

## Function Generators

# FG-275/FG-273A

### OUTLINE

The FG-275/FG-273A are function generators which generates sine wave, triangle wave, square wave and pulse wave, etc. It covers a wide ranges of 0.5 Hz to 5 MHz for the FG-275 and 0.2 Hz to 2 MHz for the FG-273A, while the digital display enables accurate frequency settings. Furthermore, the VCF, DC offset, sweep function and other features enable the FG-275/FG273A to be used in a wide variety of applications including analogue circuits as well as digital circuits.

### FEATURES

#### Wide frequency range

From an extreme low frequency up through above audible band of 7 ranges (FG-275 : 0.5Hz to 5MHz, FG-273A : 0.2Hz to 2MHz).

#### Various output wave forms

In addition to sine wave, triangle wave, square wave, TTL level square wave and CMOS level square wave output are provided for the digital circuit experiment had been made possible.

#### LOG/LIN sweep function

The logarithm and liner sweep are provided. Especially the FG-275 has ability of an independent start and stop frequency setting.

#### Frequency Counter function

An external counter input terminal can be measured from 1 Hz to 10MHz signal.

#### VCF (External frequency control terminal)

An external voltage (0 to 10V) can control the output frequency.



FG-275



FG-273A

## FG-275/FG-273A

SPECIFICATIONS		
Item	FG-275	FG-273A
Output waveform	Sinewave, squarewave, trianglewave, TTL-Level/CMOS-level squarewave, pulse waveform and sawtooth waveform	
Frequency range	0.5Hz to 5MHz	0.2Hz to 2MHz
Frequency accuracy	$5 \times 10^{-5} \pm 1$ digit	$2 \times 10^{-5} \pm 1$ digit
Sinewave characteristics		
Distortion	1% or less (10 Hz to 100kHz)	
Frequency characteristics	$\pm 1.0$ dB (50 $\Omega$ Load)	
Squarewave characteristics		
Symmetry	$\pm 3\%$ max. (at 100Hz)	
Rise and fall time	40ns max. (maximum output)	100ns max.
Trianglewave characteristics		
Linearity	1% or less (at 5kHz to 100kHz)	1% or less (at 100kHz)
TTL output characteristics		
Rise and fall time / output	25nsec or less / TTL Level	
CMOS output characteristics		
Rise and fall time / output	80nsec or less / 5V to 15V continuously variable	
Sweep characteristics		
Internal sweep	Linear or logarithm sweep	
Sweep speed	0.2Hz (5sec) to 100Hz (10msec)	
Sweep width	1:1 to 500:1/continuously variable	1:1 to 1000:1/continuously variable
Sweep output	0 to 10V / frequency increase at right direction	
External sweep		
Input voltage	0 to 10V frequency increase at right direction	
Frequency variable range	500 :1 max.	1000:1 max.
Maximum input	$\pm 20$ V (DC/AC peak)	
Input impedance	Approx. 13 k $\Omega$	
Frequency counter characteristics		
Display	5 digit display (LED)	6 digit display (LED)
Frequency range /Gate time	5Hz to 10MHz /0.01 sec, 0.1 sec, 1 sec, 10 sec.	
Accuracy	$\pm 5 \times 10^{-5} \pm 1$ count	$\pm 2 \times 10^{-5} \pm 1$ count
Input sensitivity	30mVrms	
Maximum input voltage	42Vp-p	
Input impedance	0dB : Approx. 500k $\Omega$ / -20dB : approx. 1 M $\Omega$	
Output characteristics		
Output voltage	20Vp-p (open circuit) / 10Vp-p (50 $\Omega$ load)	
Attenuator	-10dB/-20dB/-40dB steps with continuously variable	-20dB/-40dB steps with continuously variable
Output impedance	50 $\Omega$ $\pm 10\%$	
Logarithmic variable range	1:1 to 40:1 or more	
DC offset	$\pm 10$ V (open circuit) / $\pm 5$ V (50 $\Omega$ Load) / continuously variable	
Environmental condition		
Temperature/humidity for operation	0°C to 40°C, 80% max	
Temperature/humidity for spec	23°C $\pm 5$ °C, 70% max.	
Others		
Power source	AC 100/120/220/230V $\pm 10\%$ 50/60Hz, Approx. 20W	
Dimensions / weight	240 (W) $\times$ 64 (H) $\times$ 190 (D) mm / 1.8 kg	
Accessories	Instruction manual (1), power code (1)	