

THE WARRIOR CABLE®

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)

MegaPhase standard connectors are designed using passivated 303 Stainless Steel. These designs pass Salt Spray testing in accordance with Mil-Std-202 Method 101 condition C. MegaPhase suggests for more stringent environments the use of 303 Stainless Steel Gold plated connectors, this must be requested at the time of quoting.

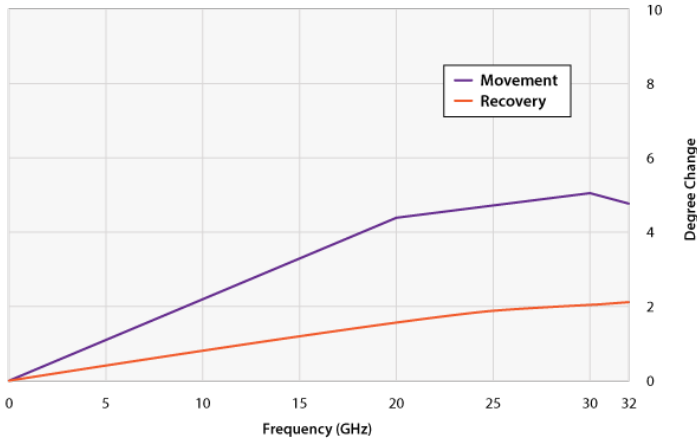
122 Banner Road, Stroudsburg, PA 18360-6433

Tel: 570-424-8400

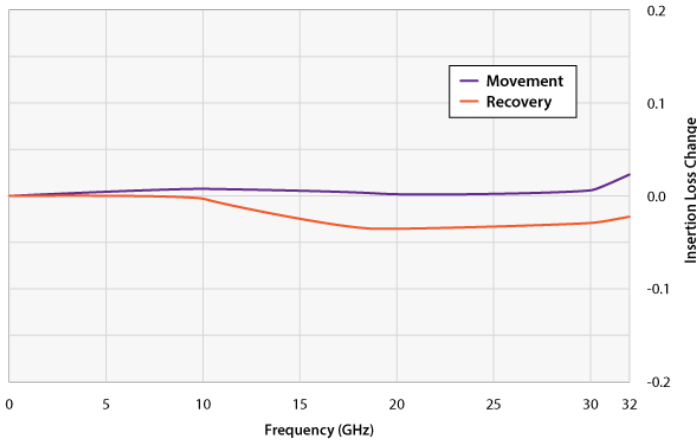
Solutions@MegaPhase.com | www.MegaPhase.com

The Warrior Cable® to 50 GHz (continued)

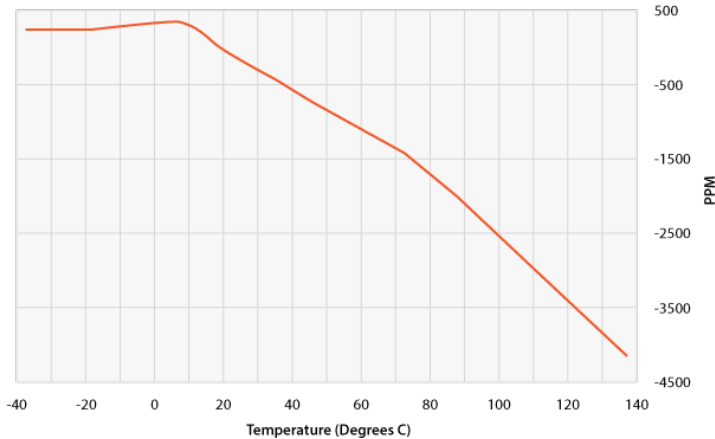
520 Phase Change vs Flexure



520 Insertion Loss vs Flexure



520 Phase Change vs Temperature



Additional Information

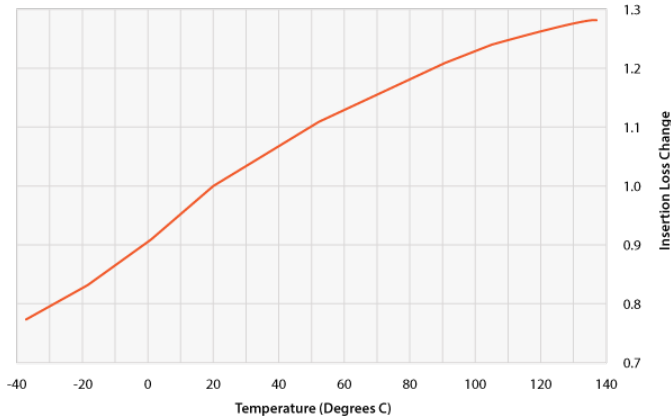
All Warrior cable assemblies are tested 100% for S-Parameters and each assembly is serialized. Standard test data includes VSWR and insertion loss. Additional testing options will be quoted upon request. Full traceability is available for each cable assembly.

