

FUNCTION GENERATORS

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



- 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
- INT/EXT AM/FM Modulation
- LIN/LOG Sweep Mode
- GCV Output for Synchronization

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GW INSTEK

Made to Measure

SPECIFICATIONS

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

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