



MegaPhase VNA Test Port Extension Cables

High Performance VN Series Cable Assemblies

MegaPhase VNA cable assemblies are designed to ease the time associated with test equipment calibrations where compensation for loss, mismatches, and feedthroughs are critical to the test outcome.

VN series cables are mechanically stable and can be bent with little effect on insertion loss, phase or VSWR. They can be employed time and again when rigorous test regimens are called for.

Cable assemblies are available in user defined lengths up to 25 feet. These low loss alternatives to expensive OEM test cables are the perfect solution for any test lab employing critical test equipment in their production operations.

The cable is constructed with an armored jacket and boot to protect the connectors and for effective VNA, PNA, and scalar test calibrations. Cables are available in phase matched lengths and come with a large variety of integrated connectors including the popular ruggedized NMD type.

Electrical Data

Maximum Frequency:
67 GHz

Impedance:
50 Ω nominal

Propagation Velocity:
VN32 69% nominal
VN67 80% nominal

Time Delay:
VN32 1.47 ns/ft (4.82 ns/m)
VN67 1.27 ns/ft (4.167 ns/m)

Dielectric Withstanding Voltage:
VN32 10 kV at 60 Hz
VN67 1.2 kV at 60 Hz

Capacitance:
VN32 29.0 pF/ft (95.1 pF/m)
VN67 25.4 pF/ft (83.3 pF/m)

Mechanical Data

Finisher Outer Diameter:
0.625 in (1.588 cm)

Static Bend Radius:
4.0 in (10.16 cm)

Max. Operating Temperature:
-75° to 248°F (-60° to 120° C)

VN32 includes VN26, VN18, VN8, VN4
VN67 includes VN34, VN40 and VN50

Cable Construction

Inner Conductor: Solid Ag-plated Cu

Dielectric:

VN32 PTFE

VN67 Foamed FEP

Outer Conductor: GrooveTube® Cu

Standard Finish: Metal Braid/Metal Conduit

Available Connectors

1.85mm, 2.4mm, 2.92mm, 3.5mm,
7mm, SMA, TNC, Type N

MegaPhase VNA Test Port Extension Cables (continued)

Specifications

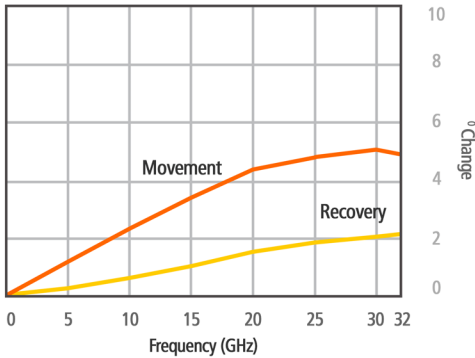
Frequency		VN32 Series*		VN67 Series**		Conn Loss dB	VSWR
		Attenuation		Attenuation			
Band	GHz	dB/ft	dB/m	dB/ft	dB/m		
UHF	0.3	0.062	0.203	0.104	0.341	0.006	1.10
	0.5	0.082	0.268	0.135	0.443	0.009	
	0.8	0.106	0.348	0.172	0.566	0.012	
L	1.0	0.120	0.394	0.194	0.635	0.014	
S	2.0	0.178	0.585	0.279	0.915	0.024	1.15
	2.4	0.199	0.652	0.307	1.009	0.027	
	3.0	0.227	0.744	0.347	1.137	0.032	
C	4.0	0.270	0.885	0.405	1.328	0.040	
	6.0	0.347	1.138	0.505	1.658	0.055	
X	8.0	0.417	1.367	0.593	1.945	0.070	1.20
	10.0	0.482	1.580	0.672	2.205	0.084	1.25
	12.4	0.555	1.822	0.759	2.491	0.101	1.30
Ku	15.0	0.631	2.070	0.847	2.779	0.118	
	18.0	0.715	2.345	0.941	3.089	0.139	
K	20.0	0.769	2.522	1.001	3.285	0.152	1.35
	22.0	0.821	2.695	1.059	3.475	0.165	
	24.0	0.873	2.865	1.115	3.659	0.178	
	26.5	0.937	3.073	1.183	3.881	0.194	
Ka	28.0	0.974	3.196	1.223	4.011	0.204	1.40
	30.0	1.024	3.358	1.274	4.181	0.217	
	32.0	1.072	3.518	1.325	4.347	0.230	
	34.0			1.375	4.510	0.243	1.45
	36.0			1.423	4.669	0.256	
V	40.0			1.518	4.980	0.281	1.50
	45.0			1.633	5.356	0.313	
	50.0			1.743	5.719	0.344	1.55
	60.0			1.955	6.414	0.406	
	67.0			2.097	6.881	0.450	1.60
	70.0					0.468	

