

FG-01

Function Generator



- 4-digit counter based frequency display-Maximum error ONE LSB
- Square, sine and triangular output upto 2 MHZ
- IC based circuit - high stability, low distortion
- Regulated power supply

Specifications

Waveforms	: Square/ Sine/ Triangular (switch selectable)
Frequency	: 10 Hz - 2 MHz in five ranges
Amplitude	: Square 0-3V (p-p) Triangular 0-3V (p-p) Sine 0-3V (p-p)
Output Impedance	: 50 W
Frequency Readout	: 4-digit, counter based, automatic decimal point
Power Supply	: 220V \pm 10%, 50 Hz

Introduction

This is an economically priced signal source for a wide variety of applications in electronics, communication and control systems laboratory. The IC used is a high frequency function generator that produces low distortion sine, triangular, sawtooth and square waveforms from frequencies less than a Hz. To 20MHz. A minimal of external components are needed which make the unit very reliable and robust. The desired output waveform is selected by logic control and may therefore be done electronically as well.

Basic principal of function generation used is the relaxation oscillation with periodic charging and discharging of a capacitor through constant current source. The charging/discharging currents are accurately controllable and the associated circuits support high frequencies very well. A sine shaping circuit converts the triangular waveform to sine wave of constant amplitude. The sine wave is useful for frequency response studies of amplifiers, filters and other electrical systems, while the square wave finds applications in transient response studies. Triangular wave is a standard input signal for the study of steady state error in feedback control systems. All power supplies are IC regulated.