

# TESTPRO VNA SERIES

Ruggedized Precision  
VNA Cables 50 & 67 GHz



The TestPro VNA series provides customers with a reliable, ruggedized solution for Lab and Production Vector Network Analyzer testing. With options for 50 GHz & 67 GHz these cables offer cost leading alternatives to original OEM VNA cable solutions.

TestPro ruggedized VNA test cables are specially designed to withstand the rigors of test lab use and production testing for 50 ohm communications systems. These phase stable cables are available in either Male or Female versions and 2.4mm or 1.85mm.

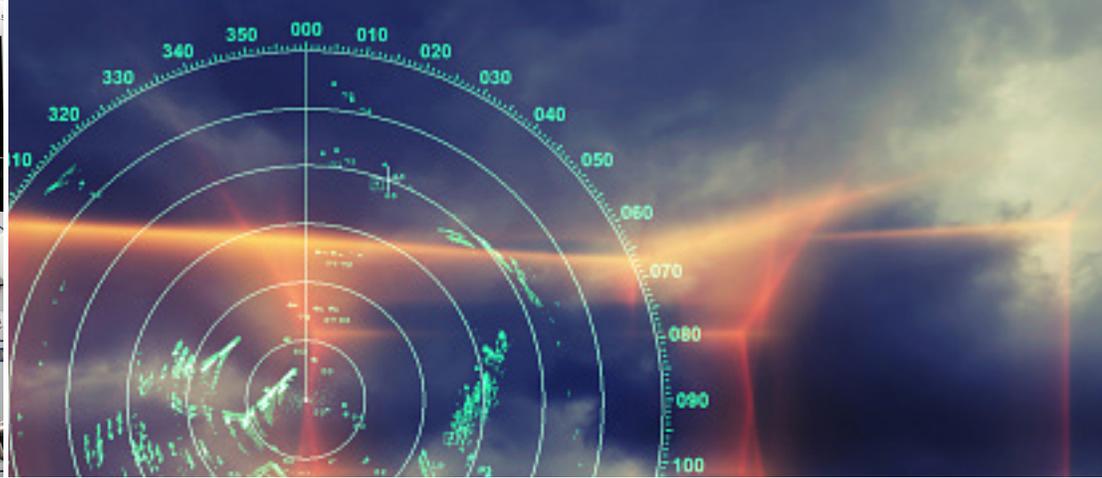
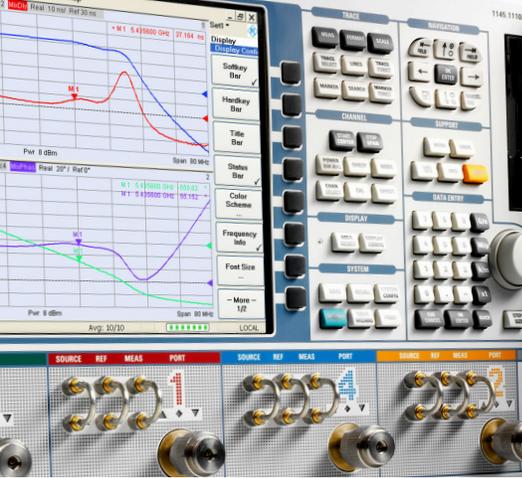
Radiall's series of VNA test cables have a maximum phase and loss change guaranteed. This key parameter is essential because amplitude and phase variation following VNA calibration causes inaccurate S Parameter measurements.

The braided stainless steel armoring surrounding the coax provides a rugged, self-locking, flexible cable with a flex life exceeding 50,000 cycles. The rugged stainless steel 2.4mm and 1.85mm connectors provide up to 5,000 mating cycles when installed and maintained.

