FG 503

- **1.0 Hz to 3 MHz**
- **Three Waveforms**
- **VCF**

The FG 503 Function Generator provides high-quality low-distortion sine, square, and triangle waveforms. Six decade frequency multiple steps, a custom position for user-determined frequency multiplication, a dial calibrated from 1.0 to 30 (uncalibrated from 0.1 to 1.0), and a frequency vernier control work together to select frequencies in overlapping ranges from 1 Hz to 3 MHz. The output frequency can be swept over a 1000:1 ratio by an external voltage. Output amplitude and offset controls are provided. A trigger output is available for controlling external devices or equipment. Amplitude up to 10 V peak-to peak can be developed across a 50-Ω load (20 V peak-to-peak open circuit). Selectable offset up to 3.75 V dc across 50 Ω (7.5 V dc open circuit) is also featured.

ORDERING INFORMATION

FG 503—3-MHz Function Generator **$690**
Includes: Instruction manual (070-1727-01).

FG 502

- **0.1 Hz to 11 MHz**
- **Five Waveforms**
- **VCF and Gated Burst**

The FG 502 Function Generator provides low-distortion sine, square, and triangle waveforms, and positive or negative ramps and pulses. Output frequency is continuously variable from 0.1 Hz to 11 MHz. The high-frequency range from 1 to 11 MHz permits the versatility of the function generator to be extended into the medium radio frequency range. VCF input permits the FG 502 to be used as a sweep generator or as an FM generator.

External-gate input permits the FG 502 output in any of its modes to be controlled by an externally supplied pulse to generate bursts of various output waveforms. The FG 502 is used in wireless or radio remote-control equipment and in certain phases of the telephone industry.

ORDERING INFORMATION

FG 502—11-MHz Function Generator **$1,110**
Includes: Instruction manual (070-1706-01).

FG 501A

- **0.002 Hz to 2 MHz**
- **30 V Peak-to-Peak, ±13-V Offset**
- **5 to 95% Variable Symmetry**
- **Trigger or Gate, ± Slope**
- **60-dB Step Attenuator**
- **≤0.25% Sine-Wave Distortion**
- **≤25 ns Rise/Fall**

The FG 501A provides low-distortion outputs from 0.002 Hz to 2 MHz. It is capable of generating five basic waveforms—sine, square, triangle, ramp, and pulse—at output levels up to 30 V peak-to-peak with up to ±13 V of offset from a 50-Ω source. Waveform triggering and gating are provided with a variable phase control to permit up to ±90° of phase shift for generating haver-sines, sin pulses, and haver triangles. A step attenuator provides 60 dB of output signal attenuation in 20-dB steps with an additional 20 dB of variable attenuation. Variable symmetry from 5% to 95% provides ramps and pulses. Pulse rise time is ≤25 ns. Audio sine-wave distortion is ≤0.25% and audio amplitude flatness is within 0.1 dB.

ORDERING INFORMATION

FG 501A 2 MHz Function Generator. **$940**
Includes: Instruction manual.

DD 501

- **Digital Events Delay**
- **Delay to 99,999 Events**
- **Divide by N Up to 20 MHz**
- **Pulse Counting to 65 MHz**
- **Time Delay With External Clock**
- **Compatible with Most Attenuator Probes**

The DD 501 Digital Delay is an events-counting device that can be used with pulse, function, and clock generators in such applications as precise digital delay between two related events, divide-by-N frequency divider, precision gate generator, counted burst output from a gated pulse or frequency generator, etc.

Basically, the DD 501 has two modes of operation. In the gating mode, the DD 501 generates a gate that starts with the application of a start pulse and continues until a selected number of event pulses have occurred. It can be used for generating a counted burst of N pulses when used with a pulse generator capable of being gated. Tektronix generators capable of being gated by the DD 501 are the FG 501A, FG 502, FG 504, FG 507, FG 5010, PG 507, and PG 508.

In the delayed-trigger mode, the DD 501 generates a trigger pulse after the selected number of event pulses have occurred. Besides being used strictly for generating precision delays, the delayed-trigger mode can also be used as a frequency count-down divider. In both modes, the desired number of events (from 0 to 99,999) is selected by front-panel thumbwheel switches.

Trigger slope and level controls for both the Start and Events inputs permit use with a wide variety of applied signals. Both inputs are compatible with Tektronix attenuator probes. In special applications, the trigger levels can be remotely set by application of analog voltages through the front-panel Level In/Out jacks.

CHARACTERISTICS

EVENTS DELAY

Count—10 to 99,999 events.
Maximum Count Rate—65 MHz.
Insertion Delay—30 ns or less from final event to trigger output pulse.
Recycle Time—50 ns or less.
Reset—Manually resets delay counter.

INPUT CHARACTERISTICS

All characteristics apply to both events and start inputs.
Input Impedance—1 MΩ, 20 pF.
Slope—Either + or −, selectable.
Sensitivity—85 mV p-p at 30 MHz.
Frequency Response—Up to 65 MHz at 120-mV sensitivity.
Minimum Detectable Pulse Width—5 ns.
Threshold Level Range—From −1.0 to +1.0 V (−10 to +10 V with 10X probe). Can be externally programmed or monitored at front-panel jacks.
Trigger View Out—Threshold-detector output, at least 0.5 V (200 Ω or less source impedance).
Events Triggered Light—Visual indication that events are being detected.
Start Triggered Light—Visual indication that delay is in progress.

TRIGGER OUTPUT

Pulse Width—Width of events pulse plus 6 ns or less.
Voltage Swing—+0.8 V or less to at least +2.0 V with 3 TTL loads (≈5 mA).
Light—Indicates output trigger.

ORDERING INFORMATION

DD 501 Digital Delay **$1,930**
Includes: Instruction manual (070-6759-00).