



MegaPhase®



HyperFlex

MegaPhase® HyperFlex™ Cable

MegaPhase has introduced a new cable that offers superior flexibility when compared to traditional solder-terminated connectors of similar sizes and applications. The HyperFlex™ Cable incorporates a solderless termination, eliminating solder wicking and enabling tight, right-angle bends directly behind the connector.

HyperFlex™ is available in three different series, .090, .120 and .141 inch diameter, with a frequency range of DC -67 GHz. This cable is ideally suited for inside-the-box and small form factor applications where tight routing is required.

Cable Construction:

Triple Shielded
FEP Outer Jacket

Min/Max Length:

4in/48in

Available Connectors:

SMA, 2.92mm, 2.4mm, SMP, Mega8

Operating Temp. Range:

-55 to 125° C

Electrical Data

Maximum Frequency:

HFx090 67 GHz

HFx120 50 GHz

HFx141 40 GHz

Impedance:

50 Ω nominal

Propagation Velocity:

HFx090, HFx120, HFx141, 69.5% nom

Time Delay:

HFx090, HFx120, HFx141

1.47 ns/ft (4.82 ns/m)

Shielding Effectiveness (Typical):

-110 dB minimum (cable only)

Dielectric Withstanding Voltage:

HFx090 600 Vrms

HFx120 900 Vrms

HFx141 1100 Vrms

Capacitance:

HFx090 29.0 pF/ft. (95 pF/m)

HFx120, HFx141, 29.1 pF/ft. (95.5 pF/m)

Mechanical Data

Finished Outer Diameter:

HFx090 0.090 in. (2.286 mm)

HFx120 0.120 in. (3.048 mm)

HFx141 0.141 in. (3.5814 mm)

Static Bend Radius:

HFx090 .10 in. (2.54 mm)

HFx120 .20in. (5.08 mm)

HFx141 .30 in. (7.62 mm)

Weight:

HFx090 4.1 grams/ft. (13.45 grams/m)

HFx120 7.5 grams/ft. (24.60 grams/m)

HFx141 11.2 grams/ft. (36.75 grams/m)

All electrical and mechanical parameters provided within this specification are typical/nominal



122 Banner Road, Stroudsburg, PA 18360-6433

Tel: 570-424-8400

Solutions@MegaPhase.com | www.MegaPhase.com

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MegaPhase HyperFlex™ Series Cable (continued)

Specifications

Frequency		HFx090		HFx120		HFx141		Conn Loss dB	VSWR
		Attenuation		Attenuation		Attenuation			
Band	GHz	dB/ft	dB/m	dB/ft	dB/m	dB/ft	dB/m		
UHF	0.3	0.197	0.645	0.084	0.277	0.091	0.297	0.006	1.10
	0.5	0.255	0.838	0.111	0.363	0.118	0.388	0.009	
	0.8	0.326	1.069	0.143	0.469	0.151	0.496	0.012	
L	1.00	0.366	1.201	0.162	0.530	0.170	0.558	0.014	
S	2.0	0.527	1.729	0.238	0.781	0.246	0.808	0.024	1.15
	2.4	0.581	1.905	0.264	0.867	0.272	0.892	0.027	
	3.0	0.654	2.146	0.301	0.986	0.307	1.008	0.032	
C	4.0	0.764	2.507	0.356	1.168	0.360	1.181	0.040	
	6.0	0.953	3.128	0.454	1.490	0.452	1.483	0.055	
X	8.0	1.118	3.668	0.542	1.779	0.533	1.747	0.070	1.20
	10.0	1.267	4.156	0.624	2.046	0.606	1.988	0.084	1.25
	12.4	1.431	4.694	0.715	2.346	0.687	2.255	0.101	
Ku	15.0	1.596	5.235	0.809	2.654	0.770	2.525	0.118	1.30
	18.0	1.773	5.817	0.912	2.993	0.859	2.818	0.139	
K	20.0	1.885	6.185	0.978	3.210	0.916	3.004	0.152	1.35
	22.0	1.994	6.541	1.043	3.422	0.970	3.184	0.165	
	24.0	2.099	6.885	1.106	3.630	1.024	3.359	0.178	
	26.5	2.226	7.302	1.184	3.883	1.089	3.572	0.194	
Ka	28.0	2.300	7.546	1.229	4.033	1.127	3.696	0.204	1.40
	30.0	2.397	7.864	1.289	4.230	1.176	3.859	0.217	
	32.0	2.492	8.176	1.348	4.423	1.225	4.019	0.230	
	34.0	2.585	8.480	1.406	4.614	1.273	4.176	0.243	
	36.0	2.676	8.780	1.464	4.803	1.320	4.331	0.256	
V	40.0	2.854	9.362	1.577	5.174	1.412	4.632	0.281	
	45.0	3.068	10.065	1.715	5.627			0.313	1.45
	50.0	3.275	10.744	1.850	6.071			0.344	
	60.0	3.671	12.044					0.406	1.50
	67.0	3.937	12.916					0.450	
Cable		A	B	Cable					
HyperFlex090		0.35	0.016	Cable Insertion Loss/ft : (A x √ freqGHz + B x freqGHz)					
HyperFlex120		0.145	0.0165						
HyperFlex141		0.160	0.010						

