EQXO-2000XN Series Oscillators

8 pin Dual-in-Line — 1.75MHz to 60.0MHz

UK MANUFACTURED ITAR FREE

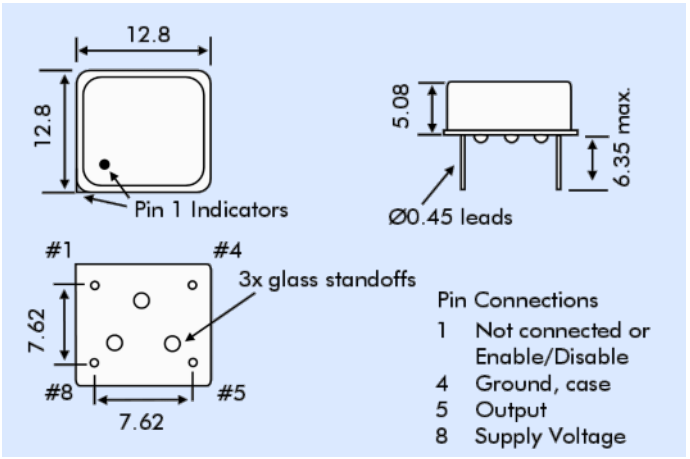
PRODUCT FEATURES

- **Industry-standard 8 pin DIL package for compatibility**