

VNA485

矢量网络分析仪

Vector Network Analyzer

Technical Specifications



深圳市极致汇仪科技有限公司
Shenzhen iTest Technology Co., Ltd.
文件编号：ITEST-WI-YX-30/C

SYSTEM MEASUREMENT RANGE				
System Impedance	50Ω(75Ω via adapter)			
Test Port Connector Type	N-Type, Female			
Number of Test Ports	2 or 4			
Frequency Range	300KHz to 8.5GHz			
Frequency Setting Resolution	1Hz			
Output Power Range	300KHz to 6GHz	-55dBm to +10dBm		
	6GHz to 8.5GHz	-55dBm to +8dBm		
Power Setting Resolution	0.05dB			
Number of Measurement Points	1 to 100,001			
System Bandwidth(IFBW)	10Hz to 1.5MHz ^{Table 1}			
System Dynamic Range: (RF Range Fixed Mode=OFF) @IFBW=10Hz	300KHz to 10MHz	125dB		
	10MHz to 6GHz	135dB		
	6GHz to 8.5GHz	130dB		
MEASUREMENT ACCURACY(UNCERTAINTY) ²				
Transmission Uncertainty (RF Range Fixed Mode=OFF:Cal. power=-10dBm; IFBW=10Hz)				
-50dB to 10dB	300kHz to 8.5GHz	0.2dB/2deg		
-70dB to -50dB	300kHz to 10MHz	1dB/10deg		
	10MHz to 8.5GHz	0.4dB/2deg		
Reflection Uncertainty: Cal. power=-10dBm;IFBW=10Hz				
-15dB to 0dB	300kHz to 10MHz	0.3dB/3deg		
	10MHz to 8.5GHz	0.6dB/5deg		
-25dB to -15dB	300kHz to 10MHz	0.5dB/6deg		
	10MHz to 8.5GHz	1.0dB/8deg		
Trace Noise: Meas. Power=Max Output Power				
Transmission	300kHz to 10MHz(IFBW=3kHz)	3mdB rms/0.02deg rms		
	10MHz to 8.5GHz(IFBW=70kHz)	4mdB rms/0.03deg rms		
Reflection	300kHz to 10MHz(IFBW=3kHz)	3mdB rms/0.02deg rms		
	10MHz to 8.5GHz(IFBW=70kHz)	5mdB rms/0.05deg rms		
Temperature Stability				
300kHz to 3GHz	Typ.0.005 dB/°C	Typ.0.1deg/°C		
3GHz to 6GHz	Typ.0.01 dB/°C	Typ.0.2deg/°C		
6GHz to 8.5GHz	Typ.0.04 dB/°C	Typ.0.8deg/°C		
CORRECTED SYSTEM EFFECTIVE DATA ²				
Description	300kHz to 10MHz	10MHz to 3GHz	3GHz to 6GHz	6GHz to 8.5GHz
Directivity	46 dB	44 dB	38 dB	38 dB
Source Match	43 dB	40 dB	37 dB	36 dB
Load Match	46 dB	44 dB	38 dB	38 dB
UNCORRECTED SYSTEM RAW DATA ³				
Description	300kHz to 10MHz	10MHz to 3GHz	3GHz to 6GHz	6GHz to 8.5GHz
Directivity	25 dB	20 dB	20 dB	15 dB
Source Match	25 dB	20 dB	20 dB	15 dB
Load Match	17 dB	15 dB	12 dB	10 dB

