

NextPhase™

Triple Shielded, Low Loss Cable Assemblies

The NextPhase series of high performance interconnect cables are designed for end users who need exceptional insertion loss performance at a reasonable cost. These low density dielectric cables are available in a variety of suitable diameters which can be selected based on the end item loss and frequency requirements. The diameter varieties also enable the design engineer to accommodate a wide range of design requirements in terms of bend radii, weight and power performance. Each cable features triple shield construction to eliminate interference from adjacent signals and these high performance assemblies are available with a wide range of connectors offering excellent VSWR characteristics.

Electrical Data

Maximum Frequency:	912 & 916:	40.0 GHz
	919:	24.0 GHz
	930:	18.0 GHz
Impedance:	50 Ω nominal	
Propagation Velocity:	912:	75.5% nominal
	916:	76.0% nominal
	919:	76.5% nominal
	930:	77.0% nominal
Time Delay:	912:	1.35 ns/ft (4.43 ns/m)
	916:	1.34 ns/ft (4.40 ns/m)
	919:	1.33 ns/ft (4.36 ns/m)
	930:	1.32 ns/ft (4.33 ns/m)
Shielding Effectiveness:	-90 dB minimum (cable only)	
Dielectric Withstanding Voltage:	912:	5.0 kV at 60 Hz
	916:	7.0 kV at 60 Hz
	919:	10.0 kV at 60 Hz
	930:	15.0 kV at 60 Hz
Capacitance:	912 & 919:	26.7 pF/ft (87.6 pF/m)
	916:	26.9 pF/ft (88.3 pF/m)
	930:	26.2 pF/ft (86.0 pF/m)

Mechanical Data

Finished Outer Diameter:	912:	0.126 in (0.320 cm)
	916:	0.160 in (0.406 cm)
	919:	0.205 in (0.521 cm)
	930:	0.305 in (0.775 cm)
Static Bend Radius:	912:	0.6 in (1.524 cm)
	916:	0.9 in (2.286 cm)
	919:	1.1 in (2.794 cm)
	930:	1.8 in (4.572 cm)
Weight with Standard Jacket/Armor:	912:	0.02 lbs/ft (0.030 kg/m)
	916:	0.04 lbs/ft (0.060 kg/m)
	919:	0.05 lbs/ft (0.074 kg/m)
	930:	0.09 lbs/ft (0.134 kg/m)
Operating Temp. Range:	85 to 392° F (-65 to 200° C)	
	Above 185° F (85° C) use "T" designation and provide temperature range.	

Cable Construction

Inner Conductor:	Solid Ag-plated Cu
Dielectric:	PTFE Tape
Outer Conductor:	Ag-plated Cu Flat Braid/ Polyamide Foil/Ag-plated Cu Flat Braid
Standard Finish:	FEP

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

Available Connectors

912:	2.4mm, 2.92mm, 3.5mm, SMA, TNC, Type N
916:	1.85 mm, 2.4 mm 2.9mm, 3.5mm, SMA, TNC, Type N
919:	3.5mm, BNC, SMA, TNC, Type N
930:	7-16 DIN, SMA, TNC, Type N

(maximum frequency dependent on cable; other connectors available)



MegaPhase®

Our Customers Connect With Us™

122 Banner Road
Stroudsburg, PA 18360-6433 USA

+1(570) 424-8400

Solutions@MegaPhase.com | www.MegaPhase.com

NextPhase™ (cont'd)

Specifications

Frequency		912 Series			916 Series			919 Series			930 Series			Conn. Loss dB		
		Attenuation		VSWR	Attenuation		VSWR	Attenuation		VSWR	Attenuation		VSWR			
GHz	Band	dB/ft	dB/m		dB/ft	dB/m		dB/ft	dB/m		dB/ft	dB/m			dB/ft	dB/m
0.3	UHF	0.092	0.302	1.10	0.065	0.212	1.10	0.044	0.145	1.10	0.031	0.103	1.10	0.006		
0.5		0.119	0.391		0.084	0.275		0.057	0.188		0.041	0.133		0.009		
0.8		0.152	0.497		0.107	0.351		0.073	0.240		0.052	0.170		0.012		
1.0	L	0.170	0.558		0.120	0.394		0.082	0.269		0.058	0.190		0.014		
2.0	S	0.243	0.798	1.15	0.173	0.566	1.15	0.118	0.387	1.20	0.083	0.272	1.15	0.024		
2.4		0.267	0.877		0.190	0.623		0.130	0.426		0.091	0.299		0.027		
3.0		0.300	0.985		0.214	0.702		0.146	0.479		0.103	0.337		0.032		
4.0	C	0.349	1.146		1.20	0.250		0.819	1.25		0.170	0.559		1.25	0.119	0.392
6.0		0.433	1.420	0.311		1.020	0.212	0.696		0.148	0.486	0.055				
8.0		X	0.505	1.656		1.25	0.364	1.195		1.20	0.248	0.815	0.173		0.568	0.070
10.0	0.569		1.867	1.30		0.412	1.352	1.25		0.281	0.922	1.30	0.195		0.641	1.25
12.4	0.639		2.098	1.35	0.465	1.526	0.317		1.040	0.220	0.721		1.30	0.101		
15.0	Ku	0.710	2.328		0.518	1.699	0.353		1.158	0.244	0.800			0.118		
18.0		0.785	2.574		0.575	1.886	0.392	1.285	0.270	0.886	1.35	0.139				
20.0		K	0.832		2.729	0.611	2.004	0.416	1.365	1.35	-	-	-	0.152		
22.0	0.877		2.877	0.646	2.118	0.440	1.442	-	-	-	0.165					
24.0	0.921		3.021	0.679	2.228	0.462	1.517	1.45	-	-	-	0.178				
26.5	0.973		3.193	1.40	0.720	2.362	-	-	-	-	-	-	0.194			
28.0	Ka	1.004	3.294		0.744	2.439	-	-	-	-	-	-	0.204			
30.0		1.044	3.425		0.774	2.541	-	-	-	-	-	-	0.217			
32.0		1.083	3.553		0.805	2.640	-	-	-	-	-	-	0.230			
34.0		1.121	3.677	1.45	0.834	2.737	1.40	-	-	-	-	0.243				
36.0		1.158	3.799		0.863	2.833	-	-	-	-	-	-	0.256			
40.0		1.230	4.036		0.920	3.018	1.45	-	-	-	-	-	-	0.281		

