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Data Sheet

August 13, 2026

KEYSIGHT / AGILENT / HP

Keysight / Agilent / HP 10811D 10MHz Crystal Oscillator

HP 10811D Oven Controlled 10 MHz Quartz Crystal Oscillator The HP 10811D is an oven-controlled 10 MHz quartz crystal oscillator (OCXO) used as a high-stability timebase component in HP counters, synthesizers, and frequency standards. Output is 10.000000 MHz at 0.55 V ± 0.05 V rms into 50 ohm. Harmonic distortion less than -25 dBc; discrete spurious phase-modulation sidebands less than -100 dBc from 10 Hz to 25 kHz. Aging typically less than 5×10^{-10} per day after specified warm-up. Fast warm-up class versus many OCXOs (about 6 minutes to within 4×10^{-9} on 10811D literature). The HP 10811D is an oven-controlled 10 MHz quartz crystal oscillator (OCXO) used as a high-stability timebase component in HP counters, synthesizers, and frequency standards. Output is 10.000000 MHz at 0.55 V ± 0.05 V rms into 50 ohm. Harmonic distortion less than -25 dBc; discrete spurious phase-modulation sidebands less than -100 dBc from 10 Hz to 25 kHz. Aging typically less than 5×10^{-10} per day after specified warm-up. Fast warm-up class versus many OCXOs (about 6 minutes to within 4×10^{-9} on 10811D literature). Instrument timebase replacement or spare (10811-60120 class); portable and communications equipment needing low phase noise and low oven power; navigation and metrology 10 MHz references.



MODEL

**Keysight / Agilent /
HP 10811D**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

10811D

LISTING

[https://aumictechlabs.c
om/products/10811d-2/](https://aumictechlabs.com/products/10811d-2/)

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Keysight/Agilent/HP 10811D is an oven-controlled crystal oscillator delivering a precise 10.000000 MHz reference signal for demanding metrology, communications, and test applications. This unit combines exceptional frequency stability with minimal aging, fast thermal stabilization, and low phase noise - making it ideal for systems requiring long-term accuracy without frequent recalibration. Technical Specifications Frequency & Output Center frequency: 10.000000 MHz Output voltage: 0.55 V $\pm$ 0.05 V rms into 50 Ω Output voltage: 1 V rms $\pm$ 200 mV into 1 k Ω Harmonic distortion: < -25 dBc Spurious phase modulation: < -100 dBc (discrete sidebands 10 Hz to 25 kHz) Stability Performance Temperature stability: < 4.5×10^{-9} from 0 $^{\circ}$ C to +71 $^{\circ}$ C Aging rate: < 5×10^{-10} per day Load stability: < 2.5×10^{-10} for 10% load change (< 1×10^{-10} typical) Acceleration sensitivity: < $\pm 4 \times 10^{-9}$ maximum for any reorientation; typically < 5×10^{-11} for 2g turn-over Humidity stability: < 1×10^{-9} at 95% RH, 40 $^{\circ}$ C Altitude effect: < 2×10^{-9} from 0 to 50,000 ft Power & Environmental Supply: 11.0 to 13.5 Vdc, 30 mA typical, 40 mA maximum Warm-up time: Typically 6 minutes Shock: 30 g, 11 ms, half-sine pulse Operating temperature: -55 $^{\circ}$ C to +71 $^{\circ}$ C Mass: 0.31 kg (11 oz) Key Features Oven-controlled design ensures drift mitigation across temperature and environmental extremes Low phase noise maintains signal integrity in complex measurement chains Minimal aging reduces calibration intervals and extends service life Fast warm-up minimizes system startup time Low power consumption reduces thermal load on host equipment Typical Applications Primary frequency reference in calibration laboratories Precision timing and synchronization in test systems Communication system frequency standards Phase-locked loop references requiring low noise Compatibility & Integration The 10811D integrates via printed circuit connector card and mounts using two internally-threaded studs on the bottom cover. It functions as a drop-in replacement for the HP 10811A/B in most operational contexts.

Features & description

From manufacturer datasheet

Features

- Ovenized 10 MHz SC-cut class quartz
- Low aging and low phase noise
- Separate oscillator and oven supplies
- Coarse mechanical and EFC electrical tuning
- 10811D/E versus 10811A/B package and temperature-range differences

10811D Characteristics / Specifications

PARAMETER	VALUE
Model	10811D
Manufacturer	Hewlett Packard / Agilent / Keysight
Instrument Type	Oven controlled quartz crystal oscillator
Series	10811
Alias	10811D; HP 10811D; 10811-60120
Output frequency	10.000000 MHz
Output voltage 50 ohm	0.55 V $\pm$ 0.05 V rms
Output voltage 1 kohm	1 V rms $\pm$ 20%
Harmonic distortion	less than -25 dBc
Spurious PM	less than -100 dBc (discrete sidebands 10 Hz to 25 kHz)
Aging	less than 5×10^{-10} per day (10811D/E class after specified period)
Aging year typical	less than 1×10^{-7} per year (typical 1×10^{-8} per year)
Temperature frequency	less than 4.5×10^{-9} from 0 C to +71 C
Operating temperature	0 C to +71 C
Storage temperature	-55 C to +85 C
Load sensitivity	less than 5×10^{-10} for $\pm$ 10% change in 50% load
Oscillator supply sensitivity	less than 2×10^{-10} for 1% change
Oven supply sensitivity	less than 2.5×10^{-10} for 10% change (typical less than 1×10^{-10})
Gravity	less than 4×10^{-9} for 2 g static 180 degree position change
Magnetic field	sidebands less than -90 dBc for 0.1 mT (1 Gauss) rms at 100 Hz
Humidity typical	less than 1×10^{-9} for 95% RH at 40 C
Shock survival	30 g, 11 ms, half sine
Altitude typical	less than 2×10^{-9} for 0 to 50000 ft
Warmup	about 6 minutes to within 4×10^{-9} (10811D literature)
Coarse tune	greater than $\pm 1 \times 10^{-6}$ ($\pm$ 10 Hz) 18-turn control

