

HyperFlex™ MEGAPHASE HYPERFLEX™ LOW LOSS



Ultra-Low Loss, Phase-Stable Performance for High-Frequency Applications

- Ultra-low insertion loss and exceptional phase stability for demanding RF and microwave systems
- Flexible, durable construction delivers reliable signal integrity and mechanical resilience in challenging environments
- Ideal for aerospace, defense, satellite, and other high-speed applications, with customizable configurations available

Electrical Data

Maximum Frequency	Impedance	Propagation Velocity	Time Delay
HFx120L: 50.0 GHz	50 Ω nominal	HFx120L: 76% nominal	HFx120L, 1.34 ns/ft (4.40 ns/m)
Shielding Effectiveness	Dielectric Withstanding Voltage		Capacitance
-110 dB minimum (cable only)	HFx120L : 900 Vrms		HFx120L: 29.1 pF/ft (95.5 pF/m)

Mechanical Data

Finished Outer Diameter	Static Bend Radius	Weight	Operating Temp. Range	Cable Construction
HFx120L: 0.110 in (2.794 mm)	HFx120L: 0.20 in (5.08 mm)	HFx120L: 7.5 grams/ft (24.60 grams/m)	-55 to +125°C	Triple Shielded FEP Outer Jacket

Available Connectors

SMA, 2.92 mm, 2.4 mm, SMP, SMPM, M8
 Other connectors available upon request



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Specifications

Frequency		HFx120L Series		VSWR	Conn. Loss dB
		Attenuation			
GHz	Band	dB/ft	dB/m		
0.3	UHF	0.104	0.341	1.10	0.006
0.5		0.135	0.443		0.009
0.8		0.172	0.566		0.012
1.0	L	0.194	0.635		0.014
2.0	S	0.279	0.915	1.15	0.024
2.4		0.307	1.009		0.027
3.0		0.347	1.137		0.032
4.0	C	0.405	1.328		0.040
6.0		0.505	1.658		0.055
8.0	X	0.593	1.945	1.20	0.070
10.0		0.672	2.205	1.25	0.084
12.4		0.759	2.491	1.30	0.101
15.0	Ku	0.847	2.779		0.118
18.0		0.941	3.089		0.139
20.0	K	1.001	3.285	1.35	0.152
22.0		1.059	3.475		0.165
24.0		1.115	3.659		0.178
26.5		1.183	3.881		0.194
28.0	Ka	1.223	4.001	1.40	0.204
30.0		1.274	4.181		0.217
32.0		1.325	4.347		0.230
34.0		1.375	4.510		0.243
36.0		1.423	4.669		0.256
40.0	V	1.518	4.980	1.45	0.281
45.0		1.633	5.356		0.313
50.0		1.743	5.719		0.344

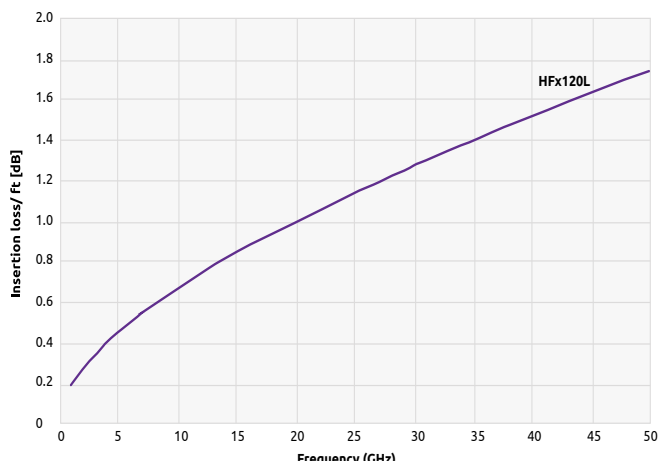
Cable	A	B	
HFx120L	0.185	0.0087	(A x $\sqrt{\text{freqGHz}}$ + B x freqGHz)

*All electrical and mechanical parameters provided within this specification are typical/nominal

