KILLER BEE®

MEGAPHASE KILLER BEE® SERIES TEST CABLES TO 50 GHZ

VN Series Test Cables to 50 GHz

Mechanically Stable, Low-Loss Performance for Repeatable RF Testing & Calibration

- Phase stable with minimal change in insertion loss and VSWR during flexure for repeatable, high-accuracy measurements
- Armored construction with reinforced ends ensures long service life in rigorous test environments
- Available in custom lengths, phase-matched configurations, and a wide variety of connector options, including ruggedized NMD

Electrical Data

Maximum Frequency	Impedance	Propagation Velocity	Time Delay
50 GHz	50 Ω nominal	KBx 84% nominal KB50 80% nominal	KBx 1.21 ns/ft (3.97 ns/m) KB50 1.27ns/ft. (4.167 ns/m)

Shielding Effectiveness	Dielectric Withstanding Voltage	Capacitance
-100 dB minimum (cable only)	KBx 7.0 kV at 60 Hz KB50 1.2 kV at 60 Hz	KBx 24.0 pF/ft (78.7 pF/m) KB50 25.4 pF/ft (83.3 pF/m)

Mechanical Data

Finished Outer Diameter	Static Bend Radius	Weight with Standard Jacket/Armor
KBx 0.360 in, nominal KB50 0.315 in, nominal	KBx 1.75 in (4.445 cm) KB50 1.5 in (3.81 cm)	KBx 0.05 lbs/ft (0.67 kg/m) KB50 0.04 lbs/ft (0.060 kg/m)

Max Assembly Length	Crush Resistance	Operating Temp Range
KBx 25 ft (8 m) KB50 40 ft (12 m)	250 lbs/linear in (44.6 kg/linear cm)	-67 to 275°F (-55 to 135°C)

Cable Construction

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

Available Connectors

KBx SMA, Type N, TNC, 3.5 mm, 2.92 mm
KB40 3.5 mm, 2.92 mm
KB50 2.4 mm
Other connectors available upon request

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

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Specifications

Frequency		KBx Attenuation		KB50 Attenuation		Conn Loss dB each	VSWR
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	0.040	
	6.0	0.281	0.923	0.505	1.658	0.055	
X	8.0	0.328	1.077	0.593	1.945	0.070	1.20
	10.0	0.370	1.215	0.672	2.205	0.084	1.25
	12.4	0.416	1.366	0.759	2.491	0.101	1.30
Ku	15.0	0.462	1.516	0.847	2.779	0.118	
	18.0	0.511	1.677	0.941	3.089	0.139	1.35
K	20.0	0.542	1.778	1.001	3.285	0.152	
	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	1.40
	30.0	0.681	2.233	1.274	4.181	0.217	
	32.0	0.706	2.317	1.325	4.347	0.230	
	34.0	0.731	2.398	1.375	4.510	0.243	1.45
	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	1.55

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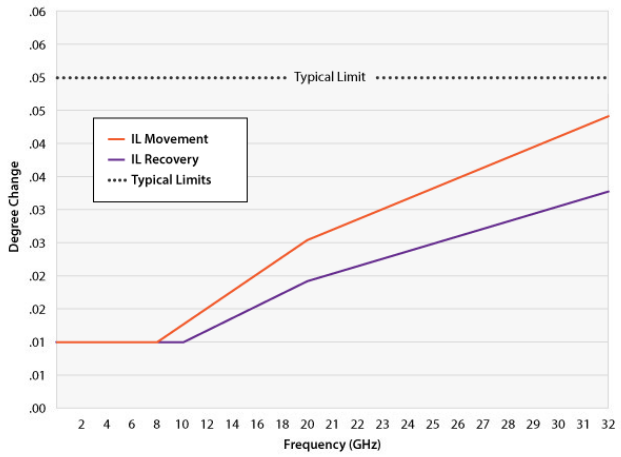
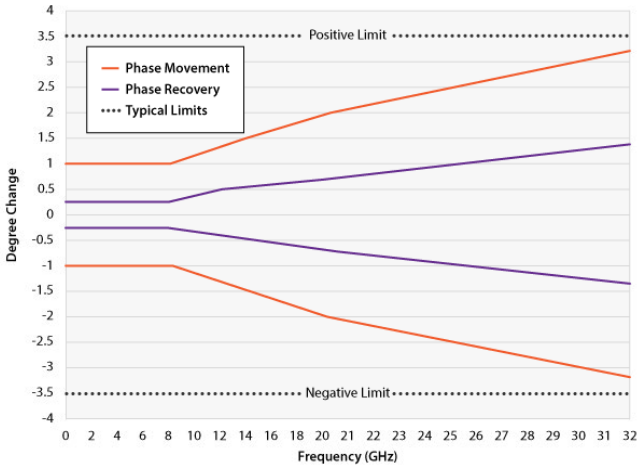
MEGAPHASE KILLER BEE® KBX GRAPHS

