VN Series VNA Test Cables

ANOISON's VN series cables (VNA port extension cables) are the equivalent of GORE® VNA Microwave/RF Test Assemblies that provide the most precise VNA measurements under laboratory conditions. They have a rugged, lightweight construction that enables longer service life.

These VN series cables have outstanding phase and amplitude stability with stable electrical performance up to 67 GHz. Our standard cable lengths are 26 inches and 39 inches. We also offer custom cable assemblies built to customer specifications of any length and with any configuration of connectors; 3.5mm through 1.85mm, male or female; or standard connectors can be specified.

Stability Specifications

Stability Cable Type	Frequency (GHz)	Phase Stability(Typ./Max.)	Amplitude Stability(Typ./Max.)
VN-18	67	±6.50°/±11.00°	±0.08dB/±0.15dB
VN-24	50	±4.95°/±9.95°	±0.06dB/±0.15dB
VN-29	40	±4.95°/±7.90°	±0.06dB/±0.15dB
VN-35	26.5	±4.95°/±7.75°	±0.06dB/±0.15dB

Test Assembly Specifications Up to 67GHz

Stability Cable Type	VN-35		VN-29		VN-24		VN-18	
Maximum Frequency(GHz)	26.5		40		50		67	
Assembly length (inch/mm)	26/660.4	39/990.6	26/660.4	39/990.6	26/660.4	39/990.6	26/660.4	39/990.6
Typical VSWR	1.17		1.30		1.26		1.30	
Typical Insertion Loss (dB)	1.6	2.25	2.25	2.90	2.5	3.6	4.3	6.0
Impedance (Ohms)	50		50		50		50	
Velocity of Propagation	74%		74%		74%		74%	
*Phase Stability(°)(Typ./Max.)	±2.0/±3.9	±2.0/±7.4	±2.0/±4.0	±3.0/±7.6	±2.0/±5.0	±4.0/±9.5	±5.0/±9.5	±6.0/±11.0
*Amplitude Stability(dB)(Typ./Max.)	±0.01/±0.08	±0.02/±0.15	±0.02/±0.08	±0.02/±0.15	±0.02/±0.08	±0.03/±0.15	±0.02/±0.10	±0.03/±0.15

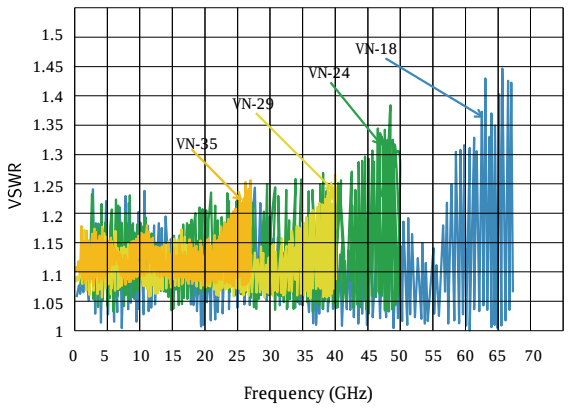
Mechanical/Environmental Properties

Stability Cable Type	VN-35, VN-29, VN-24, VN-18
Center Conductor Material	Silver Plated Copper
Maximum Outer Diameter	0.563 in. (14.30 mm)
Nominal Weight	242.3 oz/ft (225 g/m)
Min. Static Bend Radius/ Min. Dynamic Bend Radius	2.25 in. (57mm)/ 3.94 in. (100mm)
Flex Life Cycles	>50,000
Crush Resistance	>220 lb(100 kg)
Temperature Range (°C)	20 to 30

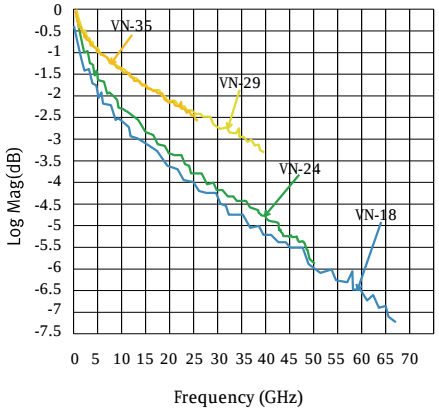
Attenuation& Average Power(1:1 VSWR, 25 °C, Sea Level, Cable Only)

