

The Hameg HM8131 is a high performance yet affordable 15MHz Synthesised Function Generator. This instrument uses direct digital synthesis to generate standard waveforms such as sine, square, ramp, triangle and noise, as well as arbitrary signals with synthesised frequency ramp.

Specifications:

Frequency

Range: 0.0001Hz to 15MHz
Resolution : 0.0001Hz
Display: 12 digit LCD
Accuracy: $\pm (10\text{ppm} + 30\mu\text{Hz})$; standard
 $\pm (2\text{ppm} + 30\mu\text{Hz})$; TCXO

Waveforms:

Sine

Freq. range; 0.0001Hz to 15MHz
Amplitude; 0 to 20Vpp Open circuit
Harmonic dist.; $<0.1\%$ (0.01Hz to 20kHz)
 $<1\%$ (20kHz to 3MHz)
 $<3\%$ (3MHz to 15MHz)

Square

Freq. range; 0.0001 to 15MHz
Amplitude; 0 to 20Vpp Open circuit
Rise/fall time; $<10\text{ns}$
Aberration; $<5\%$ ($V_{\text{out}} > 200\text{mV}$)
Symmetry; $50\% \pm(5\% + 10\text{ns})$

Ramp

Freq. range; 0.0001Hz to 100kHz
Amplitude; 0 - 20Vpp Open circuit
Linearity; better than 1%
Rise/fall time; typ. 45ns

Triangle

Freq. range; 0.0001Hz to 1MHz
Amplitude; 0 to 20Vpp Open circuit
Linearity; better than 1%
Noise; White and pink noise

Inputs

Gate/trigger (BNC jack)
Impedance; 2Kohm// 100pf; protected up to $\pm 30\text{V}$
AM (BNC jack)
Impedance; 1Kohm protected up to $\pm 30\text{V}$
External Ref.; 10MHz $\pm\text{ppm}$; 1V rms; 500ohm

Outputs

Signal O/P: Short cct. proof; ext. voltage up to max. $\pm 15\text{V}$
Impedance; 50 ohm
O/P Voltage; 2.1 to 20Vpp (OC)
0.21 to 2.0Vpp (OC)
20 to 200mVpp(OC)
Resolution; $3\frac{1}{2}$ digit; 100/10/1mV
Accuracy; $\pm(1\% + 5 \text{ digit})$
Sweep (internal); all waveforms lin. or log.

Amplitude Modulation:

Modulation; via external signal
Modulation depth; 0 to 100% (resolution 1%)
Bandwidth; DC - 20kHz (-3dB)
Sensitivity(ext); 1V rms sine wave for 100% at 1kHz
Burst; via ext. trigger input

