

PGA 1240

Power Generator
DC – 300 kHz; ± 50 V; ± 5 A



- ➔ For EMC test according to the standard IEC /EN 61000-4-16
- ➔ Output module with 5A / 250 W
- ➔ DC, sine, triangle and square waveforms external
- ➔ Input adds to internal signal source Windows
- ➔ Application software via USB port

Description

PGA 1240 is a power generator for the frequency range from DC up to 300 kHz.

The amplifier for 250 W generate a output signal up to 5 A with a voltage gain of factor 10. Signals are generated by an internal generator, its output signals are amplified by an amplifier module. Different signal types as sine, triangular or square wave are selectable. Further user defined signals can also be added via an external input.

Full software control allows easy signal generation at a desired frequency and voltage output. Internal safeguards assure protection against external faults.

Applications

General Applications

For almost any electronic engineer or technician it is necessary to generate a strong output signal. Using a PGA 1240 stable output signals are generated and amplified within a wide frequency range.

Automatic Testing

Several standards for EMC testing require high output signals and low distortions. Excellent signal quality and full remote control allows the usage of the PGA 1240 as automatic testing equipment.

Driving low impedances

Voltage supply level can be halved during PGA 1240's operation which result in lower power dissipation for low impedance loads (e.g. Helmholtz coils).

Features

Waveforms

Three different waveforms can be generated using a PGA 1240: sine wave, triangular and rectangular signals. Frequencies from DC up to 300 kHz can be generated at a resolution of 0.05 Hz. Adding a common mode voltage is also possible for any signal type.

Technology

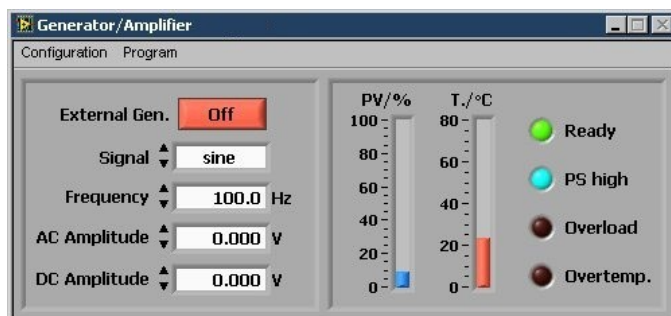
Full linear design allows to amplify signals with low distortion, low noise and high stability. Two different voltage supply levels optimize the power dissipation when driving a low impedance load.

Safeguards

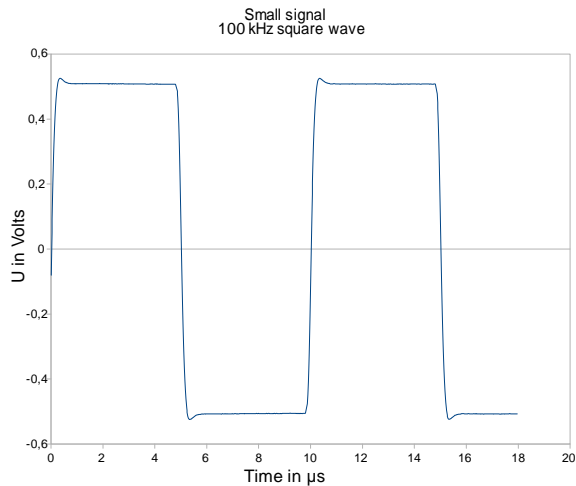
Several safeguards are implemented to protect the amplifier from any external fault, e.g. short-circuit and overheating due to high power dissipation.

Software control

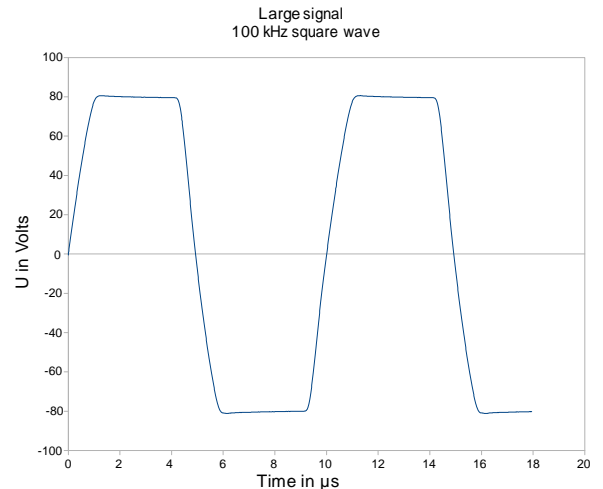
An USB interface allows to control and monitor all internal functions via an external application. A software application is included and the interface commands are described to integrate the PGA 1240 into an existing automatic test system.



Typical Characteristics



Square wave at 100 kHz (small signal) ± 500 mV



Square wave at 100 kHz (large signal) ± 80 V

Specifications

Electrical Data / Amplifier	
Frequency range	DC – 1 MHz (Small signal -3 dB)
Power bandwidth	DC – 200 kHz
Slew rate	100 V/ μ s
Offset	± 1 mV (± 0.1 mV / $^{\circ}$ C)
Voltage gain	10 ± 0.1 % (± 0.01 % / $^{\circ}$ C)
Output voltage	$50 V_{\text{rms}} / \pm 75 V_{\text{peak}}$
Output current	$5 A_{\text{rms}} / \pm 7.5 A_{\text{peak}}$
Distortion (DC – 100 kHz, load $\geq 4 e\Omega$)	$< 0.10\%$
Input impedance	$100 k e\Omega$
Max. input voltage	80 V (cont.), 100 V (< 1 min)
Noise (10 Hz – 1 MHz, Input $50 e\Omega$)	$0.5 mV_{\text{rms}}$
Power dissipation (each side)	260 W (100 ms)
Primary power	230 VAC / 50 Hz
Remote control	USB
Generator	
Frequency range	DC, 0.05Hz - 300 kHz; resolution 0.05 Hz
Frequency accuracy	± 20 ppm
Signal types	Sine , triangle and square waveforms
Mechanical Data	
Dimensions (W x H x D)	449 mm x 133 mm x 435.5 mm
Weight	Approx. 14 kg