PARAMETER	VALUE
EFC range	$\geq 1 \times 10^{-7}$ (1 Hz) total, -5 Vdc to +5 Vdc
Oscillator supply	11.0 to 13.5 Vdc, 30 mA typical, 40 mA max, less than 100 uV ripple
Related 10811A B	wider -55 C to +71 C operating class
Related part	10811-60120 oscillator assembly
Humidity	typical: less than 1×10^{-9} for 95% RH at 40 C

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Storage temperature	55 C to +85 C
Operating temperature	0 C to +71 C
Operating Temperature	0 C to +71 C
Humidity	typical: less than 1×10^{-9} for 95% RH at 40 C
Load sensitivity	less than 5×10^{-10} for $\pm 10\%$ change in 50% load
Oscillator supply sensitivity	less than 2×10^{-10} for 1% change
Oven supply sensitivity	less than 2.5×10^{-10} for 10% change (typical less than 1×10^{-10})
Gravity	less than 4×10^{-9} for 2 g static 180 degree position change
Magnetic field	sidebands less than -90 dBc for 0.1 mT (1 Gauss) rms at 100 Hz
Humidity typical	less than 1×10^{-9} for 95% RH at 40 C
Shock survival	30 g, 11 ms, half sine
Altitude typical	less than 2×10^{-9} for 0 to 50000 ft
Warmup	about 6 minutes to within 4×10^{-9} (10811D literature)
Coarse tune	greater than $\pm 1 \times 10^{-6}$ (± 10 Hz) 18-turn control
EFC range	$\geq 1 \times 10^{-7}$ (1 Hz) total, -5 Vdc to +5 Vdc
Oscillator supply	11.0 to 13.5 Vdc, 30 mA typical, 40 mA max, less than 100 uV ripple
Related 10811A B	wider -55 C to +71 C operating class
Related part	10811-60120 oscillator assembly Notes Specs from HP 10811 A/B manual output/aging tables and 10811D/E comparison tables. Confirm 10811D versus 10811A/B/E and the 10811-60120 assembly marking on the unit.

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

Specifications	
Specifications	
PARAMETER	VALUE
Model	10811D
Manufacturer	Hewlett Packard / Agilent / Keysight
Instrument Type	Oven controlled quartz crystal oscillator
Series	10811
Alias	10811D; HP 10811D; 10811-60120
Output frequency	10.000000 MHz
Output voltage 50 ohm	0.55 V $\pm$ 0.05 V rms
Output voltage 1 kohm	1 V rms $\pm$ 20%
Harmonic distortion	less than -25 dBc
Spurious PM	less than -100 dBc (discrete sidebands 10 Hz to 25 kHz)
Aging	less than 5 x 10 ⁻¹⁰ per day (10811D/E class after specified period)
Aging year typical	less than 1 x 10 ⁻⁷ per year (typical 1 x 10 ⁻⁸ per year)
Temperature frequency	less than 4.5 x 10 ⁻⁹ from 0 C to +71 C
Operating temperature	0 C to +71 C
Storage temperature	-55 C to +85 C
Load sensitivity	less than 5 x 10 ⁻¹⁰ for $\pm$ 10% change in 50% load
Oscillator supply sensitivity	less than 2 x 10 ⁻¹⁰ for 1% change
Oven supply sensitivity	less than 2.5 x 10 ⁻¹⁰ for 10% change (typical less than 1 x 10 ⁻¹⁰)
Gravity	less than 4 x 10 ⁻⁹ for 2 g static 180 degree position change
Magnetic field	sidebands less than -90 dBc for 0.1 mT (1 Gauss) rms at 100 Hz
Humidity typical	less than 1 x 10 ⁻⁹ for 95% RH at 40 C
Shock survival	30 g, 11 ms, half sine
Altitude typical	less than 2 x 10 ⁻⁹ for 0 to 50000 ft
Warmup	about 6 minutes to within 4 x 10 ⁻⁹ (10811D literature)
Coarse tune	greater than $\pm$ 1 x 10 ⁻⁶ ($\pm$ 10 Hz) 18-turn control
EFC range	$\geq$ 1 x 10 ⁻⁷ (1 Hz) total, -5 Vdc to +5 Vdc

PARAMETER	VALUE
Oscillator supply	11.0 to 13.5 Vdc, 30 mA typical, 40 mA max, less than 100 uV ripple
Related 10811A B	wider -55 C to +71 C operating class
Related part	10811-60120 oscillator assembly

Notes

Specs from HP 10811 A/B manual output/aging tables and 10811D/E comparison tables. Confirm 10811D versus 10811A/B/E and the 10811-60120 assembly marking on the unit.

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: sales@aumictech.com · +1 (484) 841-9341

Aumictech

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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.