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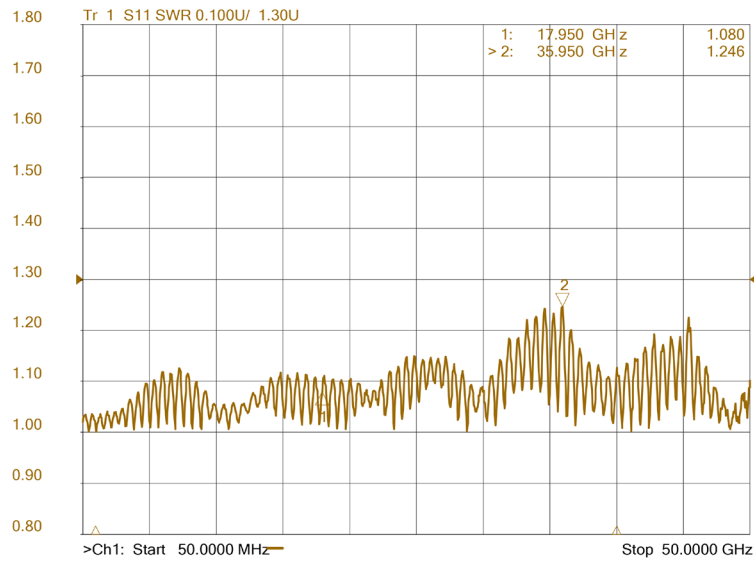
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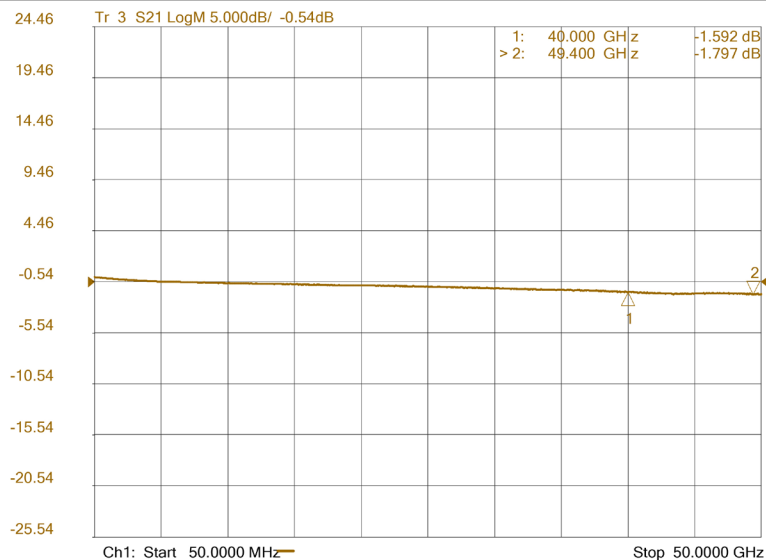
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MegaPhase HyperFlex™ Series Cable (continued)

Typical VSWR Performance For HFx120 6in Assembly



Typical Insertion Loss Performance For HFx120 6in Assembly



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