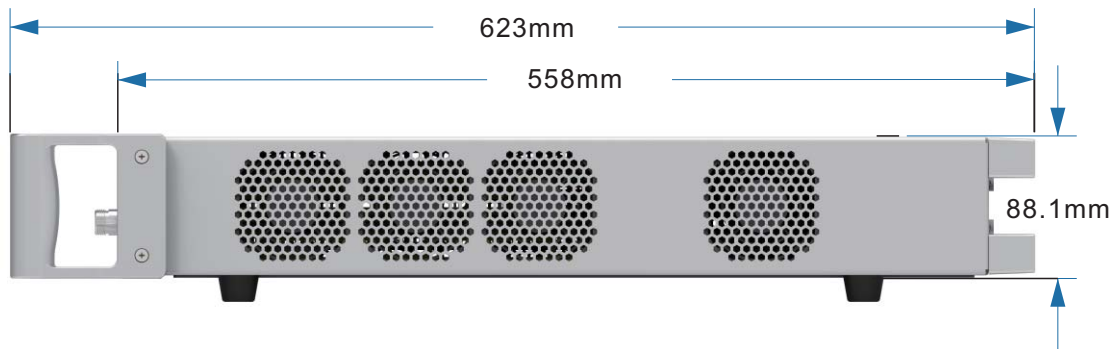
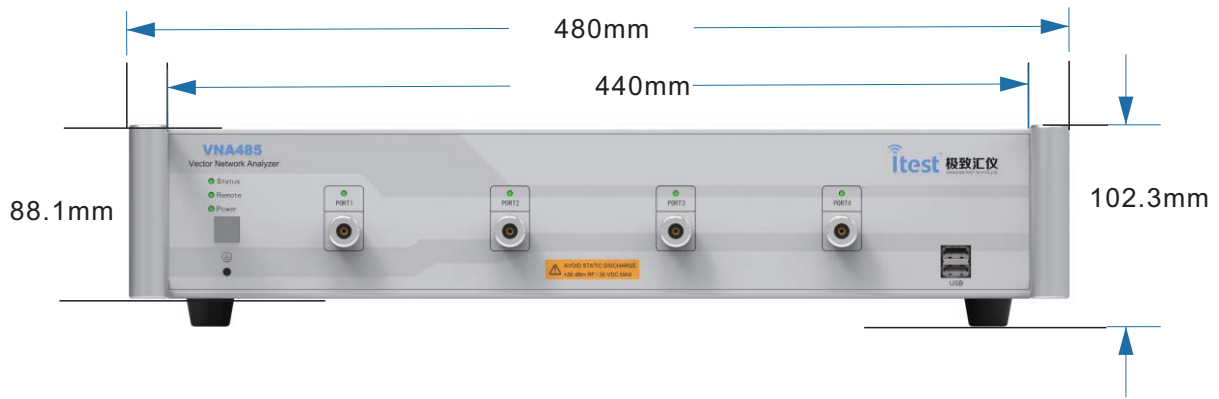
TEST PORT OUTPUT PERFORMANCE		
Power Accuracy	±0.5 dB @0dBm	
Power Linearity(Relative to 0dBm)	300kHz to 6GHz	±0.5 dB(-20dBm to +10dBm)
	6GHz to 8.5GHz	±0.5 dB (-20dBm to +8dBm)
Harmonic(2nd or 3rd)	<-25dBc @5dBm	
Non-Harmonic Spurious	<-30dBc @5dBm	
CW Accuracy	±0.2ppm (23 °C±3 °C)	
Source Stability	±0.01ppm to 23 °C,±0.1ppm/year	
TEST PORT INPUT PERFORMANCE		
Maximum Input Level	+10dBm	
Damage Level	+26dBm or ±35VDC	
Cross Talk	300kHz to 10MHz	-110dB
	10MHz to 6GHz	-120dB
	6GHz to 8.5GHz	-100dB
Noise Floor	300kHz to 10MHz	-125dBm/Hz
	10MHz to 6GHz	-135dBm/Hz
	6GHz to 8.5GHz	-132dBm/Hz
NON-TEST INPUT/OUTPUT PORT REQUIREMENTS		
External Reference Signal Input	Connector Type	BNC Female
	Input Frequency	10MHz±10ppm
	Input Level	Low Threshold Votage:0.5V
		High Threshold Votage:2.1V
		Input Level Range:0 to +5V
Duty Cycle	40% to 60%	
External Reference Signal Output	Connector Type	BNC Female
	Output Frequency	10MHz±0.2ppm
	Output Level	Low Level Votage:0V
		High Level Votage:5V
	Duty Cycle	40% to 60%
Signal Type	TTL	
External Trigger Input	Connector Type	BNC Female
	Input Level	Low Threshold Votage:0.5V
		High Threshold Votage:2.1V
		Input Level Range:0 to +5V
	Pulse Width	2µs
Polarity	Positive or Negative	
External Trigger Output	Connector Type	BNC Female
	Max Output Current	30mA
	Output Level	Low Level Votage:0V
		High Level Votage:5V
	Pulse Width	1µs
	Polarity	Positive or Negative

GENERAL AND ENVIRONMENT	
Operating Temperature	+5 °C to +40 °C
Error-Corrected Temperature Range	23 °C(± 5 °C) with <1 °C deviation from calibration temperature
Operating Humidity	20% to 80% at wet bulb temperature <+29 °C (non-condensation)
Storage Temperature	-10 °Cto +60 °C
Storage Humidity	20% to 90% at wet bulb temperature <+40 °C (non-condensation)
Dimensions	Unit with Handle:480mm W x 623mm D x 102.3mm H Unit without Handle:440mm W x 558mm D x 88.1mm H
Weight	14Kg
Power Requirements	90 to 264VAC, 47 to 63Hz
Power Consumption	<150W(maximum)
EMC	EN 61326-1:2005 EN 55011:2007 Group 1, Class A EN 61000-4-2:1995 +A2:2001 4kV CD/8kV AD EN 61000-4-3:2006 EN 61000-4-4:2004 EN 61000-4-5:2006 EN 61000-4-6:2007 3V, 0.15-80 MHz, 80% AM EN 61000-4-11:2004 0.5-300 cycle, 0%/70%
Safety	EN 61010-1:2001 Measurement Category I Pollution Degree 2 Indoor Use
Recommended Calibration Cycle	12 months
Warranty	36 months hardware 36 months software update

1. If RF Range Fixed Mode=ON, performance may be degrade by 10dB.
2. Using Cal Kit:85033E(3.5mm 50Ω) for full 2-port calibration. And IF bandwidth = 10 Hz, no averaging applied to data, environmental temperature= 23°C(±5°C) with < 1°C deviation from calibration temperature, isolation calibration performed.
3. User correction: OFF, system correction: ON
4. All specifications apply at 23 °C (±5 °C), unless otherwise stated, and 90 minutes after the instrument has been turned on.

Table 1.

IFBW Nominal settings(Hz)	10,15,20,30,40,50,70,100,150,200,300,400,500,700,1k,1.5k,2k,3k,4k 5k,7k,10k,15k,20k,30k,40k,50k,70k,100k,150k,200k,300k,400k 500k,700 k,1M,1.5M
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