

VNA4435

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:ITENEST-WI-YX-86/B

SYSTEM MEASUREMENT RANGE				
System Impedance		50Ω		
Test Port Connector Type		NMD 2.4mm, male		
Number of Test Ports		2 or 4		
Frequency Range		100kHz to 43.5GHz		
Frequency Setting Resolution		1Hz		
Output Power Range		100kHz to 2MHz	-55dBm to -10dBm	
		2MHz to 43.5GHz	-55dBm to +10dBm	
Power Setting Resolution		0.05dB		
Number of Measurement Points		2 to 100,001		
System Bandwidth(IFBW)		10Hz to 1.5MHz ^{Table 1}		
System Dynamic Range: (RF Range Fixed Mode=OFF) @IFBW=10Hz		100kHz to 500kHz	95dB	
		500kHz to 2MHz	110dB	
		2MHz to 5.8GHz	135dB	
		5.8GHz to 26.5GHz	130dB	
		26.5GHz to 43.5GHz	125dB	
MEASUREMENT ACCURACY(UNCERTAINTY) ¹				
Trace Noise: Meas. Power=Max Output Power				
Transmission	100kHz to 10MHz(IFBW=3kHz)		4mdB rms/0.03deg rms	
	10MHz to 6GHz(IFBW=70kHz)		4mdB rms/0.03deg rms	
	6GHz to 26.5GHz(IFBW=70kHz)		4mdB rms/0.04deg rms	
	26.5GHz to 43.5GHz(IFBW=70kHz)		5mdB rms/0.04deg rms	
Reflection	100kHz to 10MHz(IFBW=3kHz)		5mdB rms/0.05deg rms	
	10MHz to 6GHz(IFBW=70kHz)		5mdB rms/0.03deg rms	
	6GHz to 26.5GHz(IFBW=70kHz)		5mdB rms/0.04deg rms	
	26.5GHz to 43.5GHz(IFBW=70kHz)		6mdB rms/0.04deg rms	
CORRECTED SYSTEM EFFECTIVE DATA ¹				
Description	100kHz to 2GHz	2GHz to 10GHz	10GHz to 20GHz	20GHz to 43.5GHz
Directivity	40 dB	47 dB	44 dB	34 dB
Source Match	38 dB	42 dB	37 dB	32 dB
Load Match	36 dB	40 dB	35 dB	30 dB
UNCORRECTED SYSTEM RAW DATA ²				
Description	100kHz to 2GHz	2GHz to 10GHz	10GHz to 26.5GHz	26.5GHz to 43.5GHz
Directivity	25 dB	15 dB	12 dB	12 dB
Source Match	25 dB	15 dB	15 dB	13 dB
Load Match	17 dB	15 dB	12 dB	10 dB
TEST PORT OUTPUT PERFORMANCE				
Power Accuracy	100kHz to 2MHz	±0.5 dB @-10dBm		
	2MHz to 26.5GHz	±0.5 dB @0dBm		
	26.5GHz to 43.5GHz	±1 dB @0dBm		
Power Linearity (Relative to -10dBm or 0dBm)	100kHz to 2MHz	±0.5 dB(-20dBm to -10dBm)		
	2MHz to 6GHz	±0.5 dB(-20dBm to +10dBm)		
	6GHz to 26.5GHz	±0.75 dB (-20dBm to +10dBm)		
	26.5GHz to 43.5GHz	±1dB (-20dBm to +10dBm)		

Harmonic(2nd or 3rd)	100kHz to 2MHz	<-20dBc @-10dBm
	2MHz to 43.5GHz	<-20dBc @0dBm
Non-Harmonic Spurious	<-30dBc @Max Power	
CW Accuracy	±0.2ppm (23 °C±3 °C)	
Source Stability	±0.01ppm (5 °C±40 °C)	
TEST PORT INPUT PERFORMANCE		
Maximum Input Level	+10dBm	
Damage Level	+26dBm or ±35VDC	
Cross Talk	100kHz to 500kHz	-80dB
	500kHz to 2MHz	-100dB
	2MHz to 6GHz	-120dB
	6GHz to 26.5GHz	-110dB
	26.5GHz to 43.5GHz	-100dB
Noise Floor	100kHz to 500kHz	-115dBm/Hz
	500kHz to 2MHz	-130dBm/Hz
	2MHz to 5.8GHz	-135dBm/Hz
	5.8GHz to 26.5GHz	-130dBm/Hz
	26.5GHz to 43.5GHz	-125dBm/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±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		
Display	12.1 inch touch screen LCD(1280 X 800)	
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 °C to +60 °C
Storage Humidity	20% to 90% at wet bulb temperature <+40 °C (non-condensation)
Dimensions	Unit with Handle:482.6mm W x 404mm D x 265.9mm H Unit without Handle: 482.6mm W x 380mm D x 265.9mm H
Weight	<26Kg
Power Requirements	90 to 264VAC, 47 to 63Hz
Power Consumption	<220W(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

