



ULTRAPHASE™

MegaPhase UltraPhase™ Cable



The MegaPhase UltraPhase Series E product line is constructed with foam FEP dielectric and is a great choice for phase stability versus flexure and stability over temperature. The temperature performance features linearity across a wide temperature range, and does not exhibit the “knee” that traditional PTFE cables exhibit at ambient temperature. UltraPhase is ideal for applications including both air- and ground-based phased array radars, sensors, mobile backhaul, and temperature testing.

Electrical Data

Maximum Frequency:

- E05 110 GHz
- E08 67 GHz
- E12 40 GHz

Impedance:

50 Ω nominal

Propagation Velocity:

- E05 78.7% nominal
- E08 80% nominal
- E12 80% nominal

Time Delay:

- E05 1.291 ns/ft. (4.236 ns/m)
- E08 1.27 ns/ft. (4.167 ns/m)
- E12 1.265 ns/ft. (4.15 ns/m)

Shielding Effectiveness:

-100 dB minimum (cable only)

Dielectric

Withstanding Voltage:

- E05 400 VRMS
- E08 1200 VRMS
- E12 1100 VRMS

Capacitance:

- E05 25.82 pF/ft. (84.71 pF/m)
- E08 25.4 pF/ft. (83.3 pF/m)
- E12 25.3 pF/ft. (83.0 pF/m)

Mechanical Data

Finished Outer Diameter:

- E05 0.056 in. (1.422 mm)
- E08 0.100 in. (2.54 mm)
- E12 0.150 in. (3.81 mm)

Static Bend Radius:

- E05 .25 in. (6.35 mm)
- E08 .35 in. (8.9 mm)
- E12 .50 in. (12.7 mm)

Weight:

- E05 1.87 grams/ft. (6.14 grams/m)
- E08 5.0 grams/ft. (16.4 grams/m)
- E12 11.20 grams/ft. (36.75 grams/m)

Operating Temp. Range:

-85 to 329° F
-65 to 165° C

Cable Construction

- Inner Conductor: Solid Ag-plated Cu
- Dielectric: Foamed FEP
- Inner Shield: Ag-plated Cu
- Outer Braid Shield: Ag-plated Cu
- Outer Jacket: FEP

Maximum Length

35 Feet

Available Connectors

Type N, SMA, 3.5mm, 2.92mm, 2.4mm
1.85mm, 1.0mm

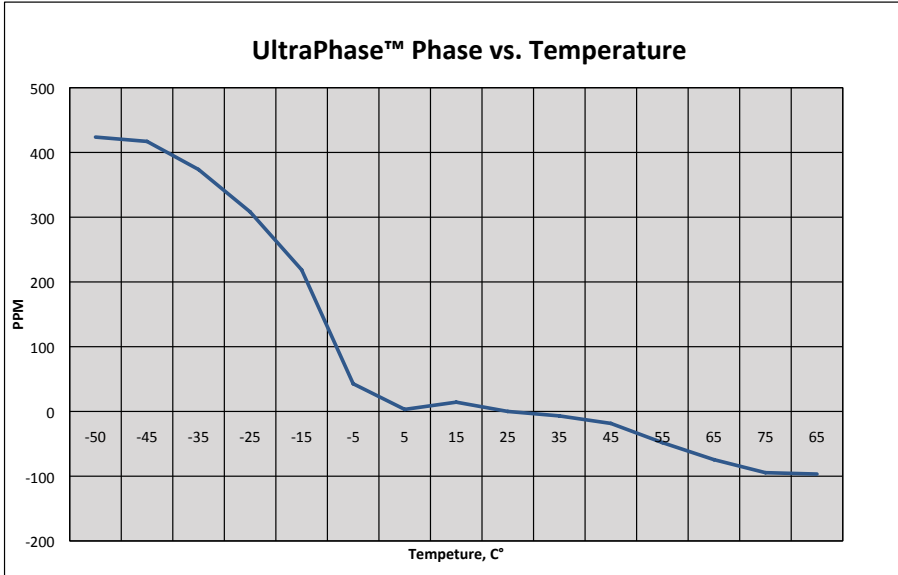


MegaPhase UltraPhase™ Cable (continued)

