



MegaPhase®

**KILLERBEE®**

## MegaPhase Killer Bee® Series Test Cables to 50 GHz Phase & Amplitude Stable Performance through Ka-Band



- Phase Stable
- Low VSWR
- Low Loss
- Armored
- Wide Variety of Connectors
- Ultra-Flexible



### Electrical Data

**Maximum Frequency:**  
50 GHz

**Impedance:**  
50  $\Omega$  nominal

**Propagation Velocity:**  
KBx 84% nominal  
KB50 80% nominal

**Time Delay:**  
KBx 1.21 ns/ft (3.97 ns/m)  
KB50 1.27ns/ft. (4.167 ns/m)

**Shielding Effectiveness:**  
-100 dB minimum (cable only)

**Dielectric Withstanding Voltage:**  
KBx 7.0 kV at 60 Hz  
KB50 1.2 kV at 60 Hz

**Capacitance:**  
KBx 24.0 pF/ft (78.7 pF/m)  
KB50 25.4 pF/ft. (83.3 pF/m)

### Mechanical Data

**Finished Outer Diameter:**  
KBx 0.360 in, nominal  
KB50 0.315 in, nominal

**Static Bend Radius:**  
KBx 1.75 in (4.445 cm)  
KB50 1.5 in (3.81 cm)

**Weight with Standard Jacket/Armor:**  
KBx 0.05 lbs/ft (0.67 kg/m)  
KB50 0.04 lbs/ft (0.060 kg/m)

**Max. Assembly Length:**  
KBx 25 ft (8 m)  
KB50 40 ft (12 m)

**Crush Resistance:**  
250 lbs/linear in (44.6 kg/linear cm)

**Operating Temp. Range:**  
-67 to 275° F (-55 to 135° C)

MegaPhase designed its Killer Bee series test cable specifically for the needs of lab technicians where precise measurements are critical. Typical applications: RF production and benchtop testing, RF instruments, and Vector network analyzers. These high-performance cables are designed for phase and amplitude stable test applications. This cable provides a long service life with repeatable performance throughout the life of the cable. A wide variety of connectors and phase matching are available.



### Cable Construction

Inner Conductor:	Solid Ag-plated Cu
Dielectric:	KBx PTFE Tape KB50 Foamed FEP
	Inner Shield Ag-plated Cu Outer Braid Shield: Ag-plated Cu
Standard Finish:	NOMEX® Braid over Polyolefin over Metal Armor

### Available Connectors

KBx SMA, Type N, TNC, 3.5mm, 2.92mm  
KB40 3.5mm, 2.92mm  
KB50 2.4mm

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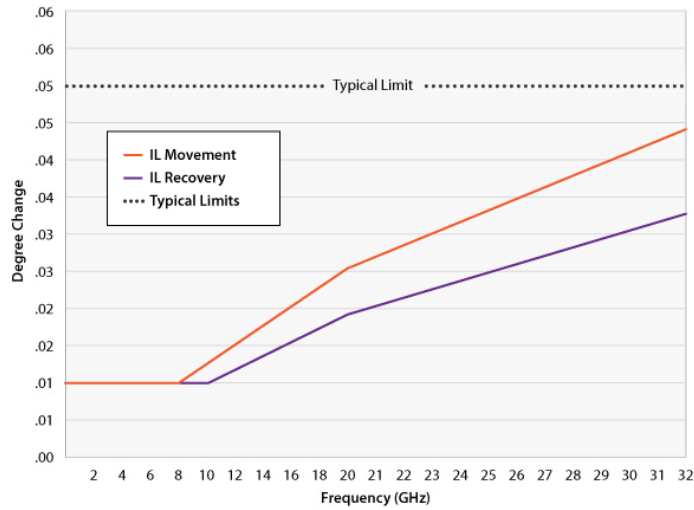
## MegaPhase Killer Bee® Test Cables to 50 GHz

Frequency		KBx		KB50		Conn Loss dB each	VSWR
		Attenuation		Attenuation			
Band	GHz	dB/ft	dB/m	dB/ft	dB/m		
UHF	0.3	0.060	0.196	0.104	0.341	0.006	1.10
	0.5	0.077	0.254	0.135	0.443	0.009	
	0.8	0.098	0.323	0.172	0.566	0.012	
L	1.0	0.110	0.362	0.194	0.635	0.014	
S	2.0	0.158	0.518	0.279	0.915	0.024	1.15
	2.4	0.174	0.570	0.307	1.009	0.027	
	3.0	0.195	0.640	0.347	1.137	0.032	
C	4.0	0.227	0.745	0.405	1.328	0.04	1.20
	6.0	0.281	0.923	0.505	1.658	0.055	
X	8.0	0.328	1.077	0.593	1.945	0.07	1.25
	10.0	0.370	1.215	0.672	2.205	0.084	
	12.4	0.416	1.366	0.759	2.491	0.101	
Ku	15.0	0.462	1.516	0.847	2.779	0.118	1.35
	18.0	0.511	1.677	0.941	3.089	0.139	
K	20.0	0.542	1.778	1.001	3.285	0.152	1.40
	22.0	0.571	1.875	1.059	3.475	0.165	
	24.0	0.600	1.969	1.115	3.659	0.178	
	26.5	0.634	2.082	1.183	3.881	0.194	
Ka	28.0	0.655	2.148	1.223	4.011	0.204	1.45
	30.0	0.681	2.233	1.274	4.181	0.217	
	32.0	0.706	2.317	1.325	4.347	0.23	
	34.0	0.731	2.398	1.375	4.510	0.243	
	36.0			1.423	4.669	0.256	
V	40.0			1.518	4.980	0.281	1.50
	45.0			1.633	5.356	0.313	
	50.0			1.743	5.719	0.344	

