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: 50.0 GHz

Impedance:
50 Ω nominal

Propagation Velocity:
69% nominal

Time Delay:
1.47 ns/ft (4.82 ns/m)

Shielding Effectiveness:
-110 dB minimum (cable only)

Dielectric Withstanding Voltage:
520: 10 kV at 60 Hz

Capacitance:
29.0 pF/ft (95.1 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:	PTFE Tape
Outer Conductor:	GrooveTube® Cu
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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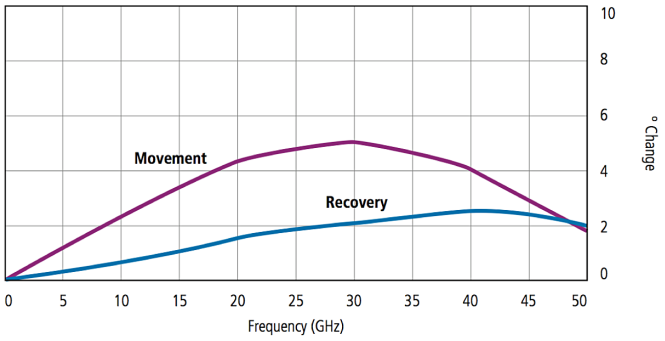
Specifications

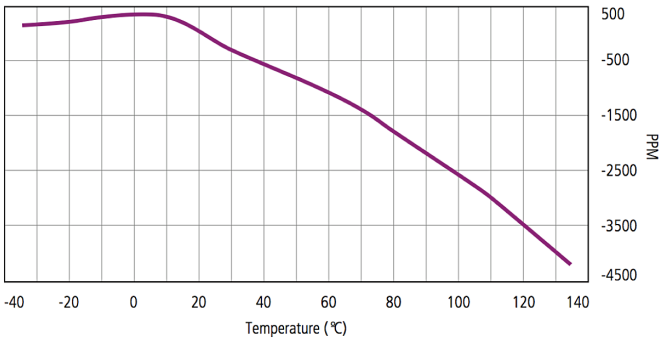
Frequency		520 Attenuation		Conn. Loss dB	VSWR
GHz	Band	dB/ft	dB/m		
0.3	UHF	0.062	0.203	0.006	1.10
0.5		0.082	0.268	0.009	
0.8		0.106	0.348	0.012	
1.0	L	0.120	0.394	0.014	
2.0	S	0.178	0.585	0.024	1.15
2.4		0.199	0.652	0.027	
3.0		0.227	0.744	0.032	
4.0	C	0.270	0.885	0.040	1.20
6.0		0.347	1.138	0.055	
8.0	X	0.417	1.367	0.070	
10.0		0.482	1.580	0.084	1.25
12.4		0.555	1.822	0.101	1.30
15.0	Ku	0.631	2.070	0.118	
18.0		0.715	2.345	0.139	
20.0	K	0.769	2.522	0.152	
22.0		0.821	2.695	0.165	
24.0		0.873	2.865	0.178	
26.5		0.937	3.073	0.194	1.35
28.0	Ka	0.974	3.196	0.204	
30.0		1.024	3.358	0.217	
32.0		1.072	3.518	0.230	
34.0		1.121	3.676	0.243	1.40
36.0		1.168	3.833	0.256	
40.0		1.262	4.141	0.281	1.45
45.0	Q	1.377	4.518	0.313	
50.0	V	1.490	4.888	0.344	1.50

Note: Typical Insertion Loss dB = (Attenuation)(Length) + 2(Conn. Loss)
Attenuation at any frequency = 520: (0.10506 x √freq GHz) + (0.01494 x freq GHz)

Phase Change vs. Flexure



Phase Change vs. Temperature



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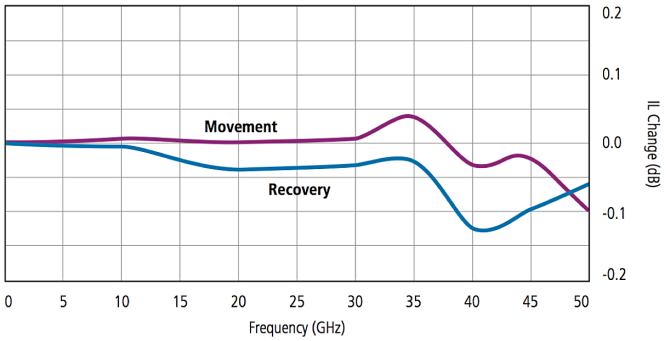
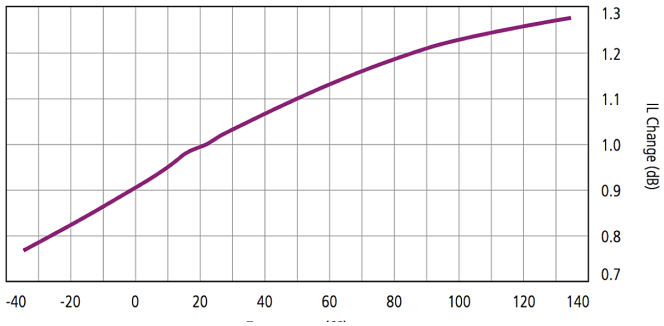
Insertion Loss vs. Flexure

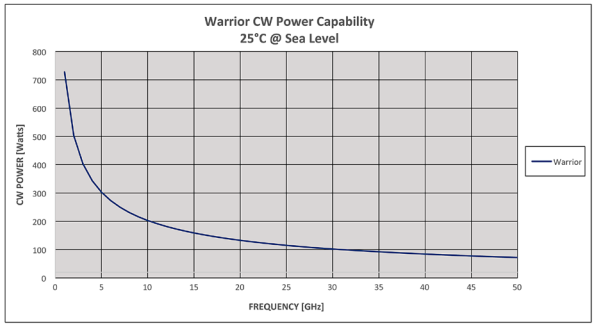


Insertion Loss vs. Temperature



Insertion Loss

Cable CW Power Handling



Note: Data at ambient temperature and sea level. Power handling of a cable assembly is also connector dependent and includes variables such as altitude, temperature and system VSWR. See website for connector power handling standards, including altitude, temperature and VSWR derating.

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