

## Signal Generator

# GA1484A/1484B 4GHz

High frequency upto 4GHz

Professional and Reliable performance at affordable price

Compact rack mount design

AM, FM, Phase and Pulse Modulation

Intuitive User Interface

Backlit and Clear LCD Display





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

## Summary

GA1484A/B 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 A/B 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: <math>< -95\text{dBc}/\text{Hz}</math>@20kHz (Carrier wave 1GHz) - GA1484A  
<math>< -115\text{dBc}/\text{Hz}</math>@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			
Depth Range	0 to 100%		Temp. From 0 to 45°C
Resolution	0.1%		
Modulation Frequency	20 Hz to 20 kHz		
Set Uncertainty	< (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%		min 1Hz
Frequency Modulation Accuracy	20 Hz to 80 kHz		
	< (set 5% + 0.2%)		1kHz modulation rate
Distortion	< 1%	< 0.1%	1kHz modulation rate 50 kHz offset
Frequency Offset Accuracy	< (Set 5% + 200 Hz)		1kHz frequency rate, 50 kHz offset
Carrier Frequency offset	< 200 Hz		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 Accuracy	300 Hz to 20 kHz		
	< (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		