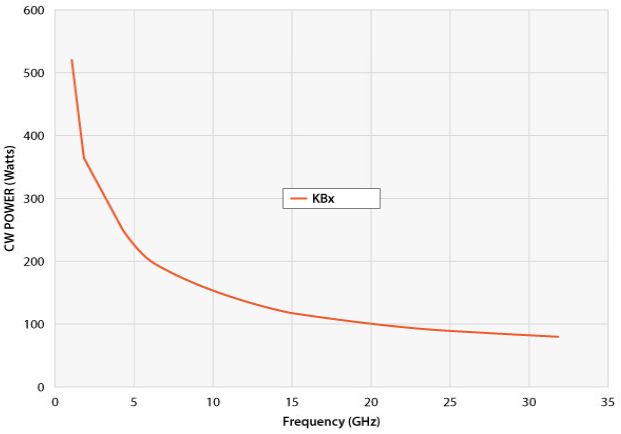
Amplitude Change vs. Flexure



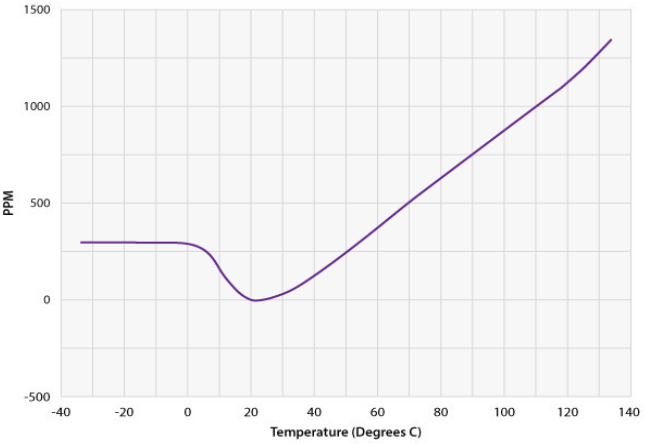
Phase Change vs. Flexure



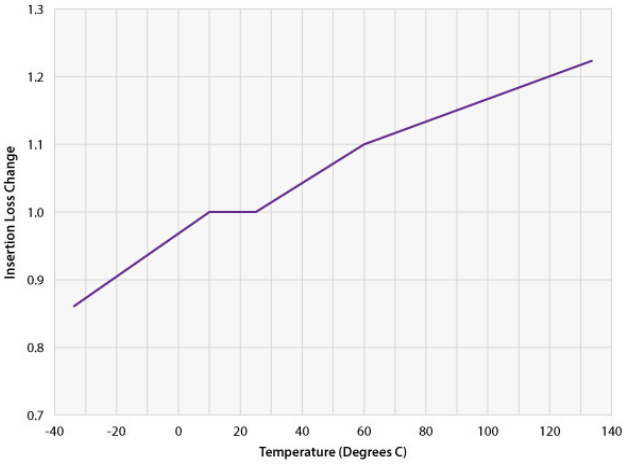
KB32x™ CW Power Capability 25°C at Sea Level



