Digital Spectrum Analyzer

GA4063
3GHz

Professional Performance

Robust Measurement features

High frequency stability

Easy- to-use User Interface

Compact size, Light weight, Portable design

8.5"
Wide Screen

Application

GA4063 small size, light weight, cost-effective portable spectrum analyzer to meet your all the RF application demands. It has easy-to-keyboard layout and high-definition 8.5-inch TFT color LCD display; display contains the appropriate settings and alerts. Standard USB, LAN and RS232 communication interface, virtual terminal display and control and remote network access. The spectrum analyzer can be widely applied in many fields of science education, enterprise research and development and industrial production.

Features

- Frequency range 9 KHz to 3 GHz
- Displayed average noise level (DANL) <-148 dbm
- -95 dBc/Hz（Offset 10 kHz） Phase Noise
- Full amplitude accuracy of <1.0 db
- Minimum resolution bandwidth (RBW) 1 Hz
- Standard preamplifier
- 3GHz Tracking Generator(Optional)
- Measurement capabilities and a variety of automatic settings
- 8.5-inch (800x480) widescreen display
- The interface is simple and rich in affinity, operation and user-friendly design
- Compact portable design, weighing less than 7 kg

TECHNICAL SPECIFICATIONS

Frequency Specifications	
Frequency range	9 kHz to 3 GHz
Internal 10 MHz frequency reference accuracy	
Aging rate	$\pm$ 1 x 10^{-7} ppm/year
Temperature stability	$\pm$ 1 x 10^{-7} Referenced to frequency reading at 0-50 °C
Frequency readout accuracy with marker (start, stop, center, marker)	
Marker resolution	(frequency span)/(sweep points -1)
Uncertainty	$\pm$ (frequency indication $\times$ frequency reference uncertainty $+1\% \times$ span $+10\% \times$resolution bandwidth $+$ marker resolution$+1$ Hz)
Frequency reference uncertainty	$=$ (aging rate x period of time since adjustment $+$ temperature stability)
Marker frequency counter	
Resolution	1 Hz
Accuracy	$\pm$(marker frequency $\times$ frequency reference uncertainty $+$counter resolution)
(marker level to displayed noise level $>$ 25 dB; frequency offset 0 Hz)	
Frequency span	
Range	0Hz (zero span), 100 Hz to 3GHz
Resolution	1 Hz
Accuracy	$\pm$span/(sweep points -1)
SSB phase noise	
	$<$ -95 dBc/Hz, Carrier offset 10 kHz
	$<$ -100 dBc/Hz, Carrier offset 100 kHz (Center frequency 500 MHz, 20 °C to 30 °C)
	$<$ -120 dBc/Hz, Carrier offset 1MHz
Resolution bandwidth (RBW)	
-3 dB bandwidth	1 Hz to 3 MHz, 1-3-10 sequence
Accuracy	$\pm$ 5%, RBW $=$ 10 Hz to 1 MHz Nominal, $\pm$10%, RBW $=$ 3 MHz
Resolution filter shape factor	$<$ 5 : 1
Video bandwidth (VBW)	
-3 dB bandwidth	1 Hz to 3 MHz, 1-3-10 sequence

Amplitude specifications			
Measurement range	Displayed average noise level (DANL) to +10 dBm, (100 kHz to 2 MHz, Preamp off) Displayed average noise level (DANL) to+20 dBm, (2 MHz to 3 GHz)		
Input attenuator range	0 dB to 50 dB, in 10 dB steps		
Maximum safe input level			
Average continuous power	+30 dBm, (3 minutes maximum, Input attenuator$\geq$20 dB, 2 MHzto 3 GHz)		
DC voltage	$\pm$ 25 VDC maximum		
Displayed average noise level			
Preamp off	100 kHz to 10 MHz , -120 dBm		
	10 MHz to 2.5GHz , -130 dBm	(Reference level $\leq$-50 dBm)	
	2.5GHz to 3GHz, -120 dBm		
Preamp on	100 kHz to 10 MHz, -130 dBm		
	10 MHz to 2.5GHz, -148 dBm	(Reference level $\leq$-70 dBm)	
	2.5GHz to 3GHz, -140dBm		

