

Ultra-Low Loss Phase and Amplitude Stable Flexible Cable

LP380P

Features & Benefits

- Ultra low loss, 2.2dB/meter to 40 GHz
- Typical VSWR 1.2 to 40GHz
- Excellent phase stability with flexure 40GHz $\leq 5^\circ$
- Robust structure with an extra interlayer
- Available in armor options
- Bulk cables from stock

Cable Construction

No.	Construction	Size (mm)	Materials
1	Center Conductor	1.02	Solid silver-plated copper
2	Dielectric	2.85	Ultra-low density PTFE
3	Outer Conductor	3.06	Silver-plated copper tape wrap
4	Interlayer	3.22	Low density PTFE
5	Outer Shield	3.67	Silver-plated copper wire braid
6	Jacket	3.80	FEP



Electrical

Frequency	DC-40 GHz
Impedance	50 Ω
Velocity of Propagation	82%
Shielding Effectiveness	>90 dB
Withstanding Voltage	1000 V
*Mechanical Phase Stability	< $\pm 5^\circ$
Amplitude Stability vs Shaking	< ± 0.1 dB
Temp Phase Stability	<680ppm(-40 $^\circ$ C to +85 $^\circ$ C)

* Wrapped 360 $^\circ$ around a 38mm radius mandrel.

Mechanical & Environmental

Min.Bending Radius Static	19mm
Min. Bending Radius Repeated	38mm
Weight	37g/m
Temperature(Operation)	-50 $\sim$ 150 $^\circ$ C
Temperature(Storage)	-60 $\sim$ 160 $^\circ$ C

Attenuation(Typical@25 $^\circ$ C&VSWR=1.0) & Power(VSWR=1.0; 40 $^\circ$ C; Sea level)

Frequency MHz	300	1000	2000	4000	6000	8000	10000	12000	14000	18000	26500	40000
dB/100 Meter	17.3	31.9	45.5	64.9	80.1	93.1	104.7	115.3	125.1	143.0	176.1	220.5
Avg.Power kW	0.940	0.511	0.359	0.251	0.203	0.175	0.156	0.141	0.130	0.114	0.093	0.074

Attenuation at any frequency=[0.991549 $\times$ SQRT(FMHz)]+[0.0005555 $\times$ FMHz]

Available connectors

Cable P/N	Connectors	Gender	Orientation	Mounting	Max Freq.(GHz)	VSWR Max
LP380P	SMA	Male	Straight	Standard	26.5	1.3
LP380P	3.5mm	Male	Straight	Standard	33	1.3
LP380P	2.92mm	Male	Straight	Standard	40	1.3

Other connectors available upon request.