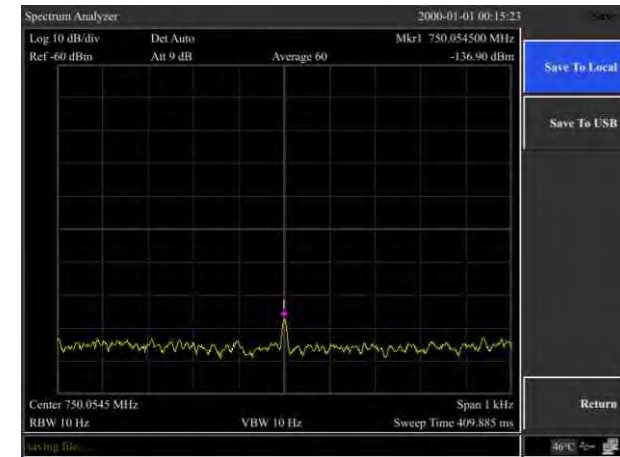
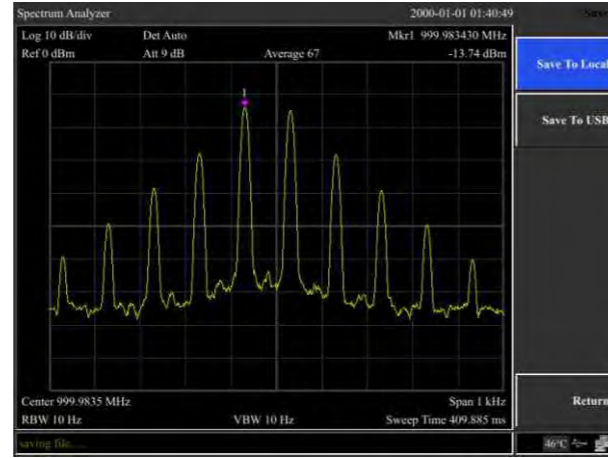


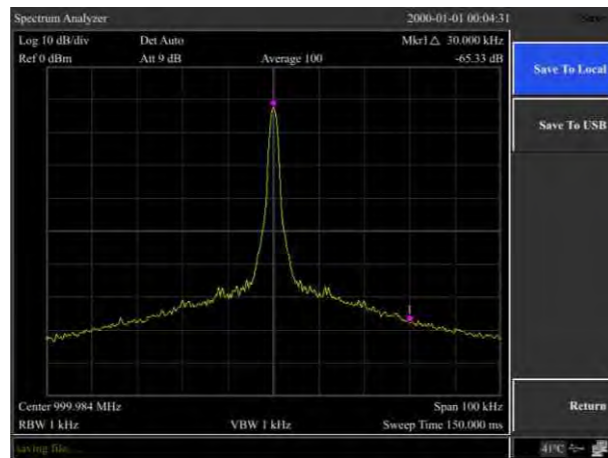
1. 10 Hz Minimum Resolution Bandwidth (RBW)

Digital IF technology offers a minimum bandwidth of 10Hz, allowing excellent signal resolution when separation of closely spaced signals is required.



2. Measure -130dB small signal at 10Hz RBW

Offers a DANL (displayed average noise level) down to -130 dBm, which is able to measure smaller signals.

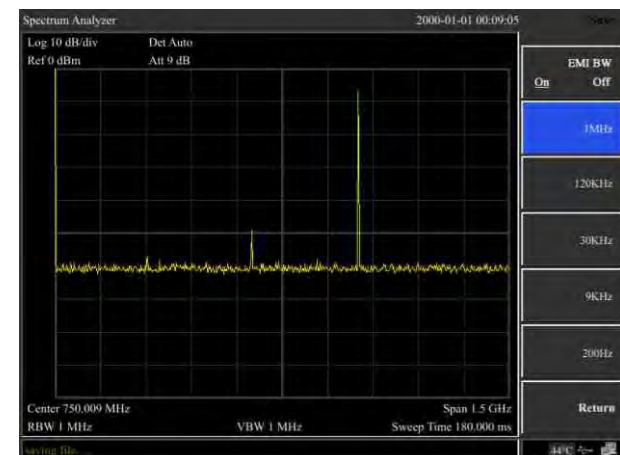


**3. Phase noise:
< -80 dBc/Hz @ 1 GHz @ 30 KHz offset**

Excellent phase noise performance - < -80dBc/Hz @30KHz enables users to evaluate most synthesizers and signal generators.

4. EMI filter and quasi-peak detector kit

OWON offers an EMI filter and quasi-peak detector kit to help evaluating EMI levels for pre-compliance testing.



