

NITROWAVE® CABLE TECHNOLOGY

HIGH-PERFORMANCE, PHASE & AMPLITUDE STABLE

DC TO
130
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

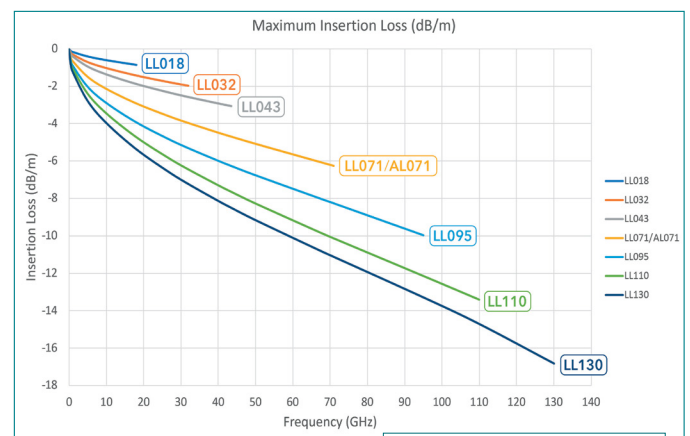
- High-performance, low-loss microwave cable assemblies
- Phase and amplitude stable with flexure
- Consistent contact resistance between layers
- Lower density dielectric minimizes loss
- State-of-the-art shielding techniques and Dynamic Performance Layer (DPL)
- Silver plating enhancements mitigate corrosion potential
- Electrical performance optimized at next gen frequencies (GHz): 18, 32, 43.5, 71, 95, 110, 130
- Mechanical and environmental robustness
- Typical phase vs. temp & power handling
- Armored versions for crush, abrasion, kink, and torque resistance with enhanced tensile strength



Series	LL018	LL032	LL043	LL071	AL071*	LL095	LL110	LL130
Impedance (Ω)	50							
Max Frequency (GHz)	18	32	43.5	71	71	95	110	130
Outer Dia. (inches)	0.309	0.182	0.141	0.094	0.207	0.076	0.068	0.060
Min Static Bend Radius	1.25	0.375	0.25	0.125	0.625	0.156	0.125	0.125
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							

*Armored Cable

MAXIMUM INSERTION LOSS (dB/m)



Frequency for Emerging Applications

18 GHz, 32 GHz, 43.5 GHz,
71 GHz, 95 GHz, 110 GHz,
130 GHz

HIGH-PERFORMANCE ARMORED MICROWAVE CABLE

Cable Assemblies AL071



FEATURES

Impedance:
50 Ω
Outer Diameter:
0.207"
Bend Radius:
0.625"
Velocity of Propagation:
77 %
Min. Shielding Effectiveness:
-90 dB
Temp Range:
-65 °C to +125 °C

Note:
*Use "XXX" for overall length with phase matching option.

SERIES	END 1 CONNECTOR	END 2 CONNECTOR	*OVERALL LENGTH	PHASE MATCHING	PHASE MATCHING CABLES
AL071 = High-Performance Armored Cable to 71 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 Seconds -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

PRELIMINARY

XXXX = OAL (millimeters)

LL071-18SP-18SP-XXXX-X-XX

END OPTION	INTERFACE TYPE	GENDER	MAXIMUM RETURN LOSS (PER END)	MAXIMUM VSWR (PER END)	FREQUENCY
-18SP	1.85 mm	PLUG	21.53	1.183	DC TO 71 GHz

Armoring over LL071 (AL071 Series)

LL071

HIGH-PERFORMANCE MICROWAVE CABLE

Cable Assemblies LL130



FEATURES

Impedance:
50 Ω
Outer Diameter:
0.060"
Bend Radius:
0.125"
Velocity of Propagation:
77 %
Min. Shielding Effectiveness:
-90 dB
Temp Range:
-65 °C to +125 °C

Note:
*Use "XXX" for overall length with phase matching option.

SERIES	END 1 CONNECTOR	END 2 CONNECTOR	*OVERALL LENGTH	PHASE MATCHING	PHASE MATCHING CABLES
LL130 = High-Performance Cable to 130 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

PRELIMINARY

XXXX = OAL (millimeters)

LL130-10SP-10SP-XXXX-X-XX

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 130 GHz
-10SJ	1.00 mm	JACK	19.90	1.225	