

# 15MHz PROGRAMMABLE FUNCTION GENERATOR



## GFG-3015 (15MHz)



### 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, 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

GFG-3015 is a versatile and high precision function generator, which provides stable and accurate signal at the frequency range up to 15MHz. Powered by the Frequency Feedback technology, GFG-3015 delivers the frequency accuracy as low as 0.02% and the maximum resolution at 10mHz. 10 sets of front panel setup memory make it easier to output the specific signal as pre-defined. Other functions include AM/FM, Gate, Burst, Trigger, five standard waveforms, 150MHz counter, VCF control, and dedicated channel for different types of output. GFG-3015 provides exceptional value to users in educational field as well as repair service, production testing, and development lab.

SPECIFICATIONS	
<b>MAIN</b>	
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	50 Ω±10%
Amplitude Range	10.00V ~ 0.01V (into 50Ω) 4 amplitude range  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
<b>SINE WAVE</b>	
Distortion	≤ 0.5%(-46dBc) from 10Hz~ 100kHz; ≤ -30dBc~15MHz;(spec. applied form 1Vpp~10Vpp)
<b>TRIANGLE WAVE</b>	
Linearity Error	<1% of full scale output at 100Hz
<b>SQUARE WAVE</b>	
Asymmetry	±1% of period + 3nS
Rise or Fall Time	<18nS
<b>SYNC OUTPUT</b>	
Impedance	50 Ω±10%
Level	>1Vp-p open circuit
<b>MODULATION CHARACTERISTICS</b>	
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
<b>AMPLITUDE MODULATION</b>	
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
<b>FREQUENCY MODULATION</b>	
Deviation	0 ~ ±15%
Modulation Frequency Rate	0.01Hz ~ 10kHz(INT) ; DC ~ 50kHz(EXT)
External Sensitivity	≤ 5Vpp for 15% deviation
<b>SWEEP CHARACTERISTICS</b>	
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	>100:1(in same frequency range)
Rate	0.01Hz ~ 10kHz
Symmetry Control	90% : 10% : 90% ; resolution:1%
Mode	Linear /Log sweep
Sweep Output	0 ≥ -5Vpp into 10kΩ