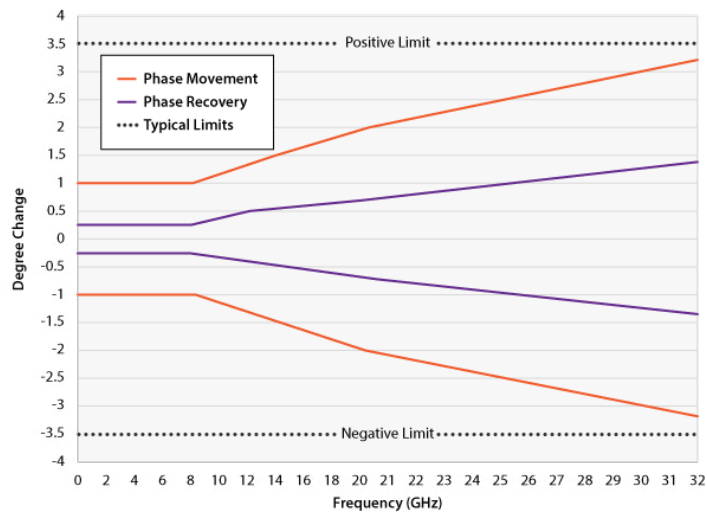
KBx includes KB4x, KB8x, KB18x, KB26x and KB34x  
 KB50 includes KB40