XSA1015 Spectrum Analyzer



Frequency Specification

Frequency	
Range	9kHz-1.5 GHz
Resolution	1Hz
Frequency span	
Range	0 Hz , 100 Hz to maximum frequency of device
Accuracy	± span / (swept points - 1)
Internal reference	
Reference frequency	10.000000 MHz
Reference frequency accuracy	± [(days from last calibrate × freq aging rate) + temperature stability + initial accuracy]
Temperature stability	<2.5ppm
Aging rate	<1ppm/year
Readout	
Marker frequency resolution	span/ (the number of sweep points - 1)
Uncertainty	± (freq indication × freq reference uncertainty + 1%× span + 10%× resolution bandwidth + Marker Frequency Resolution)
Frequency counter	
Resolution	1 Hz , 10 Hz , 100 Hz , 1 kHz
Accuracy	± (marker freq × freq reference uncertainty + counter resolution)
Bandwidth	
Resolution bandwidth (-3 dB)	1Hz to 500kHz (in 1 to 10 sequence) , 1MHz , 3MHz
Resolution filter shape factor	<5 : 1 nominal (Digital implement, similar to Gauss Pattern)
Accuracy	<5% nominal
Video bandwidth (-3 dB)	10Hz to 3MHz

Amplitude Specification

Amplitude and electric level	
Amplitude measurement range	DANL to +20 dBm , close the preamplifier
Reference electric level	-80 dBm to +30 dBm , 0.1dBm steps
Preamplifier	20 dB , nominal , 9 kHz~1.5 GHz
Input attenuator range	0~39 dB , 3 dB steps
Max input DC voltage	50 VDC
Max continuous power	27dBm , average continuous power
Displayed average noise level (DANL)	
	Input attenuation 0 dB , 1Hz resolution bandwidth
Preamp off	1 MHz~10 MHz -130dBm (typical) ;
	10 MHz~1GHz -130dBm (typical) ;
	1GHz~1.5 GHz -128 dBm(typical)
Preamp on	1 MHz~10 MHz -150dBm (typical) ;
	10 MHz~1GHz -150dBm (typical) ;
	1GHz~1.5 GHz -148 dBm(typical)
Phase noise	
	20 °C ~30 °C , fc=1 GHz
Phase noise	< -90 dBc/Hz @30 kHz offset ,
	< -100 dBc/Hz @100 kHz offset
	< -110 dBc/Hz @1 MHz offset
Level display range	
Log scale coordinate	1dB ~255dB
Linear scale coordinate	0 to reference level
level unit	dBm,dBuW,dBpW,dBmV,dBuV, W,V
Points	201~1001
Number of traces	5
Detectors	Positive-peak, negative-peak, sample, normal, RMS
Trace functions	[1 ↔ 2] , [2-DL→ 2] [2 ↔ 3] [1 → 3] [2 → 3]
Frequency response	
	20°C ~30°C , 30%~70% relative humidity, 20 dB input attenuation, reference 50 MHz
Preamp off	±0.8 dB ;
Preamp on	±0.9 dB ;
Accuracy	
Input Attenuation Switching Uncertainty	20°C ~30°C , fc=50 MHz , Preamplifier Off , 20dB RF attenuation , input signal 0~39 dB ±0.5 dB
Absolute Amplitude uncertainty	20°C ~30°C , fc=50 MHz , RBW=1 kHz , VBW=1 kHz , peak detector, 20 dB RF attenuation , Preamplifier Off ±0.4 dB , input signal= -20dBm Preamplifier On ±0.5 dB, input signal= -40dBm
Uncertainty	input signal range 0dbm~-50dbm ±1.5 dB
VSWR	input 10 dB RF attenuation , 1 MHz~1.5GHz <1.5 , nominal

Distortion and spurious response	
Second harmonic distortion	fc ≥ 50 MHz , Preamp off, signal input -30 dBm, 0 dB RF attenuation, 20 °C to 30 °C -60dbc
Third-order intermodulation	fc ≥ 50 MHz +13 dBm
1 dB Gain Compression	fc ≥ 50 MHz , 0 dB RF attenuation , Preamp off , 20 °C to 30 °C +7 dBm, nominal
Residual response	connect 50 Ω load at input port , 0 dB input attenuation , 20 °C to 30 °C < -85dBm , nominated
Input related spurious	-30 dBm signal at input mixer , 20 °C to 30 °C < -60 dBc
Sweep time and triggering	
Span range	100Hz≤SPAN≤3GHz 10ms to 3000s zero sweep width 1ms to 3000s
Mode	Continue, single
Trigger	Free run, video, external
Tracking generator (apply to TG model)	
Output frequency range	100 kHz~1.5 GHz
Output power level range	-30 dBm~0 dBm ,
Output power level resolution	1DB
Output flatness	+/- 3 dB
Maximum safe reverse level	Average total power : 30 dBm , DC : ±50 VDC
Inputs and Outputs	
Front panel RF input connector	50 Ω , N-type female
Front panel track generator output	50 Ω , N-type female
10 M reference input	50 Ω , N-type female
Communication port	USB HOST, USB DEVICE, LAN, earphone port, VGA
General technical specification	
Display	TFT LCD , 10.4 inches , resolution 600*480
Weight	
Working temperature	0~40 °C
Storage temperature	-20 °C to +60 °C
Power	100V~240V 50/60Hz