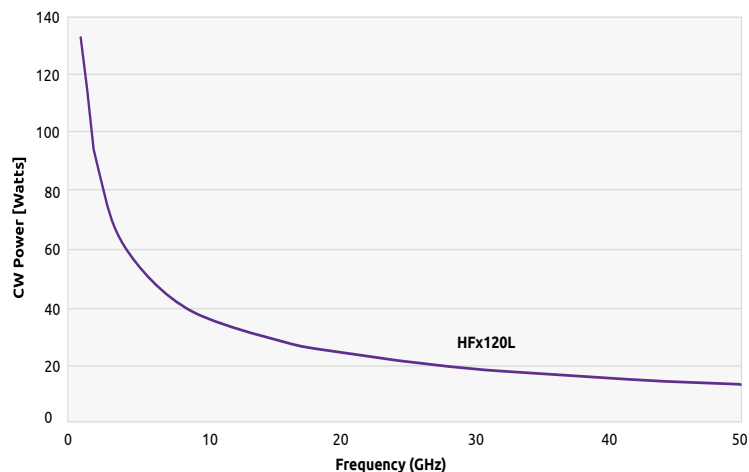


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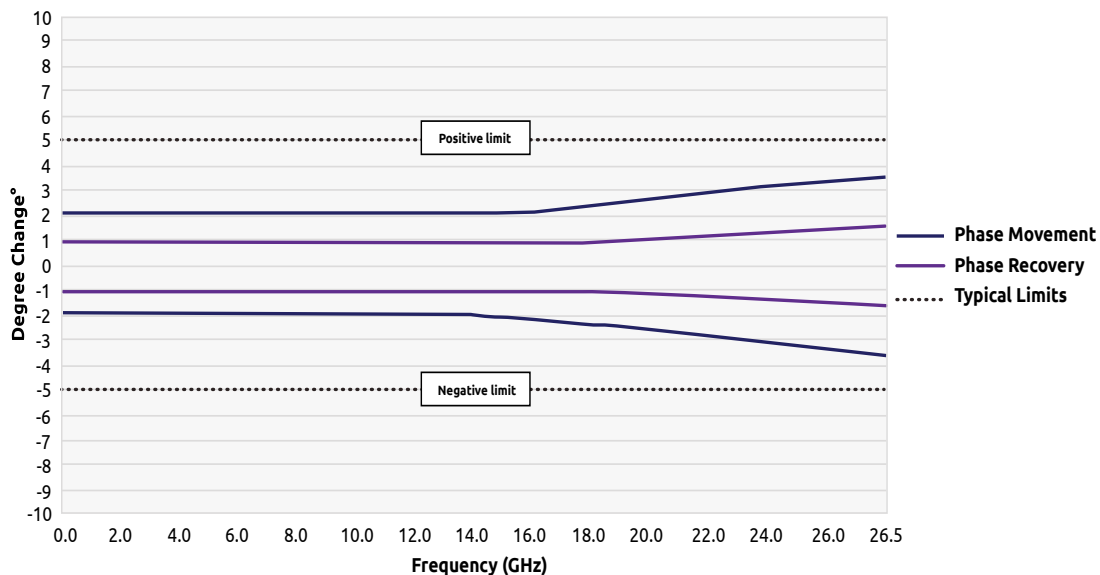
Insertion Loss



CW Power Capability 25°C at Sea Level



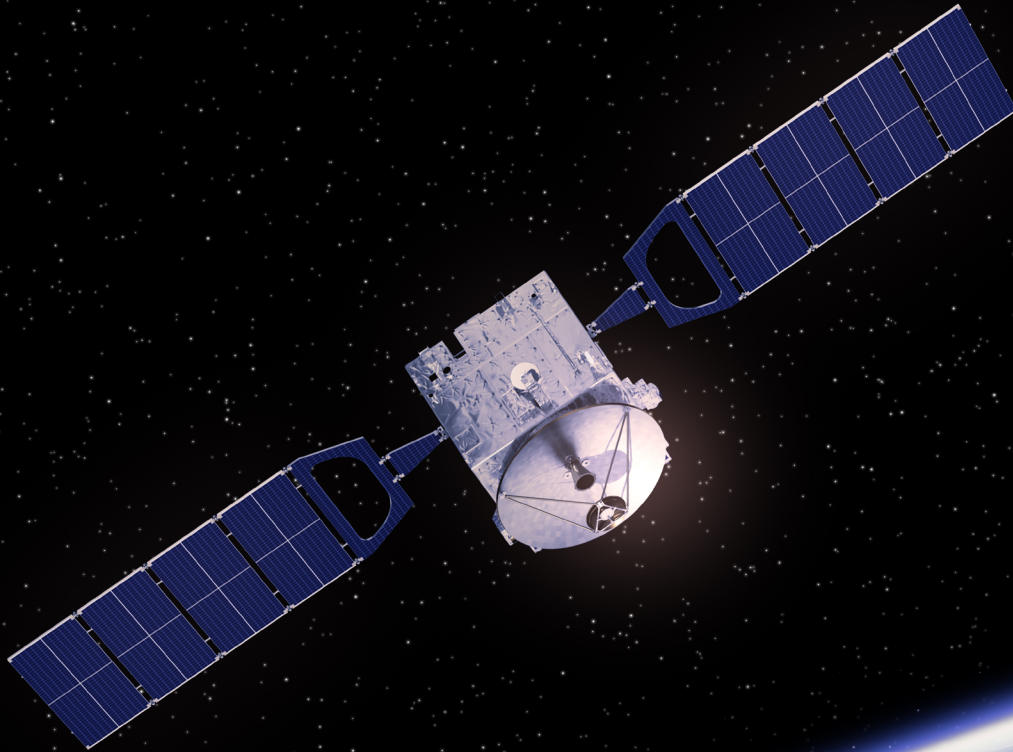
Phase Change vs. Flexure





MegaPhase®

With the right connection anything is possible



Visit us at megaphase.com

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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