MegaPhase

With the right connections, anything is possible.

The Warrior Cable® to 50 GHz

Rugged and Crush-Proof – When Downtime is Not an Option

- Soldier Proof Solution
- Stable Under Vibration and Abuse
- Crush Resistant to 250 lbs/linear in (45 kg/linear cm)
- Rugged GrooveTube® Technology
- Proprietary Pull-Resistant Connector Design
- Jacketed to withstand the elements, including chemicals.

The MegaPhase Warrior Cable® is a combat proven, "soldier proof" solution ideal for ground-based EW and ECM. This cable is internally armored with GrooveTube® Technology, a crush-proof outer conductor, surviving in the harshest conditions including salt, fog, humidity, dust, sand, vibration, and flexure.

Electrical Data

Maximum Frequency:
520- 32 GHz
520x- 50 GHz

Impedance:
50 Ω nominal

Propagation Velocity:
520 - 69% nominal
520x - 80% nominal

Time Delay:
520 - 1.47 ns/ft (4.82 ns/m)
520x - 1.27 ns/ft (4.167 ns/m)

Shielding Effectiveness:
-110 dB minimum (cable only)

Dielectric Withstanding Voltage:
520 - 10 kV at 60 Hz
520x - 1.2 kV at 60 Hz

Capacitance:
520 - 29.0 pF/ft (95.1 pF/m)
520x - 25.4 pF/ft (88.3 pF/m)

Mechanical Data

Finished Outer Diameter:
520: 0.330 in (0.838 cm)

Static Bend Radius:
520: 1.5 in (3.81 cm)

Weight with Standard Jacket/Armor:
520: 0.05 lbs/ft (0.067 kg/m)

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

Operating Temp. Range:
-67 to 275° F (-55 to 135° C)
Above 185° F (85° C) use "T" designation

Cable Construction

Inner Conductor:		Solid Ag-plated Cu
Dielectric:	520	Solid PTFE
	520x	Foamed FEP
Outer Conductor:	520	GrooveTube® Cu
	520x	Solid Ag-plated Cu Foil/Braid
Standard Finish:		Neoprene over Metallic Braid

(a wide variety of other protective finishes and armors available)

Available Connectors

520: 1.85 mm, 2.4 mm, 2.9mm, 3.5mm, 7mm, 7-16 DIN, BNC, SMA, TNC, Type N, ZMA, ZN

(maximum frequency dependent on cable; other connectors available)

Additional Information

All Warrior cable assemblies are tested 100% for S-Parameters and each assembly is serialized. Standard test data includes VSWR and insertion loss. Additional testing options will be quoted upon request. Full traceability is available for each cable assembly.

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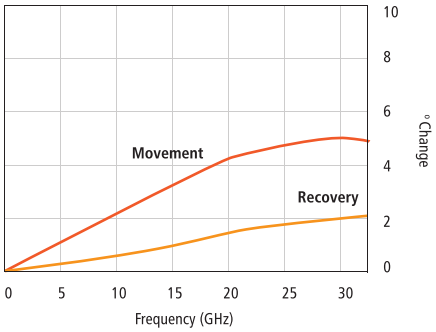
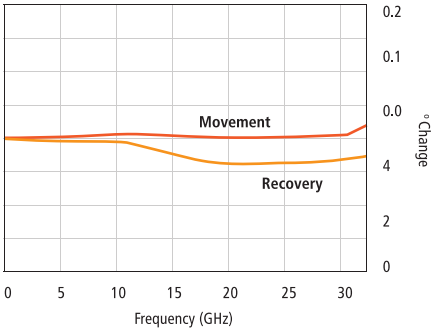
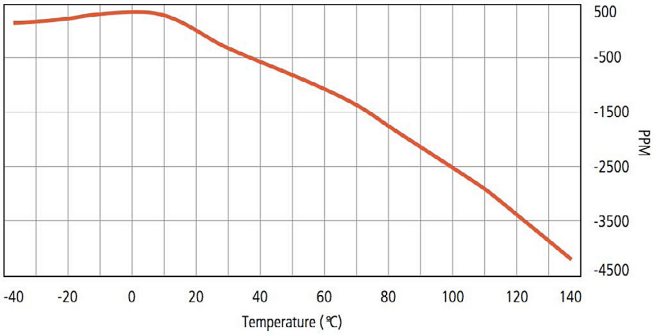
520 Phase Change vs Flexure



520 Insertion Loss vs Flexure



520 Phase Change vs Temperature



Specifications

Frequency		520		520x		Conn Loss dB	VSWR
		Attenuation		Attenuation			
Band	GHz	dB/ft	dB/m	dB/ft	dB/m		
UHF	0.3	0.062	0.203	0.104	0.341	0.006	1.10
	0.5	0.082	0.268	0.135	0.443	0.009	
	0.8	0.106	0.348	0.172	0.566	0.012	
L	1.0	0.120	0.394	0.194	0.635	0.014	
S	2.0	0.178	0.585	0.279	0.915	0.024	1.15
	2.4	0.199	0.652	0.307	1.009	0.027	
	3.0	0.227	0.744	0.347	1.137	0.032	
C	4.0	0.270	0.885	0.405	1.328	0.040	
	6.0	0.347	1.138	0.505	1.658	0.055	
X	8.0	0.417	1.367	0.593	1.945	0.070	1.20
	10.0	0.482	1.580	0.672	2.205	0.084	1.25
	12.4	0.555	1.822	0.759	2.491	0.101	1.30
Ku	15.0	0.631	2.070	0.847	2.779	0.118	
	18.0	0.715	2.345	0.941	3.089	0.139	1.35
K	20.0	0.769	2.522	1.001	3.285	0.152	
	22.0	0.821	2.695	1.059	3.475	0.165	
	24.0	0.873	2.865	1.115	3.659	0.178	
	26.5	0.937	3.073	1.183	3.881	0.194	1.40
Ka	28.0	0.974	3.196	1.223	4.011	0.204	
	30.0	1.024	3.358	1.274	4.181	0.217	
	32.0	1.072	3.518	1.325	4.347	0.230	
	34.0		3.676	1.375	4.510	0.243	1.45
	36.0		3.833	1.423	4.669	0.256	
V	40.0		4.141	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