*VN32 includes VN26, VN18, VN8, VN4

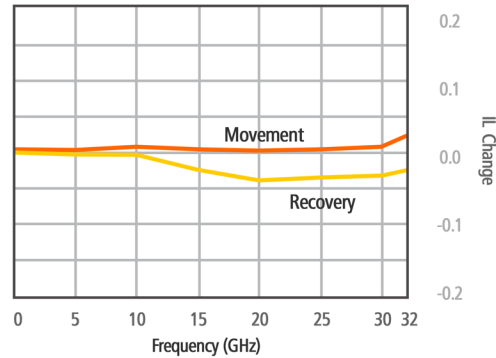
**VN67 includes VN34, VN40 and VN50

MegaPhase VNA Test Port Extension Cables to 32 GHz

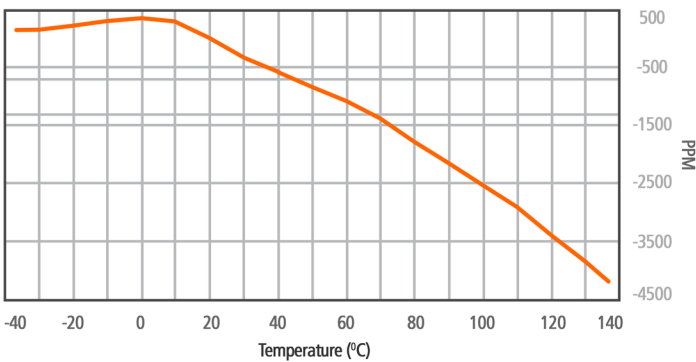
Phase Change vs. Flexure



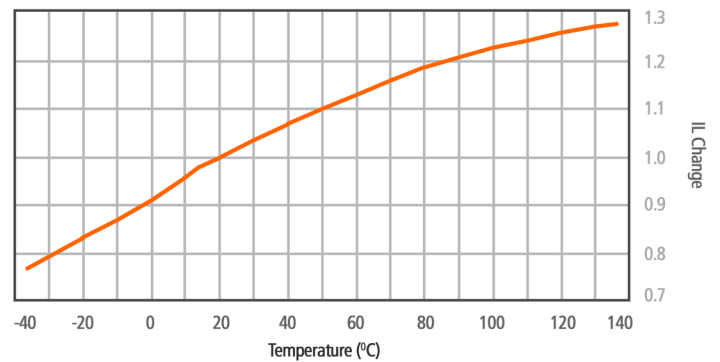
Insertion Loss vs. Flexure



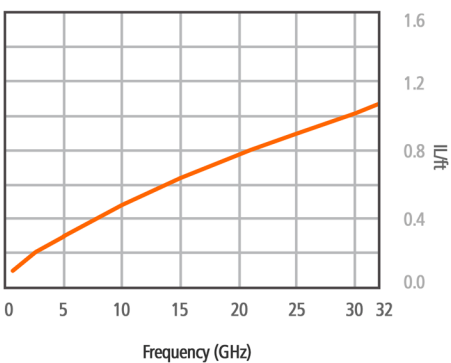
Phase Change vs. Temperature



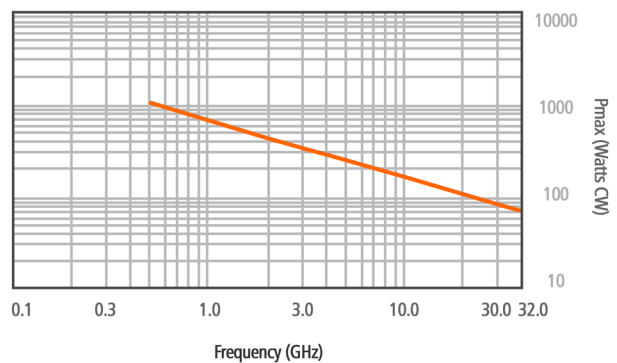
Insertion Loss vs. Temperature



Insertion Loss



Cable CW Power Handling

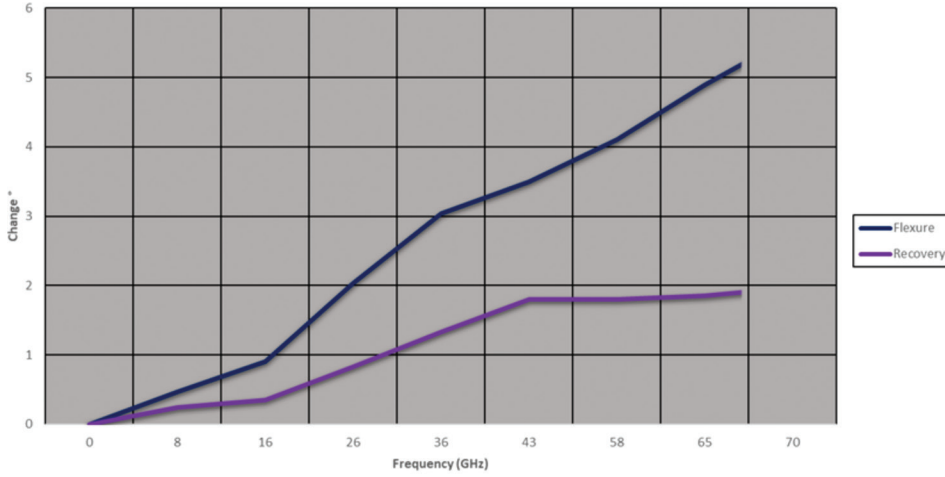


Note: Data at ambient temperature and sea level. Power handling of a cable assembly is also connector dependent and includes variables such as altitude, temperature and system VSWR. See website for connector power handling standards, including altitude, temperature and VSWR derating.



MegaPhase VNA Test Port Extension Cables to 67 GHz

Phase vs. Flexure



Phase vs. Temperature

