Appendix A: Specifications

Table 2 shows characteristics of the CFG253 Function Generator that are guaranteed by warranty.

Table 2: Warranted Characteristics

Characteristic	Measurement	
Outputs	Square wave, sine wave, sawtooth wave, TTL pulse, and sweep functions for all outputs	
Line Voltage Range	90 to 110, 108 to 132, 198 to 242, and 216 to 250 VAC at 50–60 Hz	
Frequency ranges, nonskewed waveform (Freq/1)	**Range Setting**	**Variable**
	1	0.3 to 3.0 Hz
	10	3.0 to 30 Hz
	100	30 to 300 Hz
	1 K	0.3 K to 3.0 kHz
	10 K	3 K to 30 kHz
	100 K	30 K to 300 kHz
	1 M	0.3 M to 3.0 MHz
Frequency ranges, skewed waveform (Freq/10)	**Range Setting**	**Variable**
	1	0.03 to 0.3 Hz
	10	0.3 to 3.0 Hz
	100	3.0 to 30 Hz
	1 K	30 to 300 Hz
	10 K	0.3 K to 3.0 kHz
	100 K	3.0 K to 30 kHz
	1 M	30 K to 300 kHz
Frequency multiplier	Variable 0.3 to 3.0 times the selected frequency range	
Frequency/1 dial accuracy	±5% of full scale of frequency/1	
Frequency/10 dial accuracy	±5% of full scale of frequency/10	
Sine wave distortion	<1% from 10 Hz to 100 kHz	

Table 2: Warranted Characteristics (Cont.)

Characteristic	Measurement
Sawtooth linearity	20 Hz to 200 kHz ≥ 99% 200 kHz to 3 MHz ≥ 97%
Square response	≤ 100 ns rise/fall time maximum output into 50 Ω load
Main output amplitude	Two ranges: 0–20 V peak-to-peak 100 mV to 20 V_{p-p} (open circuit) 50 mV to 10 V_{p-p} (50 Ω load) 0–2 V peak-to-peak 10 mV to 2 V_{p-p} (open circuit) 5 mV to 1 V_{p-p} (50 Ω load)
Impedance	50 Ω ±10%
DC offset	<–10 V to >+10 V (open circuit), and <–5 V to >+5 V (into 50 Ω load)
Duty cycle	5:1 minimum duty cycle change (50% at Center:Cal position), with symmetry button (Freq ÷ 10) pushed in
Sweep rate	Continuously variable from 0.5 to 50 Hz
Sweep width	Variable from 1:1 to 100:1

Table 3: Physical Characteristics

Characteristic	Dimension
Width	240 mm (9.46 in)
Height	64 mm (2.53 in)
Depth	230 mm (9.o in)
Weight	2.0 kg (4.4 lb)

Table 4: Certifications and Compliances

EC Declaration of Conformity – EMC	Meets intent of Directive 89/336/EEC for Electromagnetic Compatibility. Compliance was demonstrated to the following specifications as listed in the Official Journal of the European Communities: EN 55011 Class A Radiated and Conducted Emissions EN 50081-1 Emissions: EN 60555-2 AC Power Line Harmonic Emissions EN 50082-1 Immunity: IEC 801-2 Electrostatic Discharge Immunity IEC 801-3 RF Electromagnetic Field Immunity IEC 801-4 Electrical Fast Transient/Burst Immunity IEC 801-5 Power Line Surge Immunity
EC Declaration of Conformity – Low Voltage	Compliance was demonstrated to the following specification as listed in the Official Journal of the European Communities: Low Voltage Directive 73/23/EEC, amended by 93/68/EEC: HD401S1 Safety requirements for electronic measuring apparatus