CE

GFG-8200A Series

FEATURES

GFG-8215A



- Frequency Range: 0.3Hz ~ 3MHz
- Waveforms: Sine, Triangle, Square, Ramp, TTL and CMOS Output
- External Voltage Controlled Frequency (VCF) Function
- Duty Cycle Control with Signal Inversion Capability
- Variable DC Offset Control
- Two-Step (-20dBx2) and Variable attenuator

GFG-8216A



- Frequency Range: 0.3Hz ~ 3MHz
- Waveforms: Sine, Triangle, Square, Ramp, TTL and CMOS Output
- External Voltage Controlled Frequency (VCF) Function
- Duty Cycle Control with Signal Inversion Capability
- Variable DC Offset Control
- Two-Step (-20dBx2) and Variable attenuator
- Built-in 6 Digit Counter with INT/EXT Function up to 150MHz

GFG-8217A



- Frequency Range: 0.3Hz ~ 3MHz
- Waveforms: Sine, Triangle, Square, Ramp, TTL and CMOS Output
- External Voltage Controlled Frequency (VCF) Function
- Duty Cycle Control with Signal Inversion Capability
- Variable DC Offset Control
- Two-Step (-20dBx2) and Variable attenuator
- Built-in 6 Digit Counter with INT/EXT Function up to 150MHz
- LIN/LOG Sweep Mode

GFG-8219A



- Frequency Range: 0.3Hz ~ 3MHz
- Waveforms: Sine, Triangle, Square, Ramp, TTL and CMOS Output
- External Voltage Controlled Frequency (VCF) Function
- Duty Cycle Control with Signal Inversion Capability
- Variable DC Offset Control
- Two-Step (-20dBx2) and Variable attenuator
- Built-in 6 Digit Counter with INT/EXT Function up to 150MHz
- INT/EXT AM/FM Modulation
- LIN/LOG Sweep Mode
- GCV Output for Synchronization

GFG-8250A



- Frequency Range: 0.5Hz ~ 5MHz
- Waveforms: Sine, Triangle, Square, Ramp, TTL and CMOS Output
- External Voltage Controlled Frequency (VCF) Function
- Duty Cycle Control with Signal Inversion Capability
- Variable DC Offset Control
- Two-Step (-20dBx2) and Variable attenuator
- Built-in 6 Digit Counter with INT/EXT Function up to 150MHz

GFG-8255A



- Frquency Range: 0.5Hz ~ 5MHz
- Waveforms: Sine, Triangle, Square, Ramp, TTL and CMOS Output
- External Voltage Controlled Frequeucy (VCF) Function
- Duty Cycle Control with Signal Inversion Capability
- Variable DC Offset Control
- Two-Step (-20dBx2) and Variable attenuator
- Built-in 6 Digit Counter with INT/EXT Function up to 150MHz
- INT/EXT AM/FM Modulation
- LIN/LOG Sweep Mode
- GCV Output for Synchronization

