

## EQLXO-2000 SERIES 8 pin Dual-in-Line MIL SPECIFICATION OSCILLATORS

### DESCRIPTION

Euroquartz EQLXO-2000 series 8 pin DIL oscillators are designed for military, aerospace and similar applications requiring high reliability components. Material specification consists of a hybrid circuit substrate with all-ceramic components coupled with a ruggedized crystal mounting system. This design specification ensures that EQLXO-2000 series oscillators provide a highly reliable and accurate source of clock signals, in a package able to withstand severe environmental conditions.

### FEATURES

- Ceramic substrate and ruggedized mounts for high reliability
- Industry-standard 8 pin DIL package for ease of design
- 5.0 Volt and 3.3 Volt operation
- Option of Tristate or Output Enable
- Full Screening in accordance with MIL-O-55310C, Class B

### GENERAL SPECIFICATION

<b>Frequency Range:</b>	500kHz to 120MHz	
<b>Supply Voltage:</b>	+5.0 V $\pm$ 10% or +3.3V $\pm$ 10%	
<b>Calibration Tolerance (+5V, 25°C)*</b>		
Code A:	$\pm$ 0.01% ( $\pm$ 100ppm)	
Code B:	$\pm$ 0.03%	
Code C:	$\pm$ 0.10%	
<b>Temperature Stability**</b>		
0° to +50°C:	from $\pm$ 5ppm to $\pm$ 30ppm	
-10° to +70°C:	from $\pm$ 10ppm to $\pm$ 50ppm	
-40° to +85°C:	from $\pm$ 20ppm to $\pm$ 100ppm	
-55° to +125°C:	from $\pm$ 30ppm to $\pm$ 100ppm	
<b>Supply Current:</b>	4mA to 60mA (Frequency dependent)	
<b>Output Levels (5 Volt supply)</b>	<b>VOL</b>	<b>VOH</b>
TTL:	0.4V max.	2.4V min.
CMOS:	0.5V max.	4.5V min.
<b>Start-up Time:</b>	5ms max.	
<b>Rise/Fall Time:</b>	6ns typical, 10ns max. (Frequency dependent)	
<b>Symmetry*:</b>	40%/60%	
<b>Ageing:</b>	5ppm max., first year	
<b>Shock, Survival:</b>	1000g peak 1ms, ½ sine	
<b>Vibration, Survival:</b>	10g rms 10–2000Hz random	
<b>Operating Temperature</b>		
Commercial:	-10° to +70°C	
Industrial:	-40° to +85°C	
Military:	-55° to +125°C	
<b>Storage Temperature:</b>	-55° to +125°C	

\* Tighter tolerances are available for calibration, stability and duty cycle.

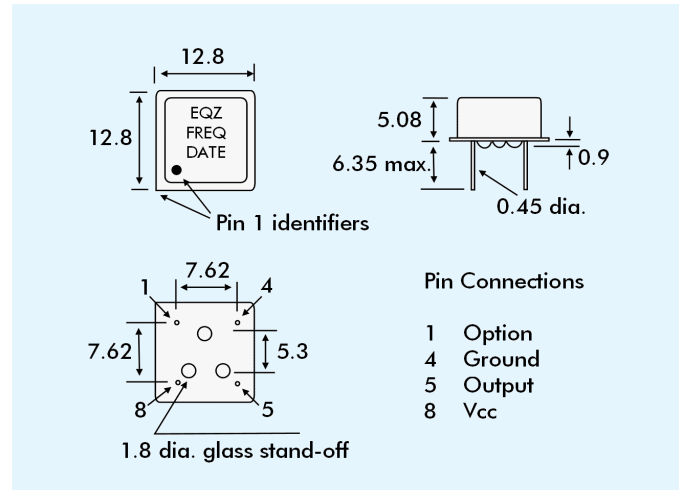
\*\* Does not include calibration tolerance.

Note: All parameters measured at ambient temperature with a 10MW and 10pF load at 5.0 Volts.

### ABSOLUTE MAXIMUM RATINGS

<b>Supply Voltage Vcc:</b>	-0.V to +7V
<b>Storage Temperature:</b>	-55° to +125°C

### OUTLINES AND DIMENSIONS



### TRUTH TABLE (PIN 1 OPTION)

Option	Pin 1* (Option)	Pin 5 (Output)
<b>Power Down</b>	Low (0) High (1)	High (1) Freq. Output
<b>Tristate</b>	Low (0) High (1)	High (Z) Freq. Output

\* Normally High (internal pull-up resistor)

### POWER DOWN vs TRISTATE

- Power Down:** When Pin 1 is low (0) the oscillator stops oscillation.
- Tristate:** When Pin 1 is low the oscillator is running. However, the output buffer amplifier stops functioning and the Pin 5 output is in high impedance state.

### PART NUMBERS & ORDERING INFORMATION

<b>Example:</b>	<b>10.000MHz</b>	<b>EQLXO-2100UM-A-SCREENED</b>
Frequency	10.000MHz	EQLXO-2100UM-A-SCREENED
Series	EQLXO	EQLXO-2100UM-A-SCREENED
Stability	100 = $\pm$ 100ppm 050 = $\pm$ 50ppm 030 = $\pm$ 30ppm	EQLXO-2100UM-A-SCREENED
Output	U = CMOS T = TTL	EQLXO-2100UM-A-SCREENED
Operating Temperature Range	M = Military I = Industrial C = Commercial	EQLXO-2100UM-A-SCREENED
Calibration Tolerance Code	A, B or C (see gen. spec.)	EQLXO-2100UM-A-SCREENED
Testing Status	'Screened' for MIL-O-55310C, Class B Blank - Unscreened	EQLXO-2100UM-A-SCREENED

(Check with Euroquartz sales office for details of Screening)