Specifications

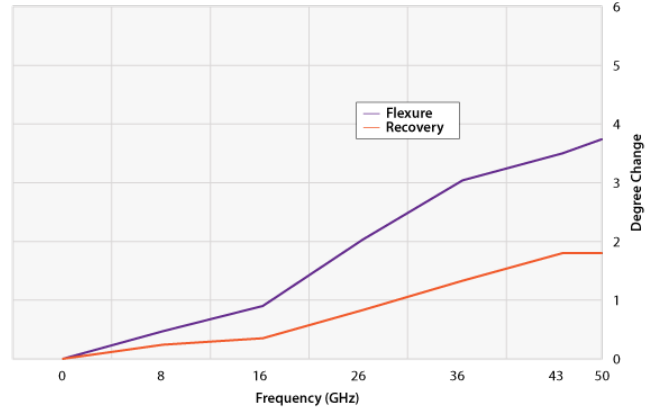
| Frequency | | 520 | | 520x | | Conn Loss dB | VSWR |
|-----------|------|-------------|-------------|-------------|-------------|--------------|------|
| | | Attenuation | Attenuation | Attenuation | Attenuation | | |
| Band | GHz | dB/ft | dB/m | dB/ft | dB/m | | |
| UHF | 0.3 | 0.062 | 0.203 | 0.104 | 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 | |
| K | 20.0 | 0.769 | 2.522 | 1.001 | 3.285 | 0.152 | 1.35 |
| | 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 | |
| Ka | 28.0 | 0.974 | 3.196 | 1.223 | 4.011 | 0.204 | 1.40 |
| | 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 | |
| | 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 | |

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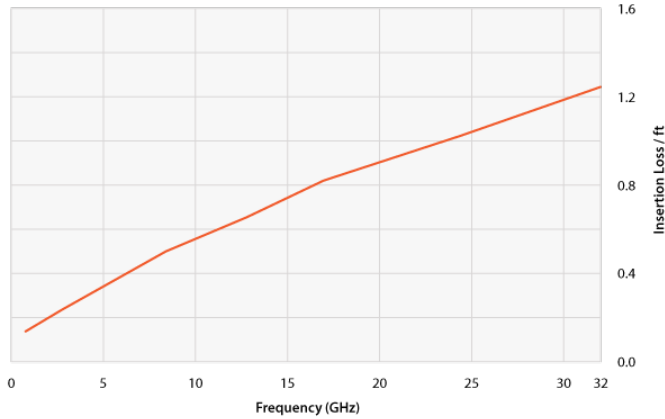
520 Insertion Loss vs Temperature



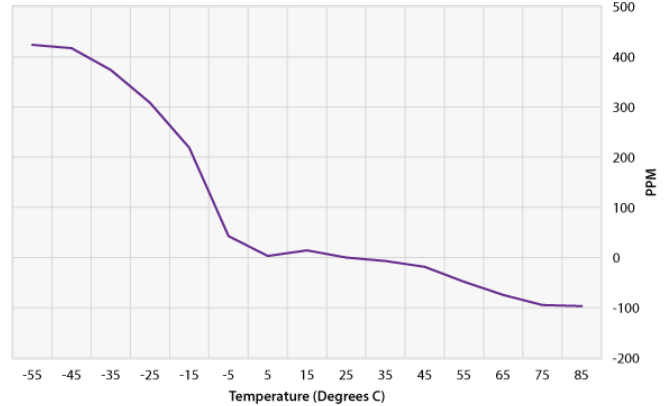
520x Phase vs. Flexures



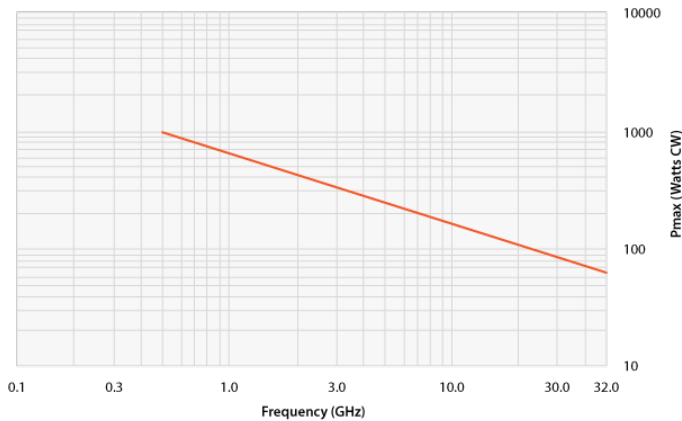
520 Insertion Loss



520x Phase vs. Temperature



520 Cable CW Power Handling



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