



With the right connections,  
anything is possible.

## Survivor™ Ruggedized Cables to 40 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 40 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:**

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

##### **Impedance:**

50 Ω nominal

##### **Propagation Velocity:**

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

##### **Time Delay:**

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:**

-100 dB minimum (cable only)

##### **Dielectric Withstanding Voltage:**

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

##### **Capacitance:**

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:**

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

##### **Static Bend Radius:**

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:**

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 40 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

### Specifications

Frequency		NC12 Series		NC19 Series		NC29 Series		VSWR
GHz	Band	Attenuation		Attenuation		Attenuation		
		dB/ft	dB/m	dB/ft	dB/m	dB/ft	dB/m	
0.3	UHF	0.060	0.196	0.034	0.113	0.026	0.086	1.10
0.5		0.077	0.254	0.044	0.146	0.034	0.112	
0.8		0.098	0.323	0.056	0.185	0.043	0.142	
1.0	L	0.110	0.362	0.063	0.207	0.049	0.159	1.10
2.0	S	0.158	0.518	0.090	0.294	0.070	0.229	
2.4		0.174	0.570	0.098	0.322	0.077	0.252	
3.0	C	0.195	0.640	0.110	0.361	0.086	0.283	1.15
4.0		0.227	0.745	0.127	0.418	0.101	0.330	
6.0		0.281	0.923	0.157	0.515	0.125	0.411	
8.0	X	0.328	1.077	0.182	0.597	0.146	0.480	1.20
10.0		0.370	1.215	0.204	0.670	0.166	0.543	
12.4		0.416	1.366	0.228	0.749	0.186	0.612	
15.0	Ku	0.462	1.516	0.252	0.827	0.207	0.681	1.25
18.0		0.511	1.677	0.277	0.910	0.230	0.755	
20.0	K	0.542	1.778	0.293	0.962	-	-	1.30
22.0		0.571	1.875	0.308	1.011	-	-	
24.0		0.600	1.969	0.323	1.058	-	-	
26.5		0.635	2.082	0.340	1.115	-	-	
28.0	Ka	0.655	2.148	-	-	-	-	1.35
30.0		0.681	2.233	-	-	-	-	
32.0		0.706	2.317	-	-	-	-	
34.0		0.731	2.398	-	-	-	-	1.40
36.0		0.755	2.478	-	-	-	-	
40.0		0.803	2.633	-	-	-	-	

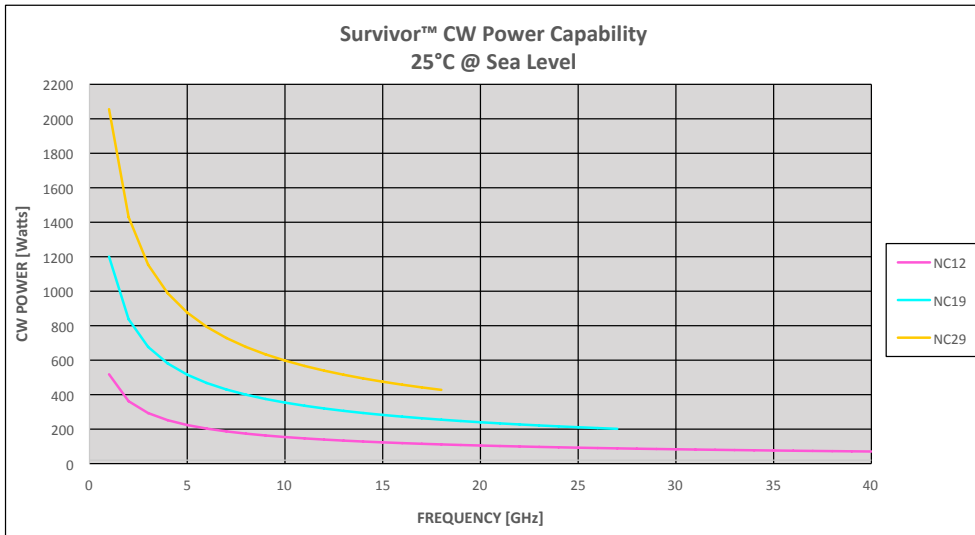
Note: Typical Insertion Loss dB = (Attenuation)(Length) +2(Conn. Loss)  
 Attenuation at any frequency = NC12: (0.1073x/freqGHz) + (0.0031xfreqGHz);  
 NC19: (0.06227x/freqGHz) + (0.00073xfreqGHz);  
 NC29: (0.04687x/freqGHz) + (0.00173xfreqGHz)



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## Survivor™ Ruggedized Cables to 40 GHz (continued)

### Cable CW Power Handling



### Insertion Loss

