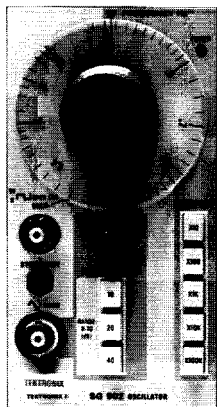


OSCILLOSCOPE CALIBRATION INSTRUMENTS



SG 502

The SG 502 Oscillator features a wide frequency range of 5 Hz to 500 kHz with low distortion (0.035% between 20 Hz and 50 kHz) and is desirable for general test purposes. Other SG 502 features include 70 dB amplitude control plus a simultaneous fixed-amplitude square wave.

CHARACTERISTICS

Frequency Range – 5 Hz to 500 kHz in 5-decade steps. Frequency accuracy within

5% of dial setting from 5 Hz to 50 kHz; within 10% of dial setting from 50 to 500 kHz.

Amplitude Response (1 kHz Reference) – Flatness: 0.3 dB over entire range.

Attenuation – Selectable from 0 to 70 dB in 10-dB

steps with pushbuttons. Accurate within 0.2 dB for each step selected, additive. An uncalibrated control provides continuous variation from 0 to 40 dB.

Harmonic Distortion – < 0.035% (70 dB) from 20 Hz to 50 kHz. < 0.15% from 50 to 500 kHz RL \geq 600 Ω .

Maximum Output Voltage – 5 V RMS open circuit; 2.5 V RMS into 600 Ω .

Output Impedance – 600 Ω , grounded.

SQUARE WAVE

Frequency Range and Accuracy – Same as sine wave. The square wave switches on the 0° phase of sine out.

Rise Time and Fall Time – 50 ns or less.

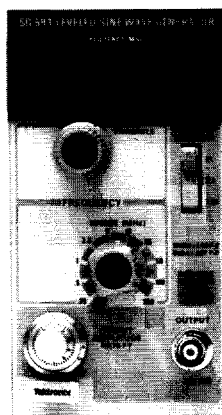
Amplitude – + 5 V, fixed, open circuit.

Output Impedance – 600 Ω , grounded.

SYNC INPUT

Oscillator can be synchronized to external signal. Sync range, the difference between sync frequency and set frequency, is a linear function of sync voltage.

Input Impedance – 10 k Ω .



SG 503

The SG 503 Signal Generator provides a leveled output that is variable in frequency from 250 kHz to 250 MHz. The selected frequency is indicated by a built-in autoranging frequency counter with a three-digit LED readout on the front panel. Accurately calibrated output voltage is variable from 5 mV to 5.5 V peak-to-peak into 50 Ω .

CHARACTERISTICS

Frequency Range –

250 kHz to 250 MHz, plus 50 kHz reference frequency.

Frequency Accuracy – Within ± 0.7 of one count of the least significant digit of indicated frequency.

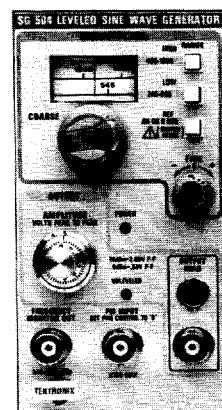
Amplitude Range – 5 mV to 5.5 V p-p into 50 Ω termination in three decade ranges.

Amplitude Accuracy (50 kHz Reference) – Within 3% of indicated amplitude on (X1) range, 4% on (X.1) range, and 5% on (X.01) range.

Flatness (P-P) – From 250 kHz to 100 MHz, output amplitude will not vary more than 1% of the value at 50 kHz except that up to +1.5%, -1% variation may occur between 50 and 100 MHz on amplitude multiplier X.1 and X.01 ranges only. From 100 to 250 MHz, amplitude variation is within 3% of the value at 50 kHz.

Harmonic Content – Second Harmonic: At least 35 dB down. Third Harmonic and All Higher Harmonics: At least 40 dB down.

Rear Interface – Addresses the leveling circuit.



SG 504

The SG 504 Signal Generator provides leveled output amplitude and is variable from 245 to 1050 MHz in two bands via its compact output leveling head. Frequency is indicated by a high-resolution tape dial that expands each band over 28 inches. The accurately calibrated output voltage is variable from 0.5 V to at least 4.0 V p-p into 50 Ω .

CHARACTERISTICS

Frequency Range – Low Band: 245 to 550 MHz. High Band: 495 to 1050 MHz, plus 50 kHz or 6 MHz reference frequency (internally selected).

Frequency Accuracy – $\pm 2\%$ of dial indication.

Amplitude Range – 0.5 V to at least 4.0 V p-p.

Amplitude Accuracy (At Reference) – Within 3% of indicated amplitude.

Flatness – $\pm 4\%$ of amplitude at reference frequency.

Harmonic Content – Second Harmonic: At least 25 dB down. Third Harmonic and All Higher Harmonics: At least 40 dB down.

FM Input – Frequency Range: DC to 100 kHz. Deviation Sensitivity: ± 9 V produces from 0.05% to 0.5% deviation of carrier, depending on output frequency.

Frequency Monitor Output – ≥ 0.3 V p-p into a 50 Ω load from 245 to 1050 MHz.

Rear Interface – Address FM input, frequency-monitor output, and amplitude control.

SG 502 Oscillator

- 5 Hz to 500-kHz Sine Waves and Square Waves
- Low-Distortion Sine Wave
- 5 V RMS Open Circuit – 600 Ω Source
- 0 to 40 dB Output Variable Plus 0 to 70 dB in 10 dB Steps

ORDERING INFORMATION

SG 502 Oscillator **\$1,650**
Includes: Instruction manual (070-1430-01).

SG 503 Leveled Sinewave Generator

- 250 kHz to 250 MHz
- Leveled, Variable Output
- Digital Readout of Frequency

ORDERING INFORMATION

SG 503 Signal Generator **\$3,595**
Includes: Three-foot precision 50 Ω cable (012-0482-00); Instruction manual (070-6770-00).

SG 504 Leveled Sinewave Generator

- 245 to 1050 MHz
- Leveled, Variable Output
- Frequency-Modulation Capability
- Internal Peak Detection

ORDERING INFORMATION

SG 504 Signal Generator **\$4,950**
Includes: Instruction manual (070-1632-01); Leveling head (012-0282-01).