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Professional integrity at its Best!

FG 503



The FG503 is a high performance and low cost function generator with synthesized frequency accuracy. It is designed by a high-tech team, using the most advanced waveform synthesis techniques to generate a pure low distortion and clean output. This instrument combines the bench-top and system features which provides a versatile solution for your testing requirements now and in the future

NEW [Downloads: Remote binning software tool](#)

Features

- 10mHz~3MHz DDS Source
- Sine, Square, Triangle, Ramp up, Ramp down, and DC Waveform
- Linear & Log Sweep Function
- External Amplitude Modulation
- Synchronous TTL Output
- Harmonic Distortion Less Than -60dB
- RS-232 Interface
- SCPI Programming Language Compatible
- Optional GPIB (IEEE-488.2) Interface
- Optional 2GHz Intelligent Frequency Counter

Specifications

Waveforms:

Sine, Square, Triangle, Ramp Up, Ramp Down, and DC.

Frequency Characteristics:

Sine:	10mHz to 3MHz
Square:	10mHz to 3MHz
Triangle:	10mHz to 20KHz
Ramp:	10mHz to 20 KHz
Resolution:	10mHz or 7 digits
Accuracy:	< 50 ppm, (20 min, after power on) 18°C to 28°C
Temp coef.:	< 5ppm/C

Sinewave Harmonic Distortion:

10mHz to 20KHz:	-60dB typical
20KHz to 100KHz:	-50dB typical
100KHz to 1MHz:	-45dB typical
	-40dB typical

1MHz to 3MHz:

Signal Characters:

Squarewave Rise/Fall time:	< 35ns
Overshoot:	1%
Triangle, Ramp Rise/full time:	100 ns (typically)
Linearity:	< 0.1% of peak output
Jitter:	< 35 ns

Amplitude(into 50 Ω): 20mVpp to 10Vpp

(Unload):	40mVpp to 20Vpp
Accuracy (at 1 KHz):	± 1% of setting +5mV(Sin,Squ) ± 3% of setting +10mV(Tri,Ramp,Typical)
Resolution:	1mV
Flatness (sinewave relative to 1 KHz):	± 1% 100KHz ± 1.5% 100KHz to 1MHz ± 2% 1MHz to 3MHz

Output Impedance:

50 Ω ± 5%

DC Offset

There are 3 ranges in DC Offset

Unload

$V_p + |V_{offset}| \leq 10V$ when $1V \leq V_p \leq 10V$

$V_p + |V_{offset}| \leq 1V$ when $100mV \leq V_p < 1V$

$V_p + |V_{offset}| \leq 100mV$ when $V_p < 100mV$

50Ω load

$V_p + |V_{offset}| \leq 5V$ when $1V \leq V_p \leq 10V$

$V_p + |V_{offset}| \leq 1V$ when $100mV \leq V_p < 1V$

$V_p + |V_{offset}| \leq 100mV$ when $V_p < 100mV$

Accuracy: ±2% of setting ± 2mV

Frequency Sweep:

Type: Linear or Logarithmic

Span: 1:400 or programmable through RS 232C interface or GPIB interface by the computer

Setting: 1. Set center frequency at front panel then:
Start Frequency=Center Frequency /20
Stop Frequency=Center Frequency *20
2. The start and stop frequency can be set directly through RS232C interface or GPIB interface by the computer

Frequency Counter and Duty Cycle (Optional Function):

Freq Range: 10.000000 Hz to 60.000000 MHz (for low range).
60.000000 MHz to 2.000000 GHz (for high range).

Resolution: 7Digits.

Accuracy: ± 5counts ± time base accuracy.

Duty Cycle: (TTL Input only).

Accuracy: $10Hz \leq f \leq 100K$ 2% ± 5digit
 $100K \leq f \leq 1M$ 2.5%

Protection:

Short-circuit protected

Overdrive protection < 20VPeak

General Specifications:

Power Source: AC 110V or 220V, 50Hz/60Hz

Power Consumption: 30 Watts Average

Operation Environment: 0°C to 50°C, 80% Relative Humidity

Storage Environment: -20°C to 70°C

Dimension: 310mm x 220mm x 102mm (WxHxD)

Weight: 3.7kg

Accessories: power cord x 1, operation manual x1



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