



SURVIVOR™

Survivor™ Ruggedized Cables to 50 GHz

Low Loss Armored Cables for Rigorous Environments



- Crush Resistant
- Low Loss Robust Connector Termination
- Stainless Steel Armor
- Robust Connector Termination
- Wide Variety of Connectors

The Survivor™ cable assemblies employ a low loss cable inside a light weight stainless steel armor to survive rigorous installation conditions through 50 GHz. These low density dielectric cables are designed to handle rigorous test environments and provide high crush resistance for applications including outdoor antenna testing, production test, and lab test.

The Survivor™ cables are cost effective and available with Type N, SMA, 3.5mm, 2.92mm, 2.4mm, and 1.85mm connectors.

Electrical Data

Maximum Frequency:

NC11: 50.0 GHz
NC12: 40.0 GHz
NC19: 26.5 GHz
NC29: 18.0 GHz

Impedance:

50 Ω nominal

Propagation Velocity:

NC11: 84% nominal
NC12: 84% nominal
NC19: 84% nominal
NC29: 84% nominal

Time Delay:

NC11: 1.21 ns/ft (3.97 ns/m)
NC12: 1.21 ns/ft (3.97 ns/m)
NC19: 1.21 ns/ft (3.97 ns/m)
NC29: 1.21 ns/ft (3.97 ns/m)

Shielding Effectiveness:

-110 dB minimum (cable only)

Dielectric Withstanding Voltage:

NC11: 5 kV at 60 Hz
NC12: 5 kV at 60 Hz
NC19: 10.0 kV at 60 Hz
NC29: 15.0 kV at 60 Hz

Capacitance:

NC11: 24.4 pF/ft (80.1 pF/m)
NC12: 24.4 pF/ft (80.1 pF/m)
NC19: 24.4 pF/ft (80.1 pF/m)
NC29: 24.4 pF/ft (80.1 pF/m)

Mechanical Data

Finished Outer Diameter:

NC11: 0.275 in (0.698 cm)
NC12: 0.275 in (0.699 cm)
NC19: 0.400 in (1.016 cm)
NC29: 0.575 in (1.461 cm)

Static Bend Radius:

NC11: 1.75 in (4.44 cm)
NC12: 1.75 in (4.445 cm)
NC19: 2.50 in (6.35 cm)
NC29: 3.00 in (7.62 cm)

Weight with Standard Jacket/Armor:

NC11: 0.075 lbs/ft (0.119 kg/m)
NC12: 0.080 lbs/ft (0.1191 kg/m)
NC19: 0.145 lbs/ft (0.216 kg/m)
NC29: 0.220 lbs/ft (0.327 kg/m)

Crush Resistance:

500 lbs/linear in.

Operating Temp. Range:

-85 to 392° F (-65 to 200° C)



Survivor™ Ruggedized Cables to 50 GHz (continued)

Cable Construction

Inner Conductor: Solid Ag-plated Cu
 Dielectric: PTFE Tape
 Outer Conductor: Ag-plated Cu Strip/
 Ag-plated Cu
 Flat Braid
 Standard Finish: Neoprene over
 Metal Armor
 Maximum Length: 35 Feet

Available Connectors

NC12: 1.85mm, 2.4mm, 2.92mm, 3.5mm,
 SMA, TNC, Type N
 NC19: 3.5mm, BNC, SMA, TNC, Type N
 NC29: 7-16 DIN, SMA, TNC, Type N

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.

Specifications

Frequency		NC11 Series		NC12 Series		NC19 Series		NC29 Series		VSWR	Conn. Loss dB
GHz	Band	Attenuation		Attenuation		Attenuation		Attenuation			
		dB/ft	dB/m	dB/ft	dB/m	dB/ft	dB/m	dB/ft	dB/m		
0.3	UHF	0.074	0.242	0.060	0.196	0.036	0.119	0.029	0.095	1.10	0.006
0.5		0.095	0.313	0.077	0.254	0.047	0.154	0.038	0.124		0.009
0.8		0.098	0.396	0.098	0.323	0.060	0.196	0.048	0.157		0.012
1.0	L	0.121	0.443	0.110	0.362	0.067	0.220	0.054	0.177	1.15	0.014
2.0	S	0.135	0.629	0.158	0.518	0.096	0.315	0.077	0.253		0.024
2.4		0.174	0.690	0.174	0.570	0.105	0.346	0.085	0.279		0.027
3.0	C	0.192	0.772	0.195	0.640	0.119	0.389	0.096	0.314	0.032	
4.0		0.210	0.893	0.227	0.745	0.138	0.453	0.111	0.365	0.040	
6.0	X	0.235	1.098	0.281	0.923	0.171	0.562	0.138	0.454	1.20	0.055
8.0		0.388	1.272	0.328	1.077	0.200	0.656	0.162	0.531		0.070
10.0		0.434	1.425	0.370	1.215	0.226	0.740	0.183	0.600		1.25
12.4	Ku	0.485	1.592	0.416	1.366	0.254	0.832	0.206	0.676	1.30	0.101
15.0		0.535	1.755	0.462	1.516	0.282	0.924	0.229	0.752		0.118
18.0	K	0.588	1.928	0.511	1.677	0.312	1.023	0.254	0.833	1.35	0.139
20.0		0.620	2.036	0.542	1.778	0.331	1.085	-	-		0.152
22.0		0.652	2.138	0.571	1.875	0.349	1.145	-	-		0.165
24.0	Ka	0.682	2.237	0.600	1.969	0.366	1.202	-	-	1.40	0.178
26.5		0.718	2.355	0.635	2.082	0.388	1.272	-	-		0.194
28.0	V	0.739	2.423	0.655	2.148	-	-	-	-	1.45	0.204
30.0		0.766	2.512	0.681	2.233	-	-	-	-		0.217
32.0		0.792	2.598	0.706	2.317	-	-	-	-		0.230
34.0	V	0.817	2.681	0.731	2.398	-	-	-	-	1.50	0.243
36.0		0.842	2.762	0.755	2.478	-	-	-	-		0.256
40.0	V	0.890	2.919	0.803	2.633	-	-	-	-	1.50	0.281
45.0		0.946	3.104								0.313
50.0		1.000	3.281								0.344

