NITROWAVE™ CABLE TECHNOLOGY

HIGH-PERFORMANCE, PHASE & AMPLITUDE STABLE

DC TO **110** GHz

Samtec's new **Nitrowave™ Phase & Amplitude Stable RF Cable** offers improved stability with flexure. The coaxial structure – with an outer jacket colored in **distinctive Samtec orange** – is designed to meet the demands of aerospace, defense, datacom, computer/semiconductor, and instrumentation markets. Performance is optimized at frequencies beyond traditional industry targets to support emerging applications.

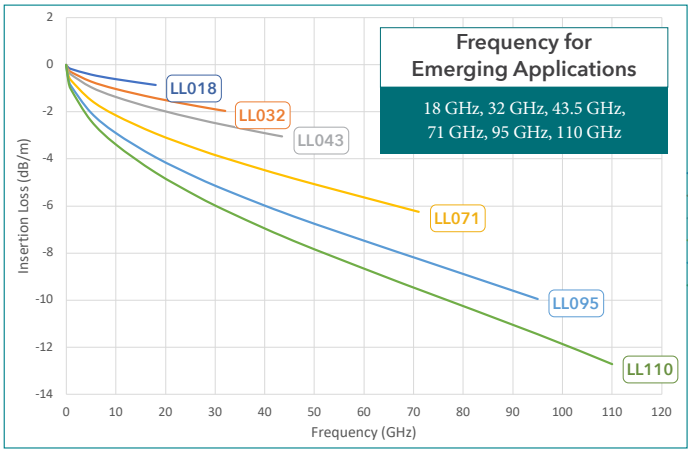
NITROWAVE™ CABLE TECHNOLOGY

- High-performance, low-loss microwave cable assemblies
- Phase and amplitude stable with flexure
- Consistent contact resistance between layers
- Lower density dielectric minimizes loss
- State-of-the-art shielding techniques and Dynamic Performance Layer (DPL)
- Silver plating enhancements mitigate corrosion potential
- Electrical performance optimized at next gen frequencies (GHz): 18, 32, 43.5, 71, 95, 110
- Mechanical and environmental robustness
- Phase vs. Bending = < 0.2˚ x F(GHz)
- VSWR = 1.4:1 @ 43.5 GHz (LL043 Series)
- Typical phase vs. temp & power handling

LOW-LOSS CABLE CONSTRUCTION WITH DYNAMIC PERFORMANCE LAYER (DPL)

Series	LL018	LL032	LL043*	LL071	LL095	LL110
Impedance (Ω)	50					
Max Frequency (GHz)	18	32	43.5	71	95	110
Outer Dia. (inches)	0.309	0.192	0.141	0.094	0.076	0.068
Min Static Bend Radius	1.25	0.375	0.25	0.125	0.156	0.156
Velocity of Propagation (%)	77					
Min Shielding Effectiveness (dB)	-90					
Temp Range (˚C)	-65 °C to +125 °C					
Insertion Loss	See Maximum IL Chart					
End 1/End 2	1.00 mm, 1.35 mm, 1.85 mm, 2.40 mm, 2.92 mm, SMPM, SMP, SMA, N Type, TNCA					

MAXIMUM INSERTION LOSS (dB/m)



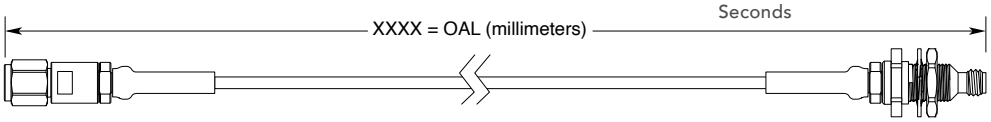
NITRO WAVE CABLE

samtec

HIGH-PERFORMANCE MICROWAVE CABLE

Cable Assemblies
LL110

SERIES	END 1 CONNECTOR	END 2 CONNECTOR	OVERALL LENGTH	PHASE MATCHING	PHASE MATCHING CABLES
LL110 = High-Performance Cable to 110 GHz	**Specify END OPTIONS from chart**		**–"XXXX"** = Overall Length in millimeters –0100 (100 mm) 3.94" min.	Leave blank for no phase matching **–1** = 1 Pico Second **–2** = 2 Pico Seconds **–5** = 5 Pico Seconds	Leave blank for 1 cable. (Only available with no phase matching option) **–02 to 16** = No. of cables



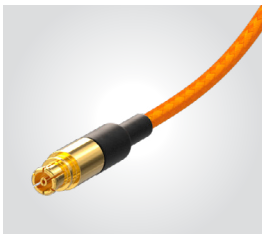
LL110-10SP-10BJ-XXXX-X-XX

FEATURES

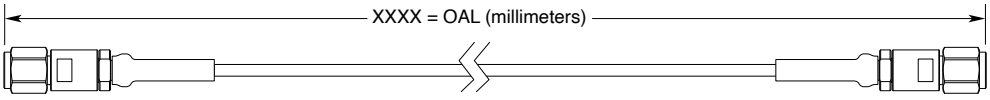
Impedance:
50 Ω
Outer Diameter:
0.068"
Bend Radius:
0.156"
Velocity of Propagation:
77 %
Min. Shielding Effectiveness:
-90 dB
Temp Range:
-65 °C to +125 °C

END OPTION	INTERFACE TYPE	GENDER	MAXIMUM RETURN LOSS (PER END)	MAXIMUM VSWR (PER END)	FREQUENCY
–10SP	1.00 mm	PLUG	13.97	1.50	DC TO 110 GHz
–10BJ	1.00 mm	BULKHEAD JACK	13.97	1.50	

Cable Assemblies
LL095



SERIES	END 1 CONNECTOR	END 2 CONNECTOR	OVERALL LENGTH	PHASE MATCHING	PHASE MATCHING CABLES
LL095 = High-Performance Cable to 95 GHz	**Specify END OPTIONS from chart**		**–"XXXX"** = Overall Length in millimeters –0100 (100 mm) 3.94" min.	Leave blank for no phase matching **–1** = 1 Pico Second **–2** = 2 Pico Seconds **–5** = 5 Pico Seconds	Leave blank for 1 cable. (Only available with no phase matching option) **–02 to 16** = No. of cables



LL095-10SP-10SP-XXXX-X-XX

FEATURES

Impedance:
50 Ω
Outer Diameter:
0.076"
Bend Radius:
0.156"
Velocity of Propagation:
77 %
Min. Shielding Effectiveness:
-90 dB
Temp Range:
-65 °C to +125 °C

END OPTION	INTERFACE TYPE	GENDER	MAXIMUM RETURN LOSS (PER END)	MAXIMUM VSWR (PER END)	FREQUENCY
–10SP	1.00 mm	PLUG	19.90	1.225	DC TO 95 GHz
–M0SJ	SMPM	JACK	19.90	1.225	DC TO 65 GHz