GW INSTEK

GOOD WILL INSTRUMENT CO., LTD.

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GFG-3015 Specifications

The specifications apply when the GFG-3015 is powered on for at least 30 minutes under +20°C~+30°C.

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 range
	|Vac peak| + |Vdc| = 5V
	Resolution : 10mV (10.00V ~ 0.01V)
Amplitude Accuracy	$\leq$3% ± 5count at 10Hz ~ 1MHz ;
	$\leq$10% ± 5count at 1MHz ~ 15MHz
Amplitude Unit	Vpp , Vrms , dBm
DC Offset	-5V ~ 5V (into 50Ω); resolution 10mV
DC Offset Accuracy	$\leq$3%±3count at minimum amplitude
Duty Control	80% ~ 20%, ~ 1MHz; resolution 1%
Duty Accuracy	$\leq$1% ~ 1MHz at 50% duty
Display	Dual display for frequency 6 digits and amplitude 4 digits
SINE WAVE	
Distortion	$\leq$0.5%(-46dBc), 10Hz~ 100kHz
	$\leq$-30dBc at 15MHz (1Vpp~10Vpp)
TRIANGLE WAVE	
Linearity Error	<1% of full scale output at 100Hz
SQUARE WAVE	
Asymmetry	±1% of period + 3nS
Rise or Fail 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($\leq$± 1%)
Output Level	$\geq$1Vpp into 10kΩ load
Sine Wave Distortion	$\leq$2% from 10Hz ~ 10kHz
AMPLITUDE MODULATION	
Depth	0 ~ 100%

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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
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	>100:1(in the same frequency range)
Rate	0.01Hz ~ 10kHz
Symmetry Control	90% ~ 10%, 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 (Voltage Controlled Frequency)	
Range	100:1 (0 ~ 10V ±1V)
Input Linearity	<0.5% ~ 1MHz, <5% ~ 10MHz
Input Impedance	10 kΩ
GCV(Generator Controlled Voltage) OUTPUT	
	0.2V ~ 2V as per different frequencies in the 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 max. resolution is 100nHz for 0.1Hz, 1Hz for 100MHz
Input Impedance	1MΩ // 150pF
Sensitivity	≤35mVrms(5 ~ 100MHz); ≤45mVrms(100MHz~150MHz)
MEMORY	
Save/Recall	10 sets of front panel setting memories
INTERFACE	
	RS-232C
POWER SOURCE	
	AC115V/230V ±15%, 50/60Hz
ACCESSORIES	
	User manual x 1 Power cord x 1 Test Lead GTL-101 x 2
DIMENSIONS & WEIGHT	290(W) x142(H) x 460(D)mm, Approx. 5kg