



MegaPhase®

With the right connections,
anything is possible.

70 GHz Test Cables

Ultra Wide Band & Broadband Test Cables for 65, 67 & 70 GHz Applications

MegaPhase's industry-leading test cable has been optimized for consistent and repeatable performance through 70 GHz. This phase and amplitude stable test cable features 1.85mm connectors, including connectors that mate directly with 1.85mm VNA ports. MegaPhase 70 GHz test cable products are built-to-order with any combination of 1.85mm connectors, including our Factory Formed right angles. Available in lengths from 12 inches to 25 feet (30 cm to 8 m).

Electrical Data

Maximum Frequency:

70 GHz

Impedance:

50 Ω nominal

Propagation Velocity:

78.7% nominal

Time Delay:

1.291 ns/ft (4.236 ns/m)

Shielding Effectiveness:

-100 dB minimum (cable only)

Dielectric Withstanding Voltage:

400 VRMS

Capacitance:

25.82 pF/ft (84.71 pF/m)

Mechanical Data

Finished Outer Diameter:

TM70: 0.285 in (0.724 cm)

VN70: 0.625 in (1.588 cm)

Static Bend Radius:

TM70: 1.5 in (3.81 cm)

VN70: 4.0 in (10.16 cm)

Weight with Standard Jacket/Armor:

TM70: 0.05 lbs/ft (0.067 kg/m)

VN70: 0.18 lbs/ft (0.260 kg/m)

Crush Resistance:

250 lbs/linear in (44.6 kg/linear cm)

Operating Temp. Range:

TM70 & VN70: -85 to 329° F (-65 to 165° C)

Cable Construction

Inner Conductor: Solid Ag-plated Cu

Dielectric: Foamed FEP

Outer Conductor: Ag-plated Cu Strip/
Ag-plated Cu Flat Braid

Standard Finish:

TM70: Polyolefin over Metallic Armor
VN70: Metal Braid/Metal Conduit

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70 GHz Test Cables (continued)

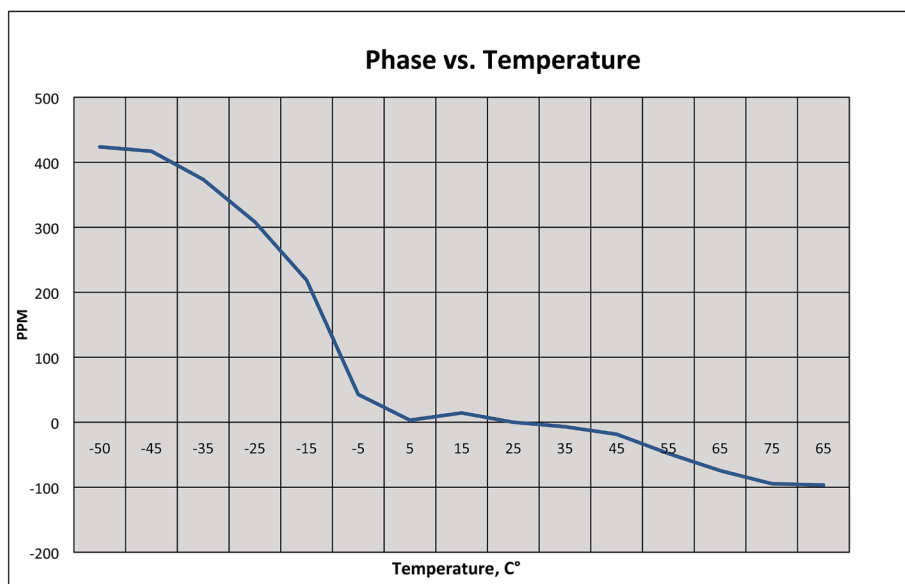
Specifications

Frequency		Attenuation		Conn. Loss dB	VSWR
Band	GHz	dB/ft	dB/m		
UHF	0.3	0.167	0.548	0.006	1.10
	0.5	0.217	0.711	0.009	
	0.8	0.276	0.904	0.012	
L	1.0	0.309	1.014	0.014	
S	2.0	0.442	1.451	0.024	1.15
	2.4	0.486	1.596	0.027	
	3.0	0.547	1.793	0.032	
C	4.0	0.636	2.087	0.040	1.20
	6.0	0.789	2.588	0.055	
X	8.0	0.921	3.020	0.070	1.25
	10.0	1.039	3.408	0.084	1.30
	12.4	1.168	3.832	0.101	
Ku	15.0	1.297	4.255	0.118	1.35
	18.0	1.435	4.707	0.139	
K	20.0	1.522	4.992	0.152	1.40
	22.0	1.605	5.266	0.165	
	24.0	1.686	5.530	0.178	
	26.5	1.783	5.849	0.194	
Ka	28.0	1.839	6.035	0.204	1.45
	30.0	1.913	6.277	0.217	
	32.0	1.985	6.513	0.230	
	34.0	2.055	6.743	0.243	1.50
	36.0	2.124	6.969	0.256	
V	40.0	2.257	7.406	0.281	1.55
	45.0	2.417	7.931	0.313	
	50.0	2.571	8.436	0.344	1.60
	60.0	2.864	9.396	0.406	
	67.0	3.059	10.035	0.450	1.65
	70.0	3.140	10.302	0.468	



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Phase vs. Temperature



Phase vs. Flexure