Amplitude specifications

Level display range	
Log scale	10 dB to 100 dB, 10 divisions displayed; 1, 2, 5, 10 dB/division
Linear scale	0% to 100%, 10 divisions displayed
Scale units	W, V, mV
Sweep (trace) points	501
Marker level readout resolution	
Log scale	0.01 dB
Linear scale	≤1% of signal level Nominal
Detectors	Normal, positive peak, sample, negative peak, average
Number of traces	3
Level display range	
Trace functions	Clear/write, maximum hold, minimum hold, average
Level measurement error	±1.5 dB, typical ± 0.6 dB
Reference level	
Setting range	-100 dBm to +30 dBm Steps of 1 dB
Setting resolution Log scale	0.01 dB
Linear scale Same as log	(2.236 μV to 7.07 V)
Accuracy	0
RF Input VSWR (at tuned frequency)	
	< 1.5:1, (10 MHz to 3 GHz, 10 dB or 20 dB attenuation)
Spurious response	
Second harmonic distortion	< -70dBc, (Mixer signal level at -40 dBm, input attenuation 0 dB, preamp off)
Third order intermodulation distortion	< -70dBc,(Two -30 dBm tones at input mixer, spaced by 1MHz input attenuation 0 dB, preamp off)
Input related spurious	< -60dBc, (-30 dBm signal at input mixer)
Inherent residual response	<-80dBm, (Input terminated and 0 dB RF attenuation, preamplifier off)

Sweep specifications

Sweep time	
Range	10ms to 3000s, Span≥100 Hz;10μs to 100s, Span = 0 Hz (zero span)
Sweep mode	Continuous, single
Trigger source	Free run, RF burst

RF input

Connector and impedance	Type-N female, 50 Ω Nominal
10 MHz reference	
Reference input frequency	10 MHz
Reference input amplitude	-10 dBm to +10 dBm
Reference output frequency	10 MHz
Reference output amplitude	0 dBm to +10 dBm
Connector	BNC female, 50 Ω Nominal

Interface

Host connector	USB Type-A female
Device connector	USB Type-mini AB female, LAN, RS232, VGA

General specifications

Display	
Resolution	800 pixels x 480 pixels
Size and type	8.5 inch TFT color display
Languages	On-screen GUI: English, Simplified Chinese

Power requirements

| Adaptor voltage	100 V to 240 V AC, 50 Hz to 60 Hz , Auto-ranging
Power consumption	24 W Typical

Environmental and size

Temperature range	0 °C to +40 °C (Operating)
	-40 °C to +70 °C (Storage)
Relative humidity	< 95%
Weight	7kg
Dimensions	410 mm × 210mm × 136 mm, Approximately (W x H x D)

Tracking generator (Optional)

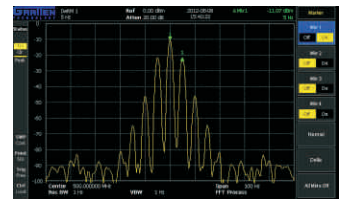| Frequency range	5 MHz to 3GHz
Output level	0 dBm to -25 dBm, 1 dB steps
VSWR	< 2.0: 1, Nominal
Connector and impedance	Type-N female, 50 Ω

Advanced Measurement Functions
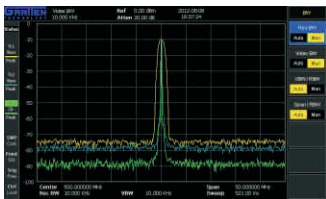
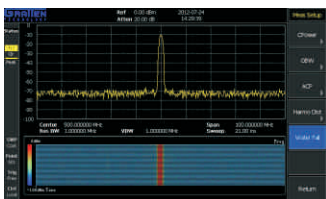**Three simultaneous Trace Display at RBM 1M/100K/10K**
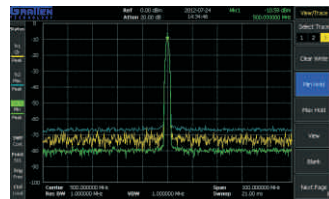
Display spectrum in 3 different color trace depending upon RBW settings
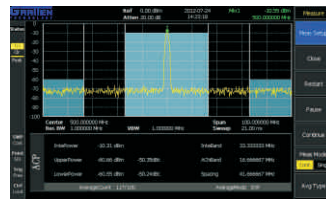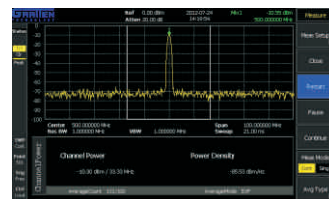

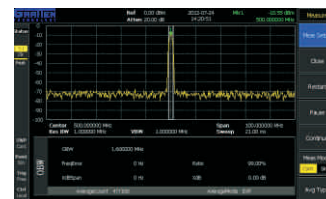**13E Advanced Measurement Functions - Adjacent channel power**

Distinguish Similar nearby Signal at RBW 1Hz

Advanced Measurement Functions - Waterfall Plot display

Advanced Measurement Functions - Channel Power Measurement

Advanced Measurement Functions - Occupied Bandwidth Measurement

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