

# Signal Generator

## GA1484A/GA1484B



**GA1484A/ GA1484B :**  
250kHz ~ 4.0GHz

### Summary

GA1484 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.

GA1484 generate the essential signals for parametric and functional testing of components and receivers. Frequency ranges extend from 250 kHz up to 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 from the educational labs to high-end R&D labs.

### Features

- Modulation: AM, FM, Phase Modulation and Pulse
- Superior Phase Noise: <-95dBc/Hz@20kHz (Carrier wave 1GHz) - GA1484A  
<-115dBc/Hz@20kHz (Carrier wave 1GHz) - GA1484B
- Output Range :-127 ~ +13dBm



### Technical Specification

Frequency	
Range	250kHz ~ 4.0GHz
Resolution	0.1 Hz

## Internal Reference Oscillator

	GA1484A	GA1484B	
Stability	< ±1ppm	< ±0.1ppm	Temp. from 0 to 45°C
Aging	< ±1ppm/year	< ±0.1ppm/year	

## Time base Reference Output

Frequency	10MHz
Amplitude	>0.35Vrms
Connector	BNC female, 50Ω

## EXT Reference Input

Frequency	10 MHz
Amplitude	0.5 ~ 2Vrms
Connector	BNC female, 50Ω

## RF Output

Power Range	-127 ~ +13dBm	
Resolution	0.01 dB	
Accuracy	< ±1 dB	-120dBm ≤power≤+13dBm, Temp. From 20°C to 30°C, ALC ON
VSWR	<1.8	power< 0dBm, typical value
Connector	N type female, 50Ω	nominal value

## Spectral Purity

	GA1484A	GA1484B	
SSB Phase Noise	< -95dBc/Hz	< -115dBc/Hz	Typical value: Carrier Frequency 1GHz; Offset 20 kHz
Residual FM(ON CW)	< 30 Hz peak	< 10 Hz peak	CW, Carrier frequency 1GHz; Bandwidth from 0.3 to 3 kHz

## Others

Harmonics	< -30dBc
Non-harmonics	< -50dBc

## Amplitude Modulation

Temp. Range	0 to 100%	Temp. From 0 to 45°C
Resolution	0.1%	
Rate	20 Hz to 20 kHz	
Accuracy	< (set 5%+0.2%)	1 kHz modulation rate,

		Output: 0dBm, 60% modulation depth (only GA1484A) / 80% modulation depth (only GA1484B)
Distortion	<2%	1 kHz modulation rate, Output: 0dBm, 60% modulation depth (only GA1484A) / 80% modulation depth (only GA1484B)

### Frequency Modulation

	GA1484A	GA1484B
Frequency Offset Range	20 Hz to 100 kHz	
Resolution	< 1%	min1 Hz
Frequency Modulation Accuracy	20 Hz to 80 kHz	
Distortion	< (set 5%+0.2%)	1kHz modulation rate
Frequency Offset Accuracy	< 1%	< 0.1%
Carrier Frequency offset	< (Set 5%+200 Hz)	1kHz modulation rate 50 kHz offset
	< 200 Hz	1kHz frequency rate, 50 kHz offset
		Reference to carrier frequency, external model

### Phase Modulation

	GA1484A	GA1484B
Phase offset range	0 ~ 10rad	Modulation rate < 10 kHz
	0 ~ 5rad	Modulation between 10 kHz and 20 kHz
Resolution	< 1%	
Modulation Frequency	300 Hz to 20 kHz	
Accuracy	< set 5%+ 0.2rad )	1 kHz modulation rate
Distortion	< 1.5%	< 0.1%
		1 kHz modulation rate, 5rad offset

### Pulse Modulation

	GA1484A	GA1484B
On/off ratio	> 60 dB	> 80 dB
Rise /fall time	< 60ns	< 50ns
Pulse width	400ns to 1 s	
Pulse cycle	1us to 2 s	
Time resolution	100ns	



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