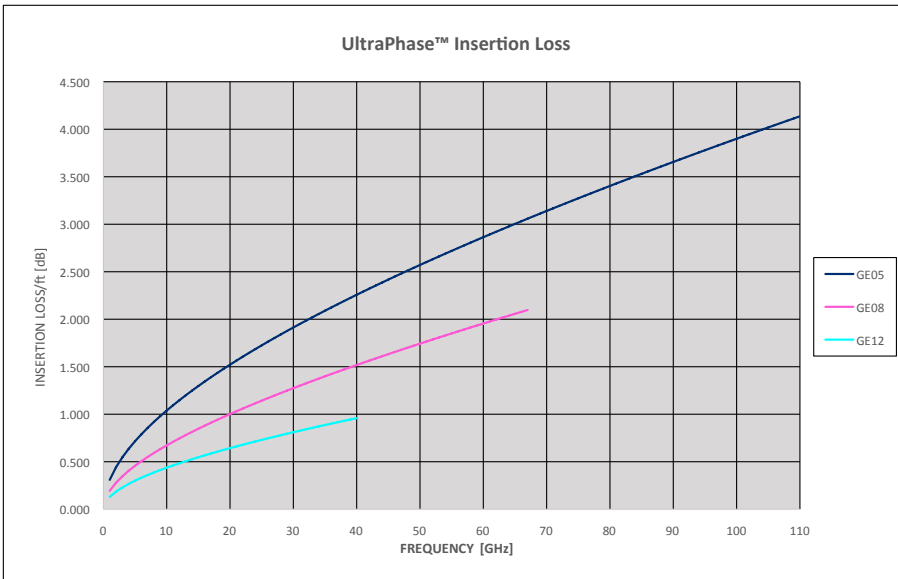
Frequency		GE05 Series		GE08 Series		GE12 Series		Conn Loss dB	VSWR
Band	GHz	Attenuation		Attenuation		Attenuation			
		dB/ft	dB/m	dB/ft	dB/m	dB/ft	dB/m		
UHF	0.3	0.167	0.548	0.104	0.341	0.070	0.229	0.006	1.10
	0.5	0.217	0.711	0.135	0.443	0.090	0.297	0.009	
	0.8	0.276	0.904	0.172	0.566	0.115	0.378	0.012	
L	1.0	0.309	1.014	0.194	0.635	0.129	0.424	0.014	
S	2.0	0.442	1.451	0.279	0.915	0.185	0.608	0.024	1.15
	2.4	0.486	1.596	0.307	1.009	0.204	0.668	0.027	
	3.0	0.547	1.793	0.347	1.137	0.229	0.752	0.032	
C	4.0	0.636	2.087	0.405	1.328	0.267	0.875	0.040	1.20
	6.0	0.789	2.588	0.505	1.658	0.331	1.087	0.055	
X	8.0	0.921	3.020	0.593	1.945	0.387	1.270	0.070	1.25
	10.0	1.039	3.408	0.672	2.205	0.437	1.435	0.084	1.30
	12.4	1.168	3.832	0.759	2.491	0.492	1.615	0.101	
Ku	15.0	1.297	4.255	0.847	2.779	0.547	1.795	0.118	1.35
	18.0	1.435	4.707	0.941	3.089	0.606	1.988	0.139	
K	20.0	1.522	4.992	1.001	3.285	0.643	2.110	0.152	1.40
	22.0	1.605	5.266	1.059	3.475	0.679	2.227	0.165	
	24.0	1.686	5.530	1.115	3.659	0.713	2.340	0.178	
	26.5	1.783	5.849	1.183	3.881	0.755	2.476	0.194	
Ka	28.0	1.839	6.035	1.223	4.011	0.779	2.556	0.204	1.45
	30.0	1.913	6.277	1.274	4.181	0.811	2.660	0.217	
	32.0	1.985	6.513	1.325	4.347	0.842	2.761	0.230	
	34.0	2.055	6.743	1.375	4.510	0.872	2.860	0.243	
	36.0	2.124	6.969	1.423	4.669	0.901	2.957	0.256	
V	40.0	2.257	7.406	1.518	4.980	0.959	3.145	0.281	1.50
	45.0	2.417	7.931	1.633	5.356			0.313	
	50.0	2.571	8.436	1.743	5.719			0.344	1.55
	60.0	2.864	9.396	1.955	6.414			0.406	
	67.0	3.059	10.035	2.097	6.881			0.450	
	70.0	3.140	10.302					0.468	
W	80.0	3.403	11.166					0.530	1.60
	90.0	3.656	11.995					0.591	
	100.0	3.900	12.795					0.652	
	110.0	4.136	13.571					0.713	

MegaPhase UltraPhase™ Cable (continued)

Phase vs. Temperature



Insertion Loss



MegaPhase UltraPhase™ Cable (continued)

Cable CW Power Handling