Frequency(GHz)	VN-35		VN-29		VN-24		VN-18	
	DB/100M	W	DB/100M	W	DB/100M	W	DB/100M	W
1	36.0	500	36.0	500	43.8	409	65	220
2	51.0	370	51.0	370	62.2	288	93	200
4	73.0	260	73.0	260	88.5	202	135	120
6	90.0	210	90.0	210	108.8	165	169	85
8	104.0	180	104.0	180	126.1	142	198	75
12	129.0	150	129.0	150	155.4	115	249	65
18	160.0	120	160.0	120	191.8	93	314	50
26.5	204.79	94	204.79	94	N/A		N/A	
40	N/A		246.0	75	291.7	61	508	30
50	N/A		N/A		328.5	55	583	25
67	N/A		N/A		N/A		695	20

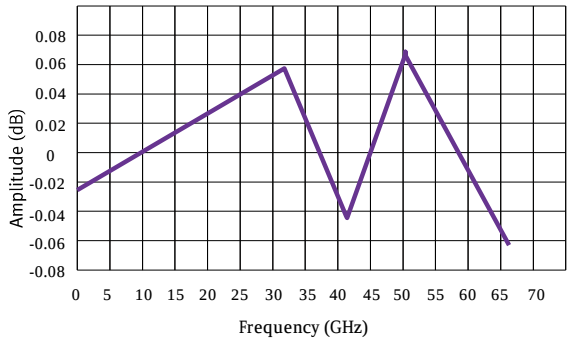
Assembly Typical VSWR 39" Cable



Assembly Typical Insertion Loss 39" Cable



Assembly Typical Amplitude Stability 39" Cable



Ordering Information for Test Assemblies

P/N	Frequency(GHz)	VSWR (Typ./Max.)	Typical IL(dB)	Phase Stability(°) (Typ./Max.)	Amplitude Stability(dB) (Typ./Max.)	L(inch)
VN-NMD18F-18M-26	67	1.40/1.50	4.76	±5.0/±9.5	±0.06/±0.10	26
VN-NMD18F-18F-26						
VN-NMD18F-18M-39			7.25	±6.5/±11	±0.08/±0.15	39
VN-NMD18F-18F-39						
VN-NMD24F-24M-26	50	1.30/1.40	3.05	±3.75/±5.25	±0.04/±0.08	26
VN-NMD24F-24F-26						
VN-NMD18F-24M-26						
VN-NMD18F-24F-26						
VN-NMD24F-24M-39			4.6	±4.95/±9.95	±0.06/±0.15	39
VN-NMD24F-24F-39						
VN-NMD18F-24M-39						
VN-NMD18F-24F-39						
VN-NMD29F-29M-26	40	1.25/1.35	2.45	±3.25/±4.95	±0.04/±0.08	26
VN-NMD29F-29F-26						
VN-NMD24F-29M-26						
VN-NMD24F-29F-26						
VN-NMD18F-29M-26						
VN-NMD18F-29F-26						
VN-NMD29F-29M-39			3.65	±4.95/±7.90	±0.06/±0.15	39
VN-NMD29F-29F-39						
VN-NMD24F-29M-39						
VN-NMD24F-29F-39						
VN-NMD18F-29M-39						
VN-NMD18F-29F-39						
VN-NMD35F-35M-26	26.5	1.25/1.30	1.85	±3.5/±4.5	±0.04/±0.08	26
VN-NMD35F-35F-26						
VN-NMD29F-35M-26						
VN-NMD29F-35F-26						
VN-NMD24F-35M-26						
VN-NMD24F-35F-26						
VN-NMD35F-35M-39			2.8	±4.95/±7.75	±0.06/±0.15	39
VN-NMD35F-35F-39						
VN-NMD29F-35M-39						
VN-NMD29F-35F-39						
VN-NMD24F-35M-39						
VN-NMD24F-35F-39						