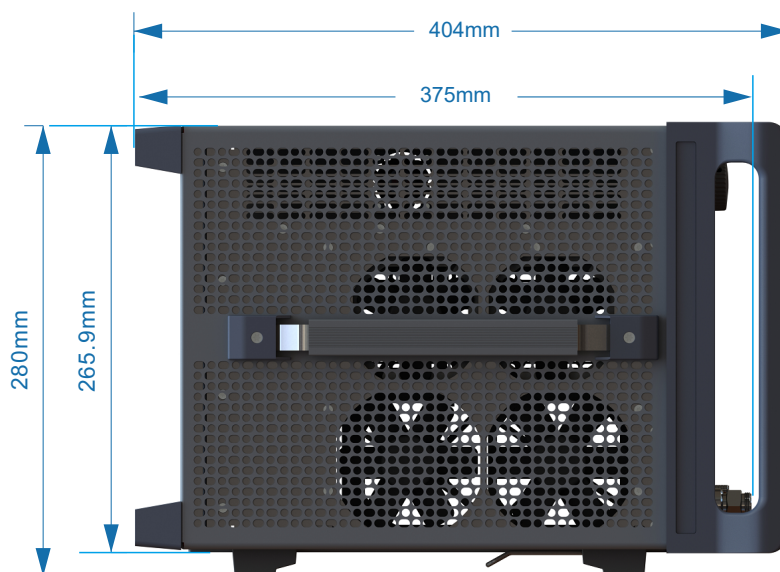
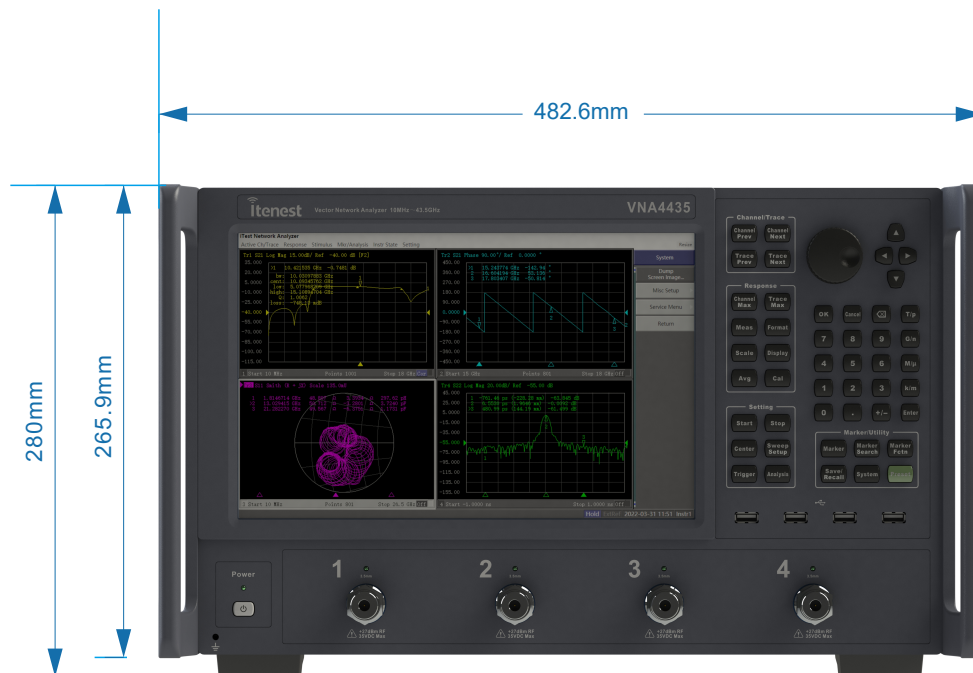
1. Using Cal Kit: MCK43A(2.4mm 50Ω) for full 2-port calibration. And IF bandwidth = 10 Hz, no averaging applied to data, environmental temperature= 23°C(±5°C) with < 1°C deviation from calibration temperature, isolation calibration performed.

2. User correction: OFF, system correction: ON

3. 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	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,300 k,400k,500kHz,700 kHz,1MHz,1.5MHz
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