## MegaPhase Killer Bee® KBx Graphs

### Amplitude Change vs. Flexure



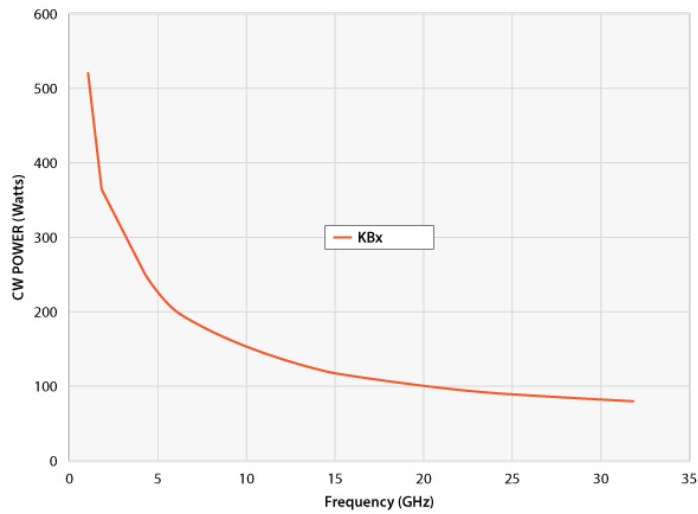
### Phase Change vs. Flexure



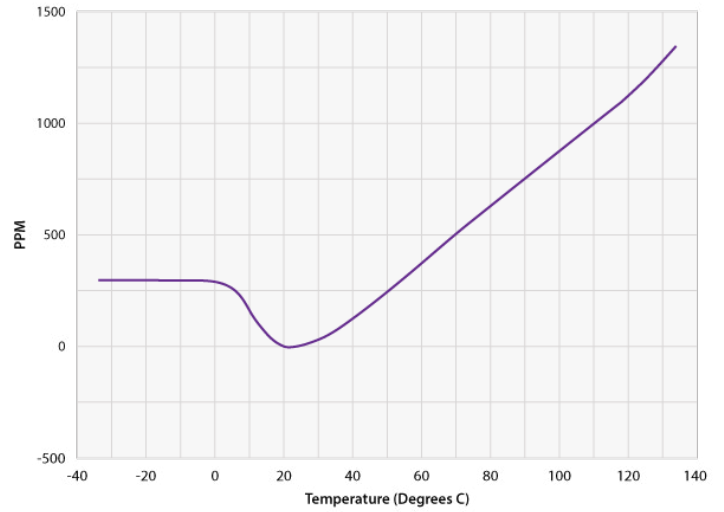


## MegaPhase Killer Bee® KBx Graphs

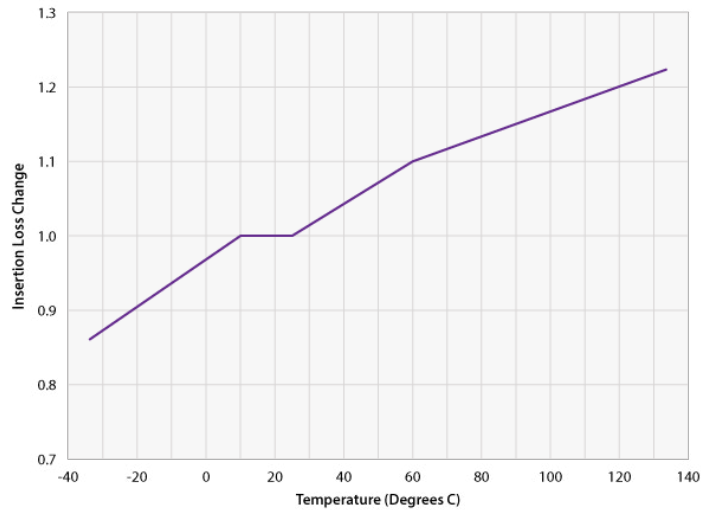
KB32x™ CW Power Capability  
25°C at Sea Level



Phase Change vs. Temperature



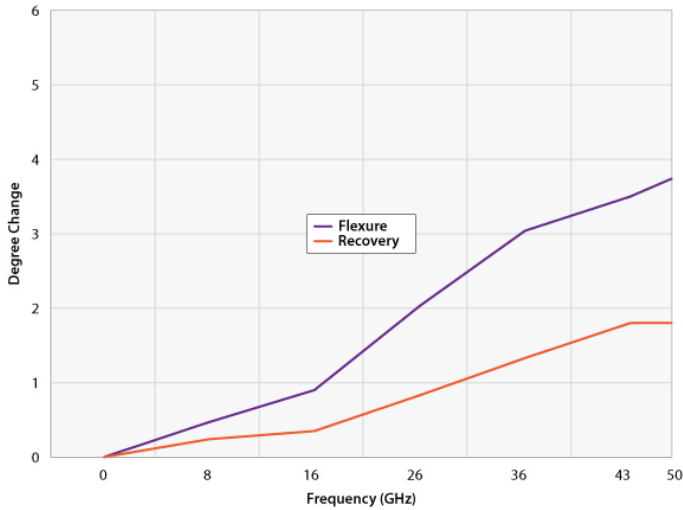
Insertion Loss vs. Temperature



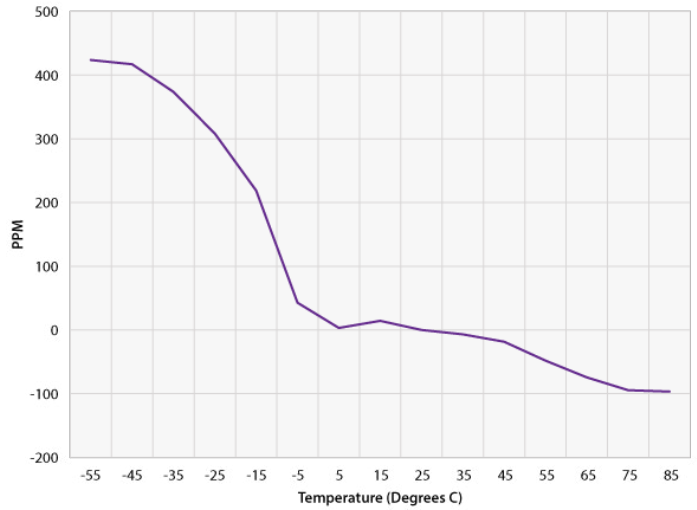


## MegaPhase Killer Bee<sup>®</sup> Series Test Cables to 50 GHz

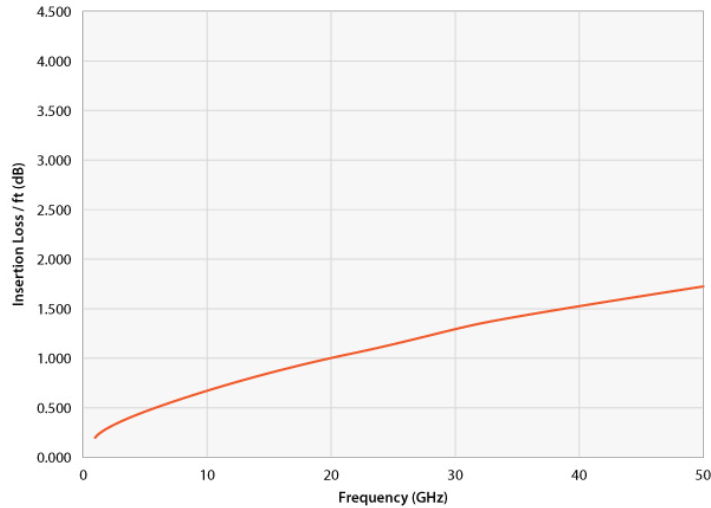
### Phase vs. Flexure



### Phase vs. Temperature



### Insertion Loss



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