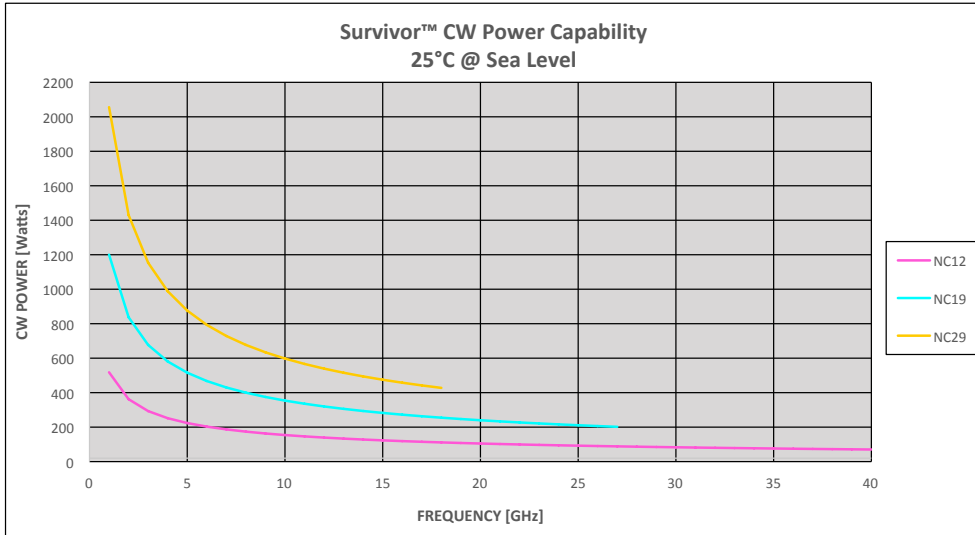
Note: Typical Insertion Loss dB = (Attenuation)(Length) + 2(Conn. Loss)
 Attenuation at any frequency = NC12: $(0.1073 \times \sqrt{\text{freqGHz}}) + (0.0031 \times \text{freqGHz})$;
 NC19: $(0.065 \times \sqrt{\text{freqGHz}}) + (0.002 \times \text{freqGHz})$;
 NC29: $(0.052 \times \sqrt{\text{freqGHz}}) + (0.00185 \times \text{freqGHz})$

122 Banner Road, Stroudsburg, PA 18360-6433
 Tel: 570-424-8400

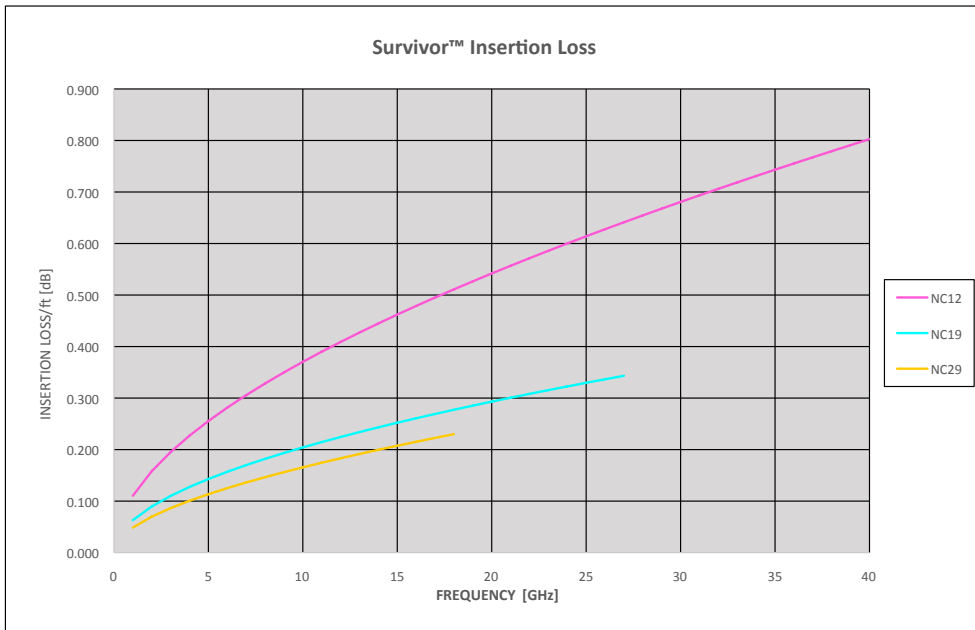
Solutions@MegaPhase.com | www.MegaPhase.com

Survivor™ Ruggedized Cables to 50 GHz (continued)

Cable CW Power Handling



Insertion Loss



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.