Introduction

With a frequency range from 10 MHz to 26.5 GHz, the VNA4265 vector network analyzers can cover testing for microwave products in C/X/Ku/K bands. They can be widely used in R&D and production testing in various industries, such as microwave communications, satellite communications, aerospace, and military.

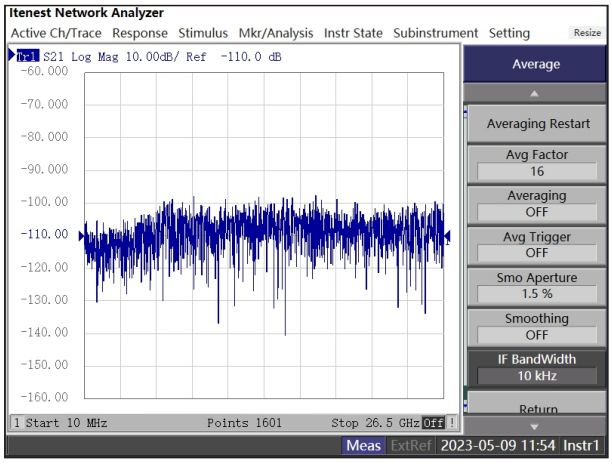
The VNA4265 provides excellent performance in terms of Dynamic range, trace noise, accuracy, and stability, making it ideal for developing and producing RF components.

The VNA4265 also comes with complete calibration algorithm and analysis functions, which help engineers full precise measurements for a variety of measurement requirements.

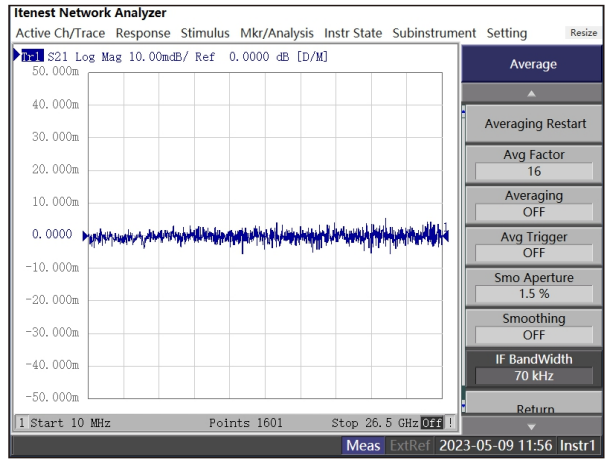


Key Features

【Performance】	【Function】
2 or 4 ports with 20/26.5GHz option	Support Time Domain Analysis(TDR)
Excellent Dynamic range: 135dB @26.5GHz(typ.)	Support Enhanced Time Domain Analysis(enhanced TDR) (Eye diagram,rise time,skew,etc...)
Ultra-Low Trace Noise:2mdB rms(typ.)@IFBW=70kHz	Compatible with main-stream mechanical and electronic calibration kits
Ultra-High Temperature stability: <0.005dB/°C	Full calibration algorithm(including SOLT, SOLR, TRL, Reflection calibration, etc...)
Wide output power range: -55dBm ~ +10dBm	Embedding/De-Embedding techniques such as automatic port extension, fixture simulation, AFR(Automatic Fixture Removal), etc...
Outstanding measurement speed	The remote control interface supports VISA and SCPI protocols, and is compatible with customers' testing software



Excellent Dynamic range: 100dB @IFBW=10kHz



Ultra-Low Trace Noise:2mdB rms(typ.)@IFBW=70kHz

Technical Specifications

SYSTEM MEASUREMENT RANGE				
Frequency Range	10MHz to 26.5GHz			
Number of Test Ports	2 or 4			
Test Port Connector Type	NMD 3.5mm, male			
Output Power Range	-55dBm to +10dBm			
System Impedance	50Ω			
Frequency Setting Resolution	1Hz			
Power Setting Resolution	0.05dB			
Number of Measurement Points	1 to 20,001			
System Bandwidth(IFBW)	10Hz to 1.5MHz[Table1]			
System Dynamic Range:	10MHz to 5.8GHz	135dB		
(RF Range Fixed Mode=OFF)	5.8GHz to 7GHz	130dB		
@IFBW=10Hz	7GHz to 26.5GHz	132dB		
MEASUREMENT ACCURACY(UNCERTAINTY)				
Noise: Meas. Power=Max Output Power				
Transmission	10MHz to 6GHz(IFBW=70kHz)	4mdB rms/0.03deg rms		
	6GHz to 26.5GHz(IFBW=70kHz)	3mdB rms/0.02deg rms		
Reflection	10MHz to 6GHz(IFBW=70kHz)	5mdB rms/0.03deg rms		
	6GHz to 26.5GHz(IFBW=70kHz)	3.5mdB rms/0.035deg rms		
CORRECTED SYSTEM EFFECTIVE DATA				
Description	10MHz to 2GHz	2GHz to 13.5GHz	13.5GHz to 20GHz	20GHz to 26.5GHz
Directivity	48	44	44	44
Source Match	40	31	31	31
Load Match	48	44	44	44
UNCORRECTED SYSTEM RAW DATA				
Description	10MHz to 2GHz	2GHz to 13.5GHz	13.5GHz to 20GHz	20GHz to 26.5GHz
Directivity	25 dB	15 dB	12 dB	12 dB
Source Match	25 dB	15 dB	15 dB	13 dB
Load Match	17 dB	10 dB	10 dB	10 dB
UNCORRECTED SYSTEM RAW DATA				
Power Accuracy	±0.5 dB @0dBm			
Power Linearity	10MHz to 6GHz	±0.5 dB(-20dBm to +10dBm)		
(Relative to 0dBm)	6GHz to 26.5GHz	±0.75 dB (-20dBm to +10dBm)		
Harmonic(2nd or 3nd)	<-20dBc @5dBm			
Non-Harmonic Spurious	<-30dBc @5dBm			
CW Accuracy	±2ppm (23 °C±3 °C)			
Source Stability	±2ppm (5 °C±40 °C)			
TEST PORT INPUT PERFORMANCE				
Maximum Input Level	+10dBm			
Damage Level	+26dBm or ±35VDC			
Cross Talk	10MHz to 6GHz	-120dB		
	6GHz to 20GHz	-110dB		
	20GHz to 26.5GHz	-100dB		
Noise Floor	10MHz to 5.8GHz	-135dBm/Hz		
	5.8GHz to 7GHz	-130dBm/Hz		
	7GHz to 26.5GHz	-132dBm/Hz		

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