HEWLETT hp PACKARD

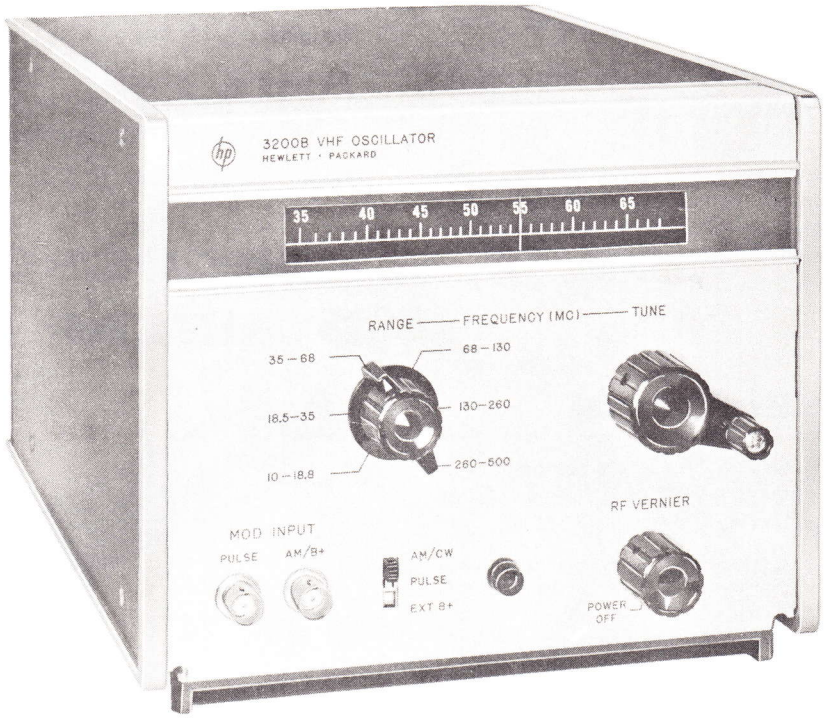
VHF OSCILLATOR

3200B

TECHNICAL DATA 15 MAR 69

Continuous Coverage 10 to 1000 MHz

(with doubler probe)



±0.002% FREQUENCY STABILITY

VERNIER TUNING

COMPACT, WEIGHS ONLY 15 LBS.

For more information, call your local HP Sales Office or East (201) 265-5000 • Midwest (312) 677-0400 • South (404) 436-6181
West (213) 877-1282. Or, write: Hewlett-Packard, 1501 Page Mill Road, Palo Alto, California 94304. In Europe, 1217 Meyrin-Geneva

Description

The VHF Oscillator, Model 3200B, provides low cost, stable, 10 to 500 MHz RF for testing receivers and amplifiers, and driving bridges, slotted lines, antennas, and filter networks. Good pulse modulation sensitivity allows standard audio oscillators to be used to provide usable square wave modulation; a 2.5-volt sine wave will provide adequate drive for this type application. The 3200B can also serve as a local oscillator for heterodyne detector systems and as a marker source for swept systems. An optional accessory Frequency Doubler Probe, Model 13515A, provides additional frequency coverage from 500 to 1000 MHz.

The 3200B will typically recover specified stability in 30 minutes following a frequency band change. Long-term warmup (24 hours) can reduce this time as much as 50%. Following in-band frequency dial changes, the oscillator typically requires 10 minutes to recover specified stability. With the instrument in thermal equilibrium with its surroundings, (i.e., long-term warmup and constant temperature lab), stabilities of 0.0001% are typical at some frequencies, if sufficient settling time is allowed after a frequency change.

Effective RF shielding permits measurements at levels down to 1 μv.

A front panel vernier control varies the plate voltage in the oscillator, electrically refining the attenuator piston setting.

RF is read on an expanded slide-rule type scale. The oscillator may be precisely tuned by means of a mechanical vernier activated by the main tuning control.

The 3200B is well suited for bench use and may be adapted for standard 19-inch rack mounting.

Specifications

Frequency range: 10 to 500 MHz in six bands: 10 to 18.8 MHz; 18.5 to 35 MHz; 35 to 68 MHz; 68 to 130 MHz; 130 to 260 MHz; 260 to 500 MHz.

Frequency accuracy: within ±2% after ½ hour warmup.

Frequency calibration: increments of less than 4%.

Frequency stability (after 4-hour warmup under 0.2 mw load): short term (5 minutes) ±0.002%; long term (1 hour) ±0.02%; line voltage (5-volt change) ±0.001%.

RF output:

Maximum power (across 50-ohm external load): >200 mw (10 to 130 MHz); >150 mw (130 to 260 MHz); >25 mw (260 to 500 MHz).

Range: 0 to >120 db attenuation from maximum output.

Load impedance: 50 ohms nominal.

RF leakage: sufficiently low to permit measurements at 1 μv. **RFI:** meets requirements of MIL-I-6181D.

Amplitude modulation: externally modulated.

Range: 0 to 30%.

Distortion: <1% at 30% AM.

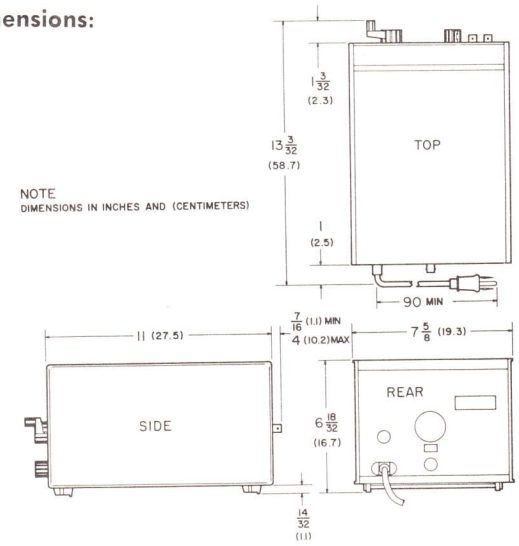
External requirements: approximately 20 volts rms into 600 ohms for 30% AM, 200 Hz to 100 kHz.

Pulse modulation: externally modulated.

External requirements: 2.5 volt negative pulse into 2000 ohms.

Power: 105 to 125 v or 210 to 250 v, 50 to 400 Hz, 30 w.

Dimensions:



Weight: net 15 lbs. (6,8 kg), shipping 19 lbs. (8,6 kg).

Accessories available: 13515A Frequency Doubler Probe; 00501B, 00514B, 00517B Output Cables; 00502B, 00506B Patching Cables.

Price: Model 3200B, $525.

FREQUENCY DOUBLER PROBE

model 13515A

Frequency range: 500 to 1000 MHz with the 3200A/B operating 250 to 260 MHz (130 to 260 MHz range) or 260 to 500 MHz.

RF output: More than 4 mw across external 50-ohm load, controlled by probe depth.

Harmonic suppression: fundamental: >16 db below desired signal.

Harmonic contribution of probe: >14 db below desired signal.

Accessories available: HP Model 360A and 360B Low-Pass Filters.

Weight: net 4 oz. (110 gms), shipping 8 oz. (220 gms).

Price: Model 13515A, $95.