

ULTRAPHASE™ MEGAPHASE ULTRAPHASE™ CABLE



MegaPhase Ultraphase™ Cable

Phase-Stable Performance Across Flexure & Temperature

- Foam FEP dielectric construction delivers exceptional phase stability under flexure and temperature variation
- Linear temperature performance across a wide operating range without the “knee” effect common in traditional PTFE cables
- Ideal for phased array radars, sensors, mobile backhaul, and temperature-sensitive test applications

Electrical Data

Maximum Frequency	Impedance	Propagation Velocity	Time Delay
E05: 110 GHz E08: 67 GHz	50 Ω nominal	E05: 78.7% nominal E08: 80% nominal	E05: 1.291 ns/ft. (4.236 ns/m) E08: 1.27 ns/ft. (4.167 ns/m)
Shielding Effectiveness	Dielectric Withstanding Voltage		Capacitance
-100 dB minimum (cable only)	E05: 400 VRMS E08: 1200 VRMS		E05: 25.82 pF/ft. (84.71 pF/m) E08: 25.4 pF/ft. (83.3 pF/m)

Mechanical Data

Finished Outer Diameter	Static Bend Radius	Weight	Operating Temp Range
E05: 0.056 in (1.422 mm) E08: 0.100 in (2.54 mm)	E05: 0.25 in (6.35 mm) E08: 0.35 in (8.9 mm)	E05: 1.87 grams/ft (6.14 grams/m) E08: 5.0 grams/ft (16.4 grams/m)	-85 to 329°F -65 to 165°C

Cable Construction

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

Maximum Length

35 Feet

Available Connectors

Type N, SMA, 3.5 mm, 2.92 mm, 2.4 mm
1.85mm, 1.0 mm, SMP, SMPM
Other connectors available upon request



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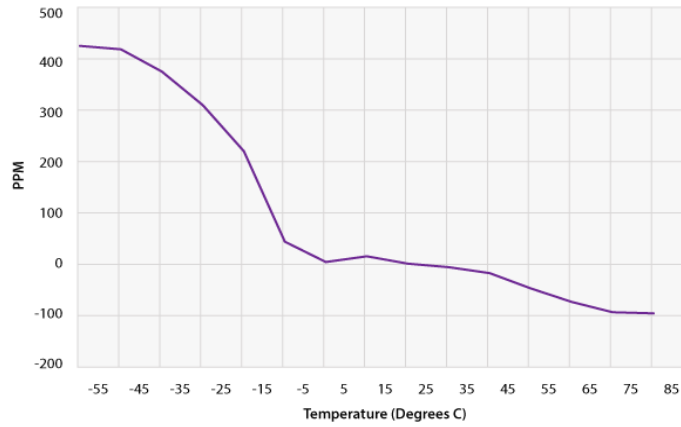
Specifications

Frequency		GE05 Series		GE08 Series		Conn Loss dB	VSWR	
Band	GHz	Attenuation		Attenuation				
		dB/ft	dB/m	dB/ft	dB/m			
UHF	0.3	0.167	0.548	0.104	0.341	0.006	1.10	
	0.5	0.217	0.711	0.135	0.443	0.009		
	0.8	0.276	0.904	0.172	0.566	0.012		
L	1.0	0.309	1.014	0.194	0.635	0.014	1.15	
S	2.0	0.442	1.451	0.279	0.915	0.024		
	2.4	0.486	1.596	0.307	1.009	0.027		
	3.0	0.547	1.793	0.347	1.137	0.032		
C	4.0	0.636	2.087	0.405	1.328	0.040		1.20
	6.0	0.789	2.588	0.505	1.658	0.055		
X	8.0	0.921	3.020	0.593	1.945	0.070	1.25	
	10.0	1.039	3.408	0.672	2.205	0.084	1.30	
	12.4	1.168	3.832	0.759	2.491	0.101		
Ku	15.0	1.297	4.255	0.847	2.779	0.118	1.35	
	18.0	1.435	4.707	0.941	3.089	0.139		
K	20.0	1.522	4.992	1.001	3.285	0.152	1.40	
	22.0	1.605	5.266	1.059	3.475	0.165		
	24.0	1.686	5.530	1.115	3.659	0.178		
	26.5	1.783	5.849	1.183	3.881	0.194		
Ka	28.0	1.839	6.035	1.223	4.011	0.204	1.45	
	30.0	1.913	6.277	1.274	4.181	0.217		
	32.0	1.985	6.513	1.325	4.347	0.230		
	34.0	2.055	6.743	1.375	4.510	0.243		
	36.0	2.124	6.969	1.423	4.669	0.256		
V	40.0	2.257	7.406	1.518	4.980	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	1.60	
	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		

