

RF Signal Generator

GA148X Series



GA1484A/ GA1484B :
250kHz~4GHz
GA1483 :
250kHz~3GHz

Summary

GA148X Series is a high-end signal generator designed and manufactured to create high frequency and stable signals capable of testing your very best devices and designs. It offers industry-leading performance, features and low cost of ownership.

GA148X Series generate the essential signals for parametric and functional testing of components and receivers. Frequency range extends from 250 kHz up to 3 GHz/4 GHz.

The performance of the signal generator is called the benchmark of similar products in the market and they can meet your demands for design and manufacturing. An ideal instrument for the educational labs to high-end R&D labs.

Application Area

- Manufacturing Line
- General Service and Maintenance
- Test Bench
- RF Teaching Lab
- Design and Development Lab

Features

- 250 kHz to 4GHz/3GHz frequency range with resolution 0.1Hz
- Superior Phase Noise : $\leq -115\text{dBc/Hz}$ @ 20kHz (Carrier wave 1GHz) : GA1484B
 $\leq -105\text{dBc/Hz}$ @ 20kHz (Carrier wave 1GHz) : GA1484A
 $\leq -115\text{dBc/Hz}$ @ 20kHz (Carrier wave 1GHz) : GA1483
- - 127 ~ +13dBm amplitude output range with 0.01 dB resolution
- Extensive Analog modulation: AM, FM, Phase and Pulse Modulation
- Hard keys on the front panel and soft keys on the unit's screen, provide fast and intuitive user experience

Technical Specification

Specification parameters		GA1484B	GA1484A	GA1483	Supplemental information
Frequency					
Frequency range		250kHz ~ 4GHz	250kHz ~ 4GHz	250kHz ~ 3GHz	
Resolution		0.1Hz			
Internal Reference	Frequency	10MHz			Temp. 0 to 45°C
	Accuracy	≤ ±0.1ppm	≤ ±1ppm	≤ ±0.1ppm	
	Aging	≤ ±1ppm/year			
EXT Input Reference	Output amplitude	≥ 0.35Vrms			
	Frequency	10MHz			
	Input amplitude	0.5~2Vrms			
Connector		BNC female, 50Ω			
RF Output					
Power Range		-127~+13dBm (Available to -136dBm)	-110~+13dBm	-127~+13dBm (Available to -136dBm)	
Resolution		0.01dB			
Accuracy		≤ ±1dB (≥ -120 dBm) ≤ ±1.8dB (≥ -127 dBm)	≤ ±1dB (≥ -110 dBm)	≤ ±1dB (≥ -120 dBm) ≤ ±1.8dB (≥ -127 dBm)	Temp. from 20°C to 30°C; ALC ON
VSWR		≤ 1.8			
Connector		N type female, 50Ω			nominal value
Spectral purity					
SSB Phase Noise		≤ -115dBc/Hz	≤ -105dBc/Hz	≤ -115dBc/Hz	Typical value: Carrier Frequency 1GHz; Offset 20 kHz
Residual FM(CW mode)		≤ 10Hz peak	≤ 30Hz peak	≤ 10Hz peak	Carrier frequency 1GHz; Bandwidth from 0.3 to 3 kHz
Harmonics		≤ -30dBc			
Non-harmonics		≤ -50dBc			
Modulation characteristics					
Amplitude Modulation	Modulation Depth	0 ~ 100%			Temp. 0 to 45°C
	Resolution	0.1%			
	Modulation freq	20 Hz~20 kHz			
	Accuracy	≤ ± (set value × 5% + 0.2%)			
	Distortion	< 2%			
					1 kHz modulation rate

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Specification parameters		GA1484B	GA1484A	GA1483	Supplemental information
Modulation characteristics					
Frequency Modulation	Freq Deviation	20 Hz~100 kHz			
	Modulation freq	20Hz~80kHz			
	Accuracy	$\leq \pm (\text{set value} \times 5\% + 0.2\%)$			1 kHz modulation rate
	Distortion	<0.1%	<1%	<0.1%	1 kHz frequency rate, 50kHz offset
	Carrier Frequency offset	<200Hz			Reference to carrier frequency, external model
	Frequency offset accuracy	< (Set 5% + 200Hz)			1 kHz frequency rate, 50kHz offset
Phase Modulation	Phase Deviation	0~10rad			modulation rate, ≤ 10 kHz
	Resolution	<1%			
	Modulation freq	300 Hz~20 kHz			
	Accuracy	$\pm (\text{set value} \times 5\% + 0.2\text{rad})$			1 kHz modulation rate
	Distortion	<0.1%	<1.5%	<0.1%	1 kHz modulation rate, 5rad offset
Pulse Modulation	On/off ratio	≥ 80 dB	≥ 60 dB	≥ 80 dB	
	Rise/Fall time	≤ 50 ns	≤ 60 ns	≤ 50 ns	
	Pulse Width	400ns ~1s			
	Pulse Period	1us ~2s			
	Time resolution	100ns			
LF Function source					
Waveform Type	Sine, Square, Triangle, Sawtooth				
Frequency	20Hz ~ 100kHz				
Freq resolution	1Hz				
Amplitude range	0 ~2V _{P-P}				
Amplitude resolution	1mV				

Specification parameters

GA1484B

GA1484A

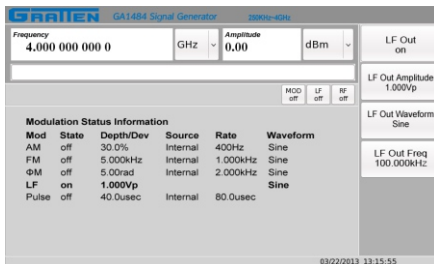
GA1483

Supplemental information

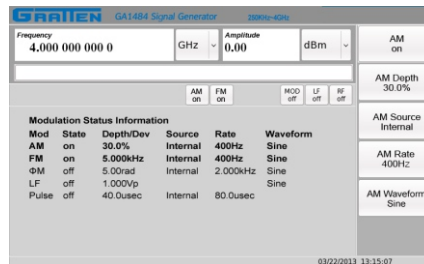
General

Display Size	7.0 inch TFT	
Display Resolution	800 x 480	
Power voltage	100V~240V	
Power frequency	47.5~52.5Hz	
Power consumption	≤ 50W	
Weight	≤ 10kg	Net weight
Size	426 × 133 × 450 mm	H x W x D
Working temperature	0°C ~ +40°C	
Storage Temperature	-40°C ~ +70°C	
Date Storage (Internal)	2M	
Date Storage (External)	Support USB 2.0 Compatible memory devices	

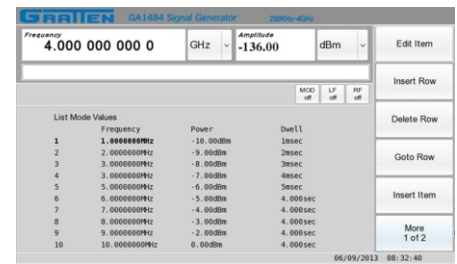
Advanced Measurement Functions



Audio Function Source LF OUT



FM/AM Combined Modulation



Combined List SWEEP Output