



ISSUE 1; July 2014 - RoHS 2011/65/EU

Description

- The LXO1 oscillator has the highest accuracy, stability and lowest current of all STATEK oscillators. The design consists of a CMOS-compatible hybrid circuit, packaged in a hermetically sealed metal DIP. Permanent, precision tuning of the oscillator is accomplished by laser trimming the crystal after it has been hermetically sealed in a ceramic package and connected to the oscillator circuit. This method of fine tuning allows for very tight calibration tolerance and eliminates the need for a trimming capacitor, a major source of long-term frequency drift. The specifications and characteristics of the LXO1 vary with frequency. The characteristics of the 32.768 kHz model are presented in this data sheet.
- **FEATURES:**
 Low power consumption
 Low ageing
 CMOS compatible
 Double hermetically sealed package
 Full military testing available
 Optional Tri-State
- **APPLICATIONS:**
 Industrial, Computer & Communications -
 General purpose clock oscillator
 Data logger
 Remote sensor
 Liquid level sensing
 Medical test and diagnostics
 Military -
 Portable field communication
 Military high speed modem
 Flight recorder

Frequency Parameters

- Frequency 10.0kHz to 2.1MHz
- Frequency Tolerance ±10.00ppm to ±1,000.00ppm
- Tolerance Condition @ 25°C
- Ageing ±1ppm typ per year, ±3ppm max per year
- Note: This specification's characteristics are based on tests at 32.7680kHz.
- Frequency Stability:
 ±40ppm max over 0 to 50°C
 ±100ppm max over -20 to 70°C
 (Note: This does not include frequency tolerance. Positive variations are small compared to negative variations.)
- Supply Voltage Variation (±10% change): ±1ppm/V typ, ±3ppm/V max
- Load Variation (±10% change): ±1ppm max

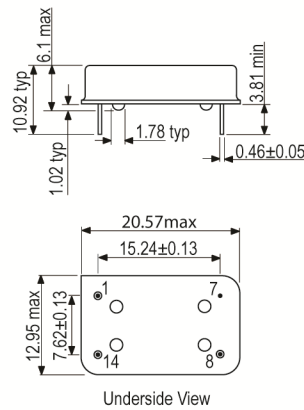
Electrical Parameters

- Supply Voltage 5.0V ±10%
- Supply Voltage Absolute Maximum Rating: -0.3V to 7V

Operating Temperature Ranges

- -10 to 70°C
- -40 to 85°C
- -55 to 125°C

Outline (mm)



Pin Connections
 1. Tri-State or N/C
 7. GND
 8. Output
 14. +Vs

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Output Details

- Output Compatibility CMOS
- Drive Capability 10pF

Output Levels

- Output Low (Vol): 0.2V max
- Output High (Voh): 4.8V min

Environmental Parameters

- Shock (1000G, 1ms, 1/2 sine): ±3ppm max
- Vibration (10G rms, 10-2000Hz): ±3ppm max
- Storage Temperature Range: -55 to 125°C

Ordering Information

- Frequency*
- Model*
- Voltage
- Output Compatibility
- Frequency Tolerance*
- Operating Temperature Range*
- Tri-State or No Connection*
- (*minimum required)
- Example
1.0MHz LXO1 5.0V
CMOS ±100ppm -40 to 85C TS

Compliance

- RoHS Status Optional
- REACH Status Compliant
- MSL Rating (JDEC-STD-033): Not Applicable

Packaging Details

- Pack Style: Tube Supplied in a tube
- Pack Size: 1

Electrical Specification - maximum limiting values 5.0V ±10%

Frequency Min	Frequency Max	Temperature Range	Stability (min)	Current Draw	Rise and Fall Time	Duty Cycle
		°C	ppm	mA	ns	%
10.00kHz	2.1MHz	-10 to 70	-	0.012	25	40/60
		-40 to 85	-	0.012	25	40/60
		-55 to 125	-	0.012	25	40/60

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