



Vector Network Analyzer

ONA1000 Series

- 2/4 port test. 100 kHz-8.5 GHz (ONA1085) and 300 kHz-3 GHz (ONA1030).
- Windows 7 operating system interface.
- 10.4 inches TFT color LCD touch screen.
- Fast and simple operation.
- More than 100 independent measurement channels; can test in more than 100 different incentive measurement conditions.
- Various scanning modes: linear sweep, logarithmic scanning, subsection scanning, power scanning.
- Powerful analysis pass/fail function: limit test, surge limit test, bandwidth limit test function.
- Time-domain analysis function.
- Unique calibration method: 4 ports SOLT calibration.
- External interface: USB, LAN, RS232, VGA, and GPIB ports (optional).

Model		ONA1085				ONA1030	
Test Port Output (Source)	Frequency Range	100 kHz ~ 8.5 GHz				300 kHz ~ 3 GHz	
	Frequency Resolution	1 Hz				1 Hz	
	Frequency Accuracy	±5 ppm (23 °C±5 °C)				±5 ppm (23 °C±5 °C)	
	Level Accuracy	±0.65 dB (50 MHz, 0 dBm)				±0.8 dB (50 MHz, 0 dBm)	
		±1.0 dB (relative 50 MHz, 0 dBm)				±1.0 dB (relative 50 MHz, 0 dBm)	
	Level Linear (0 Dbm)	±0.75 dB (range in-20 dBm ~ max output level)				±0.75 dB (-5 dBm ~ +10 dBm)	
	Output Level Range	100 kHz ~ 5 GHz	5-6 GHz	6-7 GHz	7-8.5 GHz	-45 dBm ~ +10 dBm	
		-55 ~+10 dBm	-55 ~+9 dBm	-55 ~+8 dBm	-55 ~+7 dBm		
	Level Resolution	0.05 Db				0.05 dB	
	Harmonics (2 Or 3 Times)	< -25 dBc (Freq≤2 GHz ; range in+5 dBm , typical value)				-25 dBc (+5 dBm, typical value)	
< -20 dBc (Freq≤8.5 GHz ; range in +5 dBm , typical value)							
Non-Harmonics Spurious	< -30 dBc (Freq≤8.5 GHz ; +5 dBm, typical value)				-30 dBc (+5 dBm, typical value)		
Test Port Input	Max Input Level	100 k-5 GHz	5-6 GHz	6-7 GHz	7-8.5 GHz	+10 dBm	
		+10 dBm	+9 dBm	+8 dBm	+7 dBm		
	Input Damage Level	+26 dBm; ±35 VDC				+20 dBm; ±30 VDC	
Crosstalk	1~10 MHz	10 M~3 GHz	3~6 GHz	6~8.5 GHz	1 MHz~3 GHz		
	-110 dB	-120 dB	-110 dB	-95 dB	-110 dB		
System performance after calibration	System Dynamic Range ¹						
	Test Condition	Frequency range	100 k-10 MHz	10 M-6 GHz	6-8.5 GHz	1 M-1.5 GHz	1.5-3 GHz
		IF Bandwidth	10 Hz/3 kHz	10 Hz/3 kHz	10 Hz/3 kHz	10 Hz/3 kHz	10 Hz/3 kHz
	System Dynamic Range		102/82 dB	115/98 dB	97/92 dB	110/90 dB	110/90 dB
	Mark 1 : Test port system dynamic range means the difference between test port rms of background noise and max output power of source. Effective dynamic range must consider the uncertainty and disturbance signal of measurement.						
Orientation Index	Frequency	100 kHz~10 MHz	10 MHz~3 GHz	3~6 GHz	6~8.5 GHz	1 MHz~1.5 GHz	1.5 MHz~3 GHz
	Directivity	46	43	37	35	48	44
	Source Matching	41	40	36	35	41	35
	Load Matching	45	43	37	34	48	44
	Transmission Track	±0.041	±0.039	±0.068	±0.136	±0.011	±0.021
	Reflection Track	±0.040	±0.040	±0.060	±0.070	±0.015	±0.029
	Note: IF bandwidth=10 Hz environment temperature is 23 °C±5 °C, deviation is less 1 °C than calibration temp. 2 ports calibration. Need isolation calibration. N type calibration kit.						
Test Port Input (Curve of Noise)	Test Condition	Max Input Level	+10 dBm	+10 dBm	+7 dBm		
		Frequency Range	100 k-10 MHz	10 M-4.38 GHz	4.38-8.5 GHz		
		IF Bandwidth	3KHz	70 kHz	70 kHz		
	Noise Curve (Amplitude)		0.003 dBrms	0.004 dBrms	0.006 dBrms		
Noise Curve (Phase)		0.020 °rms	0.035 °rms	0.050 °rms			

Options:

ONA1000-A1	N-50J Calibration Kit (Open, Short, Load, Adapter)
ONA1000-A2	N-50 K Calibration Kit (Open, Short, Load, Adapter)
ONA1000-A3	SMA-50J Calibration Kit (Open, Short, Load, Adapter)
ONA1000-A4	SMA-50 K Calibration Kit (Open, Short, Load, Adapter)
ONA1000-A5	N-50J Calibration Kit (Open, Short, Load, Adapter)
ONA1000-A6	N-50 K Calibration Kit (Open, Short, Load, Adapter)
ONA1000-A7	N-75J Calibration Kit (Open, Short, Load, Adapter)
ONA1000-A8	N-75 K Calibration Kit (Open, Short, Load, Adapter)
ONA1000-A9	F-75J Calibration Kit (Open, Short, Load, Adapter)
ONA1000-A10	F-75 K Calibration Kit (Open, Short, Load, Adapter)
ONA1000-A11	SMA-50J Calibration Kit (Open, Short, Load, Adapter)
ONA1000-A12	SMA-50 K Calibration Kit (Open, Short, Load, Adapter)
ONA1000-A13	GPIO Interface