### MOST STANDARD PART NUMBERS<sup>(1)</sup>

PART NUMBER	RIGHT CONNECTOR		LEFT CONNECTOR		LENGTH		MAX FREQUENCY
	Model	Series	Model	Series	(in)	(mm)	
VB01581570635TF	NMD Female	2.4 mm	NMD Male	2.4 mm	25	635	50 GHz
VB01581550635TF	NMD Female		Male				
VB01581560635TF	NMD Female		Female				
VB01581570965TF	NMD Female		NMD Male				
VB01581550965TF	NMD Female		Male				
VB01581560965TF	NMD Female		Female				
VB01581571219TF	NMD Female		NMD Male		48	1219	
VB01581551219TF	NMD Female		Male				
VB01581561219TF	NMD Female		Female				
VB01621610635ZT	NMD Female		NMD Male				
VB01621590635ZT	NMD Female	Male					
VB01621600635ZT	NMD Female	Female					
VB01621610965ZT	NMD Female	NMD Male					
VB01621590965ZT	NMD Female	Male					
VB01621600965ZT	NMD Female	Female					
VB01621611219ZT	NMD Female	NMD Male	48	1219			
VB01621591219ZT	NMD Female	Male					
VB01621601219ZT	NMD Female	Female					
VB01621601219ZT	NMD Female	Female					

**Note**  
1. Between series and male / female configurations also available upon request. All pns are available as phase matched pair in same series and length.



## FEATURES & BENEFITS

- Phase and amplitude stable
- Accurate measurements
- Long lasting
- Long calibration intervals
- High degree of flexibility
- No spring-back

## APPLICATIONS

- Vector network analyzers
- Testing in lab environments
- Critical measurements

TestPro VNA cable assemblies are designed for precision measurements with Vector Network Analyzers. They offer extremely precise phase and amplitude stability when flexed and provide extreme accuracy and long lasting intervals between re-calibration. TestPro VNA cable assemblies are available as single cable or phase matched pairs and are delivered in three standard lengths of 25, 38 and 48 inches. A test report with serial number and VSWR, IL and phase and loss stability data is included.

## PRODUCT CHARACTERISTICS

ELECTRICAL CHARACTERISTICS						
CABLE TYPE	TESTPRO VNA (VB0---TF)			TESTPRO VNA (VB0---ZT)		
Length (in)	25	38	48	25	38	48
Maximum Frequency (GHz)	50			67		
Typical VSWR	1.25 : 1			1.35 : 1		
Maximum VSWR	1.43 : 1			1.50 : 1		
Typical Insertion Loss (dB)	3.60	5.25	6.51	4.43	6.43	7.96
Maximum Insertion Loss (dB)	4.31	6.28	7.80	5.10	7.44	9.25
Impedance (Nominal) (Ohms)	50			50		
Typical Phase Stability (±degree)	1.5	3.5	3.5	4.5	5.5	5.5
Maximum Phase Stability (±degree)	4.5	7.5	7.5	8.5	10	10
Typical Amplitude Stability (dB)	0.01	0.03	0.03	0.02	0.04	0.04
Maximum Amplitude Stability (dB)	0.08	0.08	0.08	0.10	0.10	0.10
Velocity of Propagation (Nominal) (%)	76			76		
Shielding Effectiveness (dB through 18 GHz)	> 100			> 100		
Time Delay (Nominal) ns/cm (ns/in)	4.4 (1.35)			4.4 (1.35)		

MECHANICAL CHARACTERISTICS						
CABLE TYPE	TESTPRO VNA (VB0---TF)			TESTPRO VNA (VB0---ZT)		
Length (in)	25	38	48	25	38	48
Nominal Weight (g)	280	373	442	273	366	435
Typical Flex Cycles	> 50,000			> 50,000		
Minimum Bend Radius (mm/in) (Selflocking)	50/2			50/2		
Operating Temperature Range (°C)	Laboratory conditions; (23 ± 5)			Laboratory conditions; (23 ± 5)		
Storage Temperature Range (°C)	-40 to +70			-40 to +70		
Crush Resistance kgf/cm (lbf/in)	44 / 260			44 / 260		