Note: Typical Insertion Loss dB = (Attenuation)(Length) + 2(Conn. Loss)

Attenuation at any frequency = 912: $(0.1654 \times \sqrt{\text{freq GHz}}) + (0.0046 \times \text{freq GHz})$, 916: $(0.11522 \times \sqrt{\text{freq GHz}}) + (0.00478 \times \text{freq GHz})$, 919: $(0.07882 \times \sqrt{\text{freq GHz}}) + (0.00318 \times \text{freq GHz})$, 930: $(0.05621 \times \sqrt{\text{freq GHz}}) + (0.00175 \times \text{freq GHz})$



MegaPhase®

Our Customers Connect With Us™

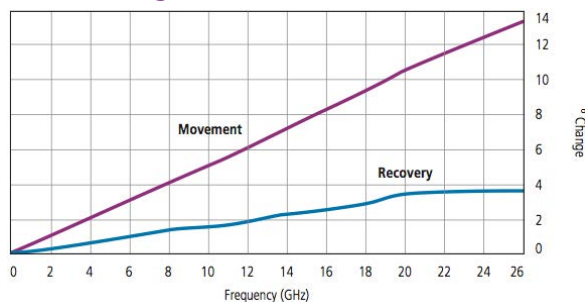
122 Banner Road
Stroudsburg, PA 18360-6433 USA

+1(570) 424-8400

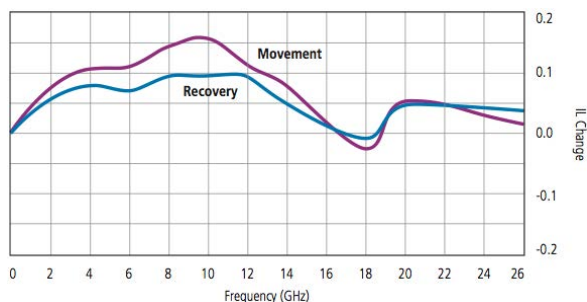
Solutions@MegaPhase.com | www.MegaPhase.com

NextPhase™ (cont'd)

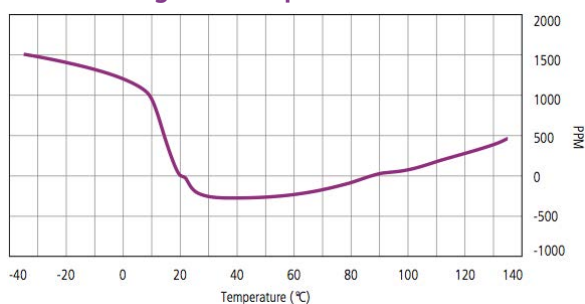
Phase Change vs. Flexure



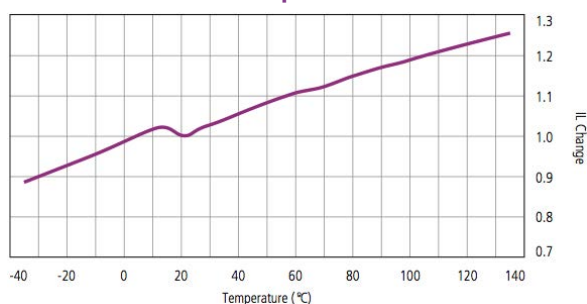
Insertion Loss vs. Flexure



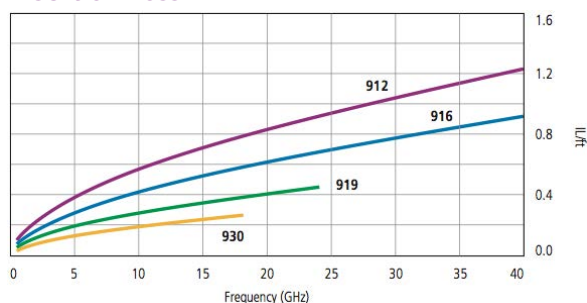
Phase Change vs. Temperature



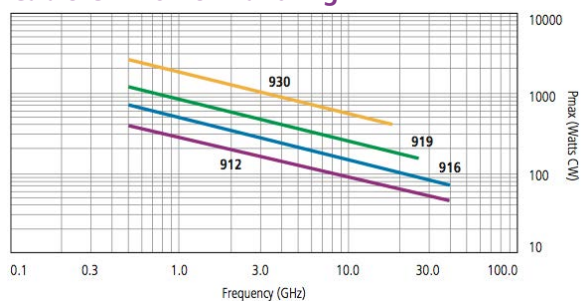
Insertion Loss vs. Temperature



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.



MegaPhase®

Our Customers Connect With Us™

122 Banner Road
Stroudsburg, PA 18360-6433 USA

+1(570) 424-8400

Solutions@MegaPhase.com | www.MegaPhase.com