to $+165^\circ\text{C}$

4. INDUSTRY CROSS-REFERENCE

Manufacturer	Reference Model
GORE	CXN3449

5. ATTENUATION & POWER HANDLING RATINGS

$$IL = K1 * \sqrt{F_MHz} + K2 * F_MHz \text{ (dB/100m)} \mid K1 = 0.75040, K2 = 0.00033$$

Frequency (MHz)	Nom. Attenuation (dB/100m @ 25°C)	Max Power Handling (W @ 40°C)
300	13.10	1578
500	16.94	1220
1000	24.06	859
3000	42.09	491
6000	60.09	344
8000	69.74	296
10000	78.32	264
12400	87.63	236
18000	106.58	194
20000	112.68	183
26500	130.85	158
31000	142.35	145