*520 includes TV26, TV18, TV8, TV4
**520x includes TV40, TV34

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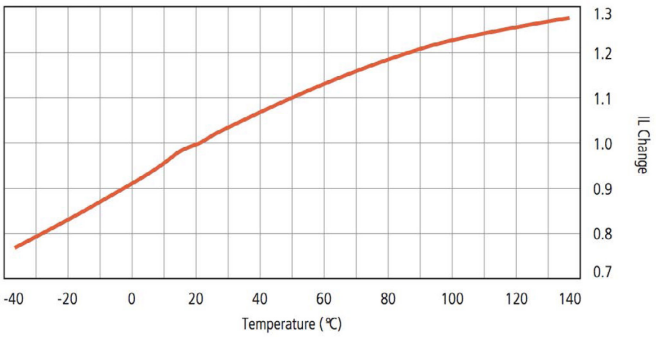
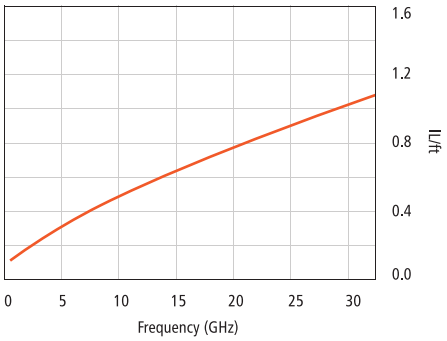
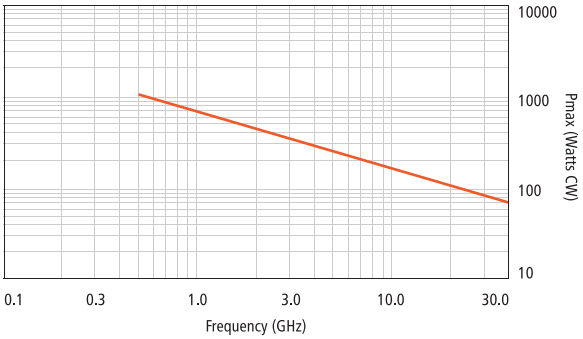
520 Insertion Loss vs Temperature



520 Insertion Loss



520 Cable CW Power Handling



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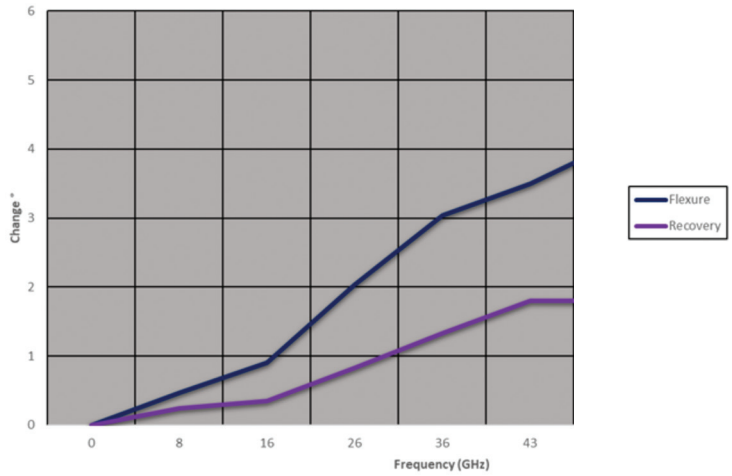
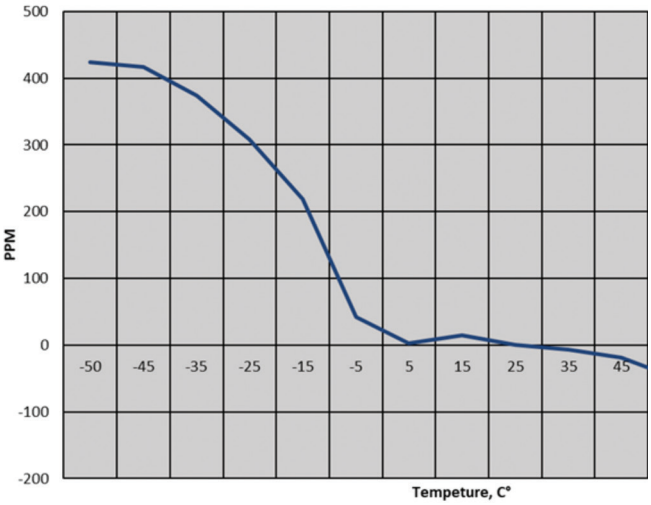
520x Phase vs. Flexures



520x Phase vs. Temperature



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