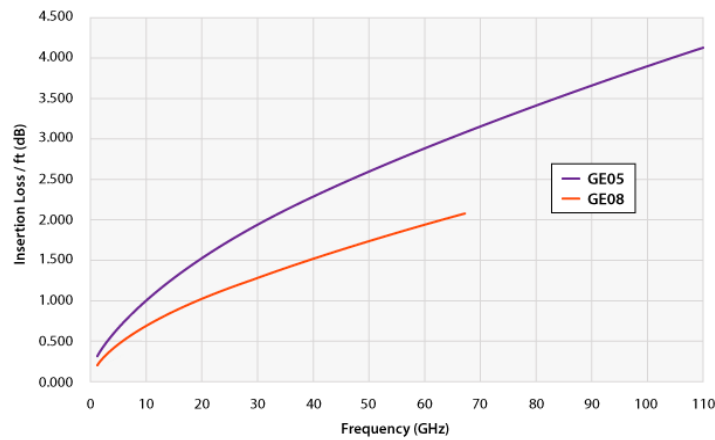


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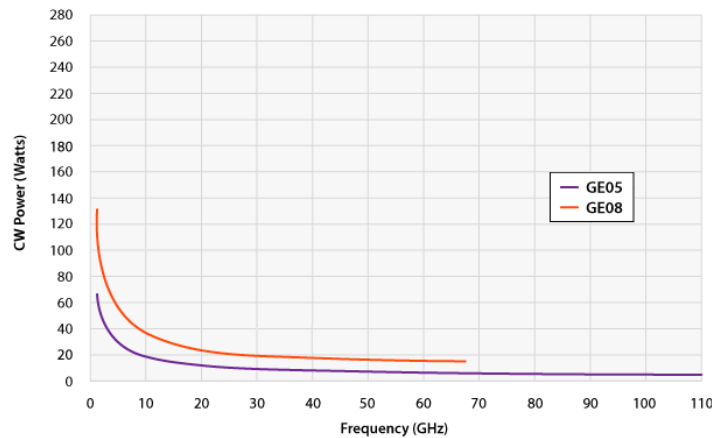
Phase vs. Temperature



Insertion Loss



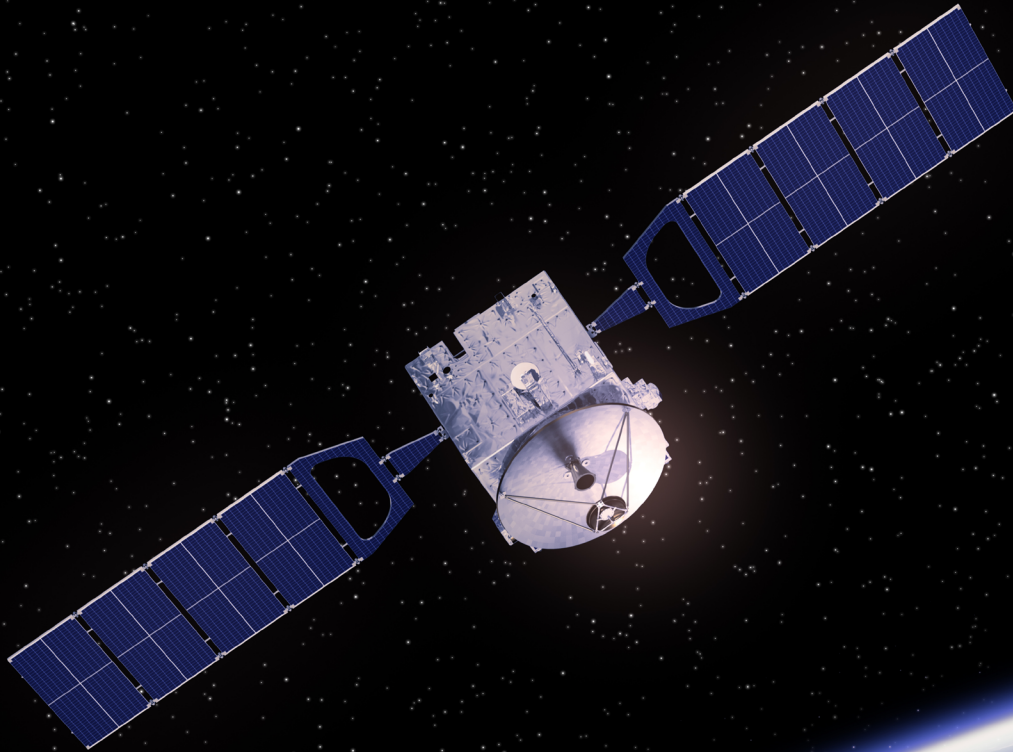
Cable CW Power Handling





MegaPhase®

With the right connection anything is possible



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About us

Founded in 1998 and headquartered in Stroudsburg, Pennsylvania, MegaPhase designs and manufactures high-performance RF coaxial cables and connectors for OEMs in critical markets including test instrumentation, defense, aerospace, telecommunications, and satellite systems. Serving more than 500 customers in 30 countries—including major technology leaders and the U.S. government—MegaPhase is best known for its industry-leading GrooveTube® technology, a breakthrough flexible cable design used in high-reliability, high-power, and phase-defined applications across ground, sea, air, and space platforms. All products are manufactured in-house, tested 100% in a state-of-the-art RF lab up to 110 GHz, and engineered to deliver exceptional phase stability, low loss, and long-term measurement repeatability, helping customers achieve more reliable results at a lower cost per measurement.

MegaPhase

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