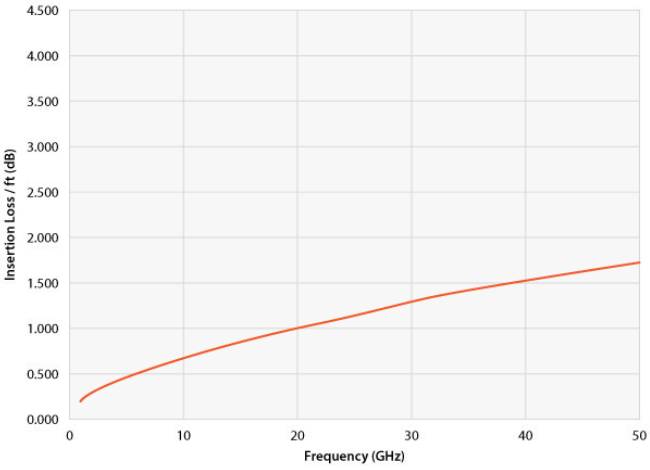
Phase Change vs. Temperature



Insertion Loss vs. Temperature



Insertion Loss



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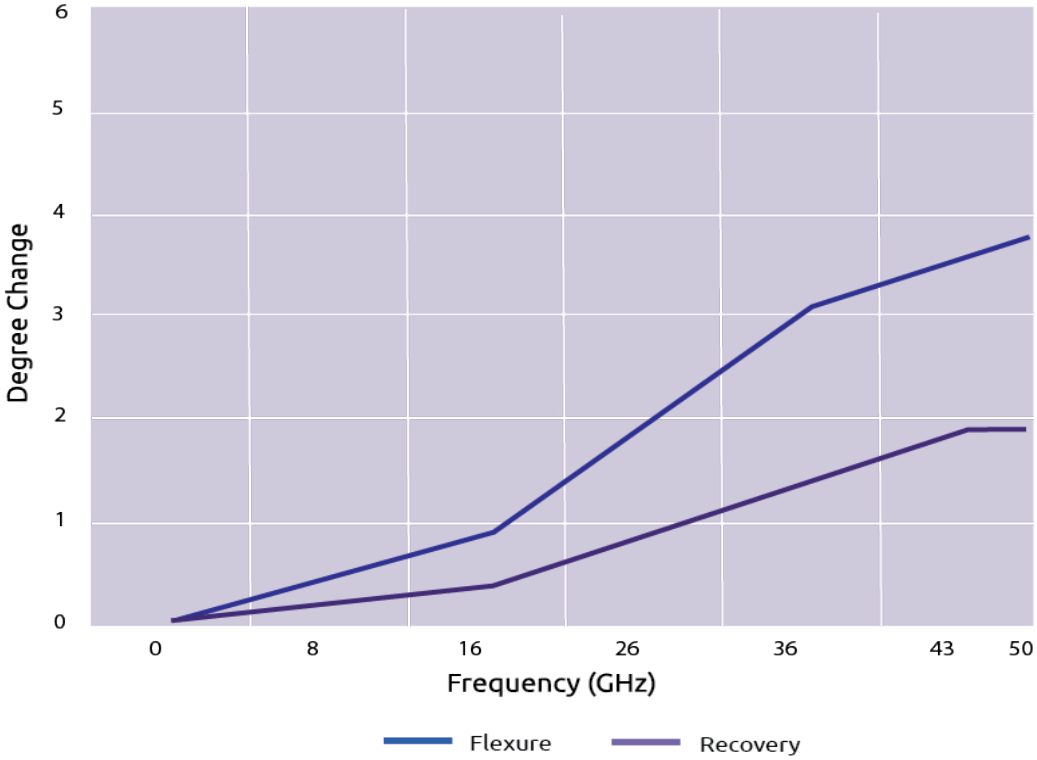
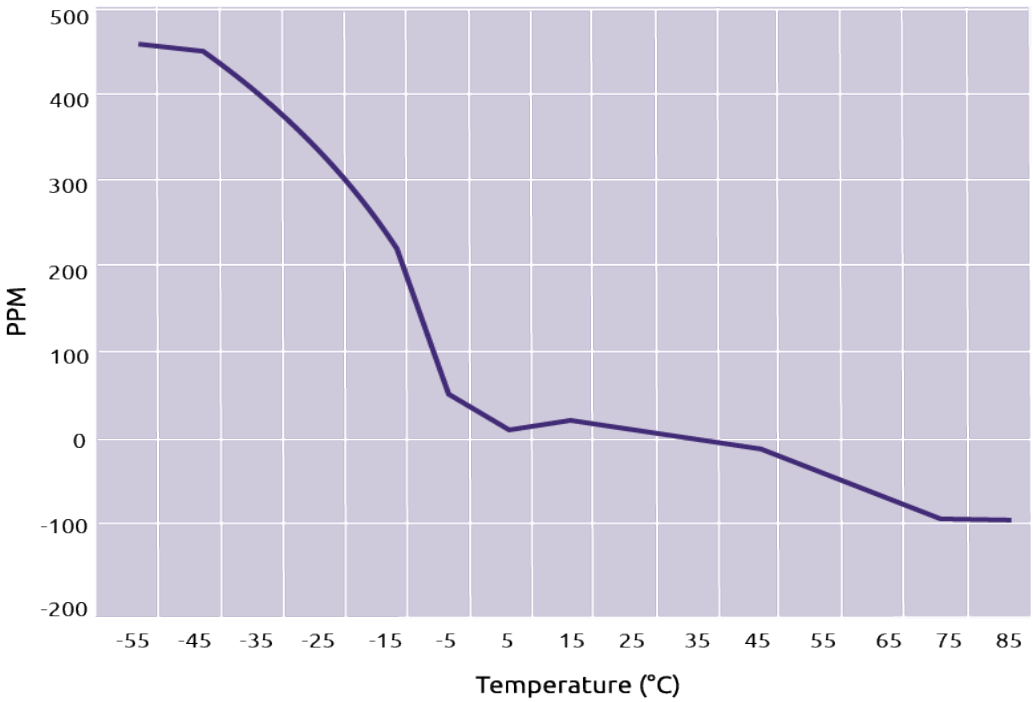
Phase vs. Flexure



Phase vs. Temperature



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MegaPhase

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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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