SPECIFICATIONS

MODEL		GFG-8215A/8216A/8217A/8219A	GFG-8250A / 8255A
MAIN	**Frequency Range**	0.3Hz ~ 3MHz (7 Range)	0.5Hz ~5MHz (7 Range)
	Amplitude	> 10Vpp (into 50 load)	> 10Vpp (into 50 load)
	Impedance	50 ±10%	50 ±10%
	Attenuator	-20dB ± 1dBx2	-20dB ± 1dBx2
	DC Offset	<-5V ~ >5V (into 50 load)	<-5V ~ >5V (into 50 load)
	Duty Control	80% : 20% : 80% to 1MHz Continue variable	80% : 20% : 80% to 1MHz Continue variable
	Display	6 digit LED display *GFG-8215A does not have display.	6 digit LED display
	Range Accuracy	±5%+1Hz (at 3 position) *only for GFG-8215A	
SINE WAVE	**Distortion**	≤ 1%, 0.3Hz ~ 200kHz THD ≤ 35dB below fundamental in all range (Specification applied from MAX. to 1/10 level)	≤1%, 0.5Hz ~ 100kHz THD ≤30dB below fundamental in all range (Specification applied from MAX. to 1/10 level)
	Flatness	< 0.3dB, 0.3Hz ~ 300kHz < 0.5dB, 300kHz ~ 3MHz	≤0.3dB, below 500kHz ≤1dB, below 5MHz
TRIANGLE WAVE	**Linear**	≥ 98%, 0.3Hz ~ 100kHz ≥ 95%, 100kHz ~ 3MHz	≥ 98%, 0.5Hz ~ 100kHz ≥ 95%, 100kHz ~ 5MHz
SQUARE WAVE	**Symmetry**	± 2%, 0.3Hz ~ 100kHz	± 2%, 1Hz ~ 100kHz
	Rise or Fall Time	≤ 100nS at maximum output (into 50 load)	≤ 50nS at maximum output (into 50 load)
CMOS OUTPUT	**Level**	4Vpp±1Vpp ~ 14.5Vpp±0.5Vpp adjustable	4Vpp±1Vpp ~ 14.5Vpp±0.5Vpp adjustable
	Rise or Fall Time	≤ 120nS	≤ 120nS
TTL OUTPUT	**Level**	≥ 3Vpp	≥ 3Vpp
	Fan Out	20 TTL load	20 TTL load
	Rise or Fall Time	≤ 25nS	≤ 25nS
VCF	**Input Voltage**	0V ~ 10V ±1V (100 : 1)	0V ~ 10V ±1V (100 : 1)
	Input Impedance	10k ±10%	10k ±10%
GCV **(for GFG-8219A/8255A only)**	**Output Voltage**	To set the voltage between 0V ~ 2V as per different frequency	To set the voltage between 0V ~ 2V as per different frequency
SWEEP OPERATION **(for GFG-8217A/8219A/8255A only)**	**Sweep/Manual**	Switch selector	Switch selector
	Sweep/Rate	100 : 1 ratio max. and adjustable	100 : 1 ratio max. and adjustable
	Sweep/Time	0.5sec. ~ 30sec. adjustable	0.5sec. ~ 30sec. adjustable
	Sweep/Mode	Lin./Log. switch selector	Lin./Log. switch selector
AMPLITUDE MODULATION **(for GFG-8219A/8255A only)**	**Depth**	0 ~ 100%	0 ~ 100%
	MOD. Frequency	400Hz (INT), DC ~ 1MHz(EXT.)	400Hz (INT), DC ~ 1MHz(EXT.)
	Carrier BW	100Hz ~ 3MHz (-3dB)	100Hz ~ 5MHz (-3dB)
	EXT Sensitivity	≤ 10Vpp for 100% modulation	≤ 10Vpp for 100% modulation
FREQUENCY MODULATION **(for GFG-8219A/8255A only)**	**Deviation**	0 ~ ±5%	0 ~ ±5%
	MOD. Frequency	400Hz(INT), DC ~ 20kHz(EXT.)	400Hz (INT), DC ~ 20kHz(EXT.)
	EXT. Sensitivity	≤ 10Vpp for 10% modulation	≤ 10Vpp for 10% modulation
FREQUENCY COUNTER **(except GFG-8215A)**	**Int./Ext.**	Switch selector	Switch selector
	Range	0.3Hz ~ 3MHz (5Hz ~ 150MHz EXT.)	0.5Hz ~ 5MHz (5Hz ~ 150MHz EXT.)
	Accuracy	Time base accuracy ±1 count	Time base accuracy ±1 count
	Time Base	± 10ppm (23 °C±5 °C) after 30 minutes warm up	± 10ppm (23 °C±5 °C) after 30 minutes warm up
	Resolution	The maximum resolution is 100nHz for 1Hz and 1Hz for 100MHz	The maximum resolution is 100nHz for 1Hz and 1Hz for 100MHz
	Input Impedance	1M // 150pF	1M // 150pF
	Sensitivity	≤ 35mVrms (5Hz ~ 100MHz) ≤ 45mVrms (100MHz ~ 150MHz)	≤ 35mVrms (5Hz ~ 100MHz) ≤ 45mVrms (100MHz ~ 150MHz)
GENERAL INFORMATION	**Power Source**	AC115V, 230V± 15%, 50 / 60Hz	AC115V, 230V± 15%, 50 / 60Hz
	Accessories	GTL-101 x 2 (GTL-101 x 1 for GFG-8215A) User manual x 1	GTL-101 x 2 User manual x 1
	Dimension	251(W) x 91(H) x 291(D)	251(W) x 91(H) x 291(D)
	Weight	Approx. 2.0 kgs(GFG-8215A) Approx. 2.15kgs(GFG-8217A) Approx. 2.1 kgs(GFG-8216A) Approx. 2.2 kgs(GFG-8219A)	Approx. 2.3 kgs (GFG-8250A) Approx. 2.4 kgs (GFG-8255A)

Specifications subject to change without notice. FG-820AGD0DH

Ordering Information

GFG-8215A 3MHz Function Generator
GFG-8216A 3MHz Function Generator With Counter
GFG-8217A 3MHz Function Generator With Counter x Sweep Mode
GFG-8219A 3MHz Function Generator With Counter, Sweep Mode & AM/FM Modulation
GFG-8250A 5MHz Function Generator With Counter
GFG-8255A 5MHz Function Generator With Counter, Sweep Mode & AM/FM Modulation

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