

15MHz Programmable Function Generator



GFG-3015

SPECIFICATIONS	
MAIN	
Output Waveforms	Sine, Square, Triangle, Ramp, Pulse, AM, FM, Sweep, Trigger, Gate or Burst
Frequency Range	10mHz~15MHz in 8 frequency range(auto switch)
Frequency Resolution	15MHz~150kHz(100Hz);1.5MHz~15kHz(10Hz) 150kHz~1.5kHz(1Hz);15kHz~150Hz(0.1Hz) 1.5kHz~15Hz(10mHz);150Hz~1.5Hz(10mHz) 15Hz~0.15Hz(10mHz);1.5Hz~0.01Hz(10mHz)
Frequency Accuracy	0.02% ± 5 count
Output Impedance	50Ω ± 10%
Amplitude Range	10.00V ~ 0.01V(into 50Ω) 4 amplitude rang Vac peak + Vdc = 5V Resolution : 10mV(10.00V ~ 0.01V)
Amplitude Accuracy	≤ 3% ± 5count at 10Hz ~ 1MHz ≤ 10% ± 5count at 1MHz ~ 15MHz
Amplitude Unit	Vpp, Vrms, dBm
DC Offset	-5V ~ 5V (into 50Ω); resolution 10mV
DC Offset Accuracy	≤ 3% ± 3count at amplitude min.
Duty Control	80%: 20%:80% ~ 1MHz; resolution 1%
Duty Accuracy	≤ 1% ~ 1MHz at 50% duty
Display	Dual display for frequency 6 digits and amplitude 4 digits
SINE WAVE	
Distortion	≤ 0.5%(-46dBc) THE from 10Hz~ 100kHz; ≤ -30dBc~15MHz;(spec. applied form 1Vpp~10Vpp)
TRIANGLE WAVE	
Linearity Error	<1% of full scale output at 100Hz
SQUARE WAVE	
Asymmetry	± 1% of period + 3nS
Rise or Fall Time	<18 nS
SYNC OUTPUT	
Impedance	50Ω ± 10%
Level	>1Vp-p open circuit
MODULATION CHARACTERISTICS	
Types	AM, FM, Sweep, Trigger(int/ext), Gate or Burst (implement by trigger type)
Waveform	Sine, Square, Triangle, Ramp or Variable Symmetry Pulse
Rate Frequency Range	10mHz~10kHz in 3 frequency range (auto switch)
Rate Frequency Accuracy	5% ± 1 count
Rate Frequency Resolution	10.0kHz~0.1kHz(100Hz);99Hz~1Hz(1Hz); 0.99Hz ~ 0.01Hz(0.01Hz)
Symmetry	90% : 10% : 90%; resolution : 1%
Symmetry Accuracy	± 1 count(≤ ± 1%)
Output Level	≥ 1Vpp into 10kΩ load
Sine Wave Distortion	≤ 2% from 10Hz ~ 10kHz
AMPLITUDE MODULATION	
Depth	0 ~ 100%
Modulation Frequency Rate	0.01Hz ~ 10kHz(INT) ; DC ~ 1MHz(EXT)
Carries -3dB Bandwidth	<100Hz to >5MHz
External Sensitivity	≤ 10Vpp for 100% modulation
FREQUENCY MODULATION	
Deviation	0 ~ ± 15%
Modulation Frequency Rate	0.01Hz ~ 10kHz(INT) ; DC ~ 50kHz(EXT)
External Sensitivity	≤ 5Vpp for 15% deviation

FEATURES

- * Frequency Range 0.01Hz~15MHz
- * Maximum Frequency Resolution 10mHz
- * Frequency Accuracy 0.02%± 5 Count
- * Dual Displays Indicate Frequency and Amplitude
- * Built-in 6 Digit Counter With INT/EXT Function up to 150MHz/High Resolution
- * Output Waveforms Sine, Square, Triangle, Ramp, Pulse, AM, FM, Sweep, TTL, Trigger and Gate or Burst
- * INT/EXT AM/FM Modulation
- * LIN/LOG Sweep Mode
- * Variable DC Offset Control
- * VCF for 100:1 EXT Frequency Control
- * GCV Output for Synchronization
- * SYNC Output
- * Output Overload Protection
- * RS-232C Interface Standard

SWEEP CHARACTERISTICS

Sweep Range	15MHz ~ 150kHz; 1.5MHz ~ 15kHz; 150kHz ~ 1.5kHz; 15kHz ~ 150Hz; 1.5kHz ~ 15Hz; 150Hz ~ 1.5Hz; 15Hz ~ 0.15Hz; 1.5Hz ~ 0.01Hz
Width Rate	>100:1(in same frequency range) 0.01Hz ~ 10kHz
Symmetry Control	90% 10% 90% ; resolution:1%
Mode	Linear /Log sweep
Sweep Output	0 ≥ -5Vpp into 10kΩ

TRIGGER CHARACTERISTICS

Start/Stop Phase Range	80° ~ 90°
Rate	0.1Hz ~ 10kHz
Frequency Range	0.1Hz ~ 1MHz(Useful ~ 10MHz)
Ext Trig Frequency Range	DC ~ 1MHz, TTL compatible input level
Gate or Burst	Implement by trigger setting

VCF

Range	100:1(0 ~ 10V ± 1V)
Input Linearity	<0.5% ~ 1MHz, <5% ~ 10MHz
Input Impedance	10 kΩ

GCV OUTPUT

To set the voltage between 0.2V ~ 2V as per different frequency in same frequency range

FREQUENCY COUNTER

INT/EXT	Switch selector
Range	5Hz ~ 150MHz EXT
Accuracy	Time base accuracy ± 1 count
Time Base	± 20ppm(23°C ± 5°C) after 30 minutes warm up
Resolution	The maximum resolution is 100nHz for 0.1Hz and 1Hz for 100MHz
Input Impedance	1MΩ // 150pF
Sensitivity	≤ 35mVrms(5 ~ 100MHz); ≤ 45mVrms(100MHz~150MHz)

MEMORY

Save/Recall	10 sets of front panel setting memories
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INTERFACE

Save/Recall	RS-232C
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POWER SOURCE

POWER SOURCE	AC115V/230V ± 15%, 50/60Hz
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ACCESSORIES

ACCESSORIES	Instruction manual x 1, Power cord x 1, GTL-101 x 2
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DIMENSIONS & WEIGHT

DIMENSIONS & WEIGHT	290(W) x 142(H) x 460(D)mm, Approx. 5kg
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ORDERING INFORMATION

GFG-3015 15MHz Programmable Function Generator

- Note : ① VCF : Voltage Controlled Frequency
② GCV : Generator Controlled Voltage