

TSG6020

60MHz 2CH Function Signal Generator



FEATURES

- Dual-channel output, max frequency 60 MHz / 30 MHz, max amplitude 20 Vpp
- 200 MSa/s sampling rate, 14-bit vertical resolution
- Supports sine, square, pulse, ramp, noise, DC, and arbitrary waveforms
- ZeroSurge and VeriPoint technologies for low-jitter, high-fidelity waveforms
- Switchable DDS / point-by-point output modes
- Provides 7-digit high-precision frequency counter functionality, supporting TTL signals
- 4.3-inch high-resolution TFT color display with 90° rotation, dual operation via keypad and touchscreen
- USB Device for remote control and waveform transfer; Type-C power input supports portable power supply
- Languages: English

SPECIFICATIONS

Arbitrary Waveform Generator

- Max Frequency: 60 MHz
- Channels: 2CH
- Sample Rate: 200 MSa/s
- Vertical Resolution: 14-bit (including sign)
- Frequency Resolution: 1 μ Hz
- Amplitude: 2 mVpp ~ 20 Vpp (High-Z, <10 MHz) / 2 mVpp ~ 10 Vpp (High-Z, >10 MHz)
- 1 mVpp ~ 10 Vpp (50 Ω , <10 MHz) / 1 mVpp ~ 5 Vpp (50 Ω , >10 MHz)
- Offset: High-Z: -9.999V~9.999V
- Output Waveforms: Sine, Square, Ramp, Pulse, Triangle, Noise, DC, Arbitrary
- Memory Depth: 4 kpts
- Non-Volatile Storage: 24 Waveforms
- THD: <0.2% (Sine, DC ~ 20 kHz, 1Vpp)
- Amplitude Flatness (relative to 1 kHz sine, 1 Vpp / 50 Ω): Typical (Sine, 2.0 Vpp) $\leq$ 100kHz: $\pm$ 0.1dB, $\leq$ 20MHz: $\pm$ 0.3dB $\leq$ 30MHz: $\pm$ 0.5dB, $\leq$ 40MHz: $\pm$ 0.6dB, $\leq$ 60MHz: $\pm$ 0.8dB

- Rise / Fall Time: <20ns (typical)
- Duty Cycle: 0.01% ~ 99.99% adjustable (Square)
- Accuracy (1 kHz Sine): $\pm$ (Set Value x 5% + 2 mVpp)
- Jitter: DDS Mode: 5 ns $\pm$ 150 ps, Point-by-Point Mode: $\pm$ 150 ps
- Output Impedance: 50 Ω (typical)
- Operating Modes: Gated, Continuous, Modulate, Frequency Sweep
- Sweep Types: Linear, Logarithmic
- Modulation Types: AM, FM, PM, FSK, ASK, PSK
- Output Modes: DDS, Point-by-Point
- Interfaces: USB Device, Type-C Power Input

Frequency Counter

- Input Level: TTL compatible
- Output Frequency Range: 100 mHz ~ 100 MHz
- Accuracy: $\pm$ 51 ppm
- Frequency Resolution: 7 digits
- Coupling: DC

GENERAL CHARACTERISTICS

- **Temperature Range:** Operating: 10°C to +40°C; Storage: -20°C to +60°C
- **Humidity Range:** Below +35°C: $\leq$ 90% RH ; +35°C to +40°C: $\leq$ 60% RH
- **Altitude:** Operating: $\leq$ 2000 m; Non-operating: $\leq$ 15000 m
- **Display:** 4.3-inch TFT LCD (480*272)
- **Power Supply:** DC 5V / 2A
- **Power Consumption:** < 10 W
- **Product Color:** Graphite
- **Product Size:** 205*82*123 mm
- **Product Net Weight:** 739g
- **Standard Carton:** 63*34*24.5 cm
- **Carton Gross Weight:** 13.8 kg
- **Quantity Per Carton:** 10 PCS
- **Standard Accessories:** Main Device*1, Charging Adapter*1, Type-C Charging Cable*1, Data Cable*1, Test Lead Cable*1, Alligator Clips*1, User Guide*1