

SWEEP/FUNCTION GENERATORS MODEL 22

Display: 1100 count LCD frequency display with frequency ranging units (mHz, Hz, kHz and MHz) and decimal point.

Sweep Generator
Sweep Mode: Linear or logarithmic, up to 3 decades.
Sweep Time: Selectable 0.01, 0.1, 1.0 and 10 seconds.
Sweep Width: Up to 1100:1 linear or logarithmic.
Sweep Output: Source impedance: 600 Ω for driving horizontal axis of oscilloscope or recording equipment. Voltage of 0 to +5V (open circuit).

FREQUENCY PRECISION
Frequency Display Accuracy: ± 1 count of 1100 counts, which is 0.09% of range. Stabilizer maintains same reading indefinitely.
Time Symmetry
Square Waveform Variation From 100 to 1100 Counts On Display: $\leq \pm 0.1\%$
 To 1100.00 Hz (Bottom 5) $\leq \pm 1\%$
 To 110.00 kHz: $\leq \pm 1\%$
 To 11.00 MHz: $\leq \pm 5\%$.

AMPLITUDE PRECISION
Sine Variation with Frequency: Referenced to 1 kHz.
 To 110.0 kHz Range: $\leq \pm 0.2$ dB.
 To 11.00 MHz: $\leq \pm 1.5$ dB.

WAVEFORM CHARACTERISTICS

Sine Distortion
 1.00 to 11.00 kHz Range: $< 0.5\%$ THD.
 10.0 to 110.0 kHz Range: $< 1\%$ THD.
 0.100 to 1.1 MHz Range: < -40 dBc.
 1.0 to 11.0 MHz Range: < -28 dBc.
Triangle Linearity To 110 kHz: $> 99\%$.
Square Wave Rise and Fall Times: < 22 ns at Function Out with 10 Vp-p into 50 Ω .
Square Wave Total Aberrations: Each peak $< 5\%$ of peak-to-peak amplitude.
Stability Frequency (Stabilized): $\pm 0.9\%$ of range for ≥ 10 minutes, 0 to 50°C.

GENERAL
Output Protection: Function outputs are protected against a short circuit to any voltage between ± 10 Vdc and have internal fused protection against accidental application of up to 250 Vac or 350 Vdc.
Environment
Temperature Range: 23 ± 5 °C for specified operation, operates 0° to +50°C, -20° to +75°C for storage.
Warm-up Time: 20 minutes for specified operation.
Dimensions: 211 mm (8.3 in.) wide; 85 mm (3.4 in.) high; 305 mm (12 in.) deep.
Weight: 3.4 kg (7.5 lb) net; 4.5 kg (10 lb) shipping.
Power: 90 to 128, 180 to 256V, 48 to 66 Hz, < 35 VA.

FACTORY/FOB
San Diego, CA
PRICE
Model 22
\$1,450

11 MHz Stabilized Sweep Generator

- 100 μ Hz to 11 MHz Range
- Crystal Stabilized to 0.09%
- Linear and Logarithmic Sweep
- LCD Display

VERSATILITY

Waveforms: Sine, triangle, square and dc; additionally, below 1100 Hz, ramp up and ramp down.
Operational Modes: Continuous, Triggered, Gated, Sweep and Triggered Sweep.

Sweep: Generator frequency is swept from lower frequency limit set by Frequency control to upper frequency limit set by Sweep Set control.
Triggered Sweep: Generator is quiescent until triggered, then produces a single low to high sweep at selected rate and width.
Frequency Range: 100 μ Hz to 11 MHz in 9 overlapping decade ranges. Each range capable of 1100:1 frequency change.

Frequency Control
Value: Range is selected with front panel key; frequency within range is set with coarse and fine tune controls.
VCG: Up to 1100:1 frequency change with external 0 to ± 5 V signal applied to VCG input.
Input Impedance: 5k Ω .
Slew Rate: 0.1 V/ μ s (max.).

Stabilizer: Stabilizer improves long term frequency stability for all durations to be equal to the 10 minute short term value.

Trig In: BNC TTL positive edge of input or gates generator in nonstabilized modes.

Inputs
VCG In: BNC input for voltage control of generator in nonstabilized modes.
Sync Out: TTL pulse (50% duty cycle) at generator frequency. Will drive 10LS TTL loads.
Sweep Out: Voltage proportional to instantaneous generator frequency.

Outputs
Func Out (50 Ω): Main waveform output.
Func Out (-20 dB): -20 dB with respect to main output.
DC Offset and DC Output: Variable up to ± 10 V maximum (± 5 V into 50 Ω). Calibrated zero off-set position.

Amplitude Range: 20 dB range up to 20 Vp-p (10 Vp-p into 50 Ω) at Func Out (50 Ω). Additional output attenuated 20 dB with respect to Func Out (50 Ω) for total amplitude range of 40 dB.