



PHASE & INSERTION LOSS STABLE HIGH-FREQUENCY CABLE ASSEMBLIES



Samtec's Next Generation of Precision RF, Microwave/Millimeter Wave Cable Assemblies are uniquely designed to meet the increased demands placed on the Aero, Defense, Datacom, Computer/Semi and Instrumentation markets.

Orange is the new cable!

Samtec is fully vertically integrated; this includes design and manufacture of our own microwave/millimeter wave cables - *which of course are orange!* Vertical integration allows us to optimize the coaxial structure to meet increased demands placed on the Aero, Defense, Datacom, Computer/Semi and Instrumentation markets. Meeting these increased demands means Samtec's next generation of RF coaxial cable is optimized to perform beyond traditional frequency targets to support emerging applications.

Samtec's next generation of RF coaxial cable offers improved stability and flexure over time, and also addresses common industry concerns of phase length and delay, loss and shielding effectiveness. To balance application needs with cost sensitivities, three cable types are available:

LOW-LOSS (multipurpose) Lower Loss vs. Typical PTFE	ULTRA-LOW-LOSS Lowest Loss, Better Phase Stability	PHASE STABLE Best Phase Stability
 <ul style="list-style-type: none"> FEP Jacket Silver Plated Copper Braid Interlayer Silver Plated Copper Helical Foil Low-Density PTFE Dielectric Silver Plated Copper Conductor 	 <ul style="list-style-type: none"> Tape Wrapped ePTFE Dielectric 	 <ul style="list-style-type: none"> Foamed Fluoropolymer Dielectric

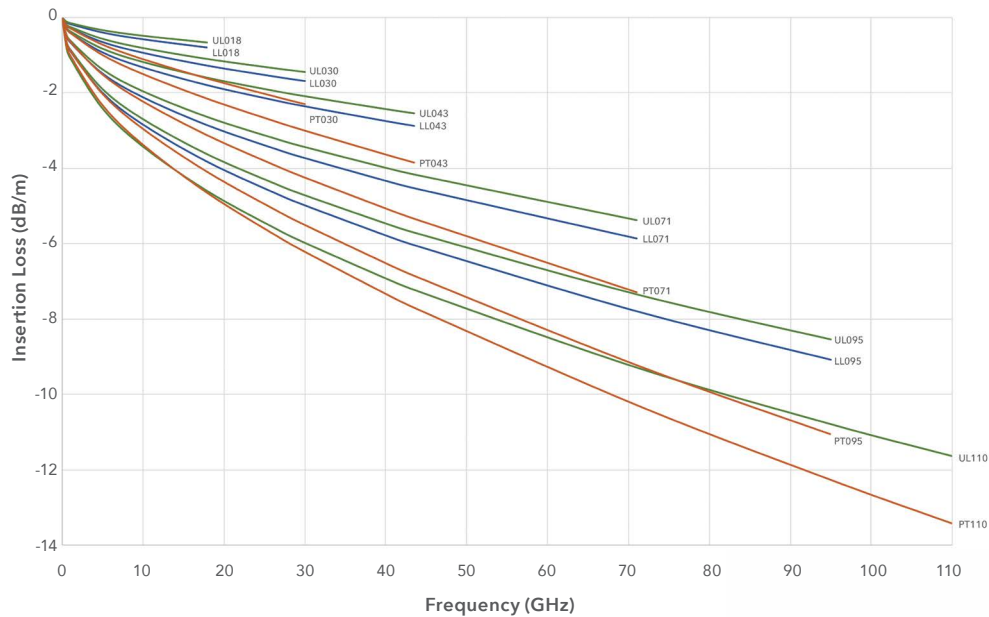
Contact Samtec's RF Group for additional information at RFGroup@samtec.com.



SPECIFICATIONS & PERFORMANCE DATA

	LOW-LOSS (multipurpose)					ULTRA-LOW-LOSS						PHASE STABLE				
Series	LL018	LL030	LL043	LL071	LL095	UL018	UL030	UL043	UL071	UL095	UL110	PT030	PT043	PT071	PT095	PT110
Impedance (Ω)	50															
Max Frequency (GHz)	18	30	43.5	71	95	18	30	43.5	71	95	110	30	43.5	71	95	110
Outer Dia. (inches)	0.306	0.192	0.143	0.096	0.078	0.327	0.201	0.148	0.097	0.078	0.063	0.194	0.142	0.094	0.075	0.067
Min Static Bend Radius (to inside of cable) (inches)	1.25	0.375	0.25	0.25	0.125	1.25	0.375	0.375	0.25	0.25	0.125	0.375	0.25	0.25	0.125	0.125
Velocity of Propagation (%)	76.6					85.5	84	83	81	78	79	82	81	80	80	79
Min Shielding Effectiveness (dB)	-90															
Temp Range ($^{\circ}\text{C}$)	-65 $^{\circ}\text{C}$ to +125 $^{\circ}\text{C}$															
Insertion Loss	See Chart Below															
Phase vs. Temp	See Chart Below															

INSERTION LOSS (dB/m)



FREQUENCY FOR EMERGING APPLICATIONS

18 GHz, 30 GHz, 43.5 GHz,
71 GHz, 95 GHz, 110 GHz

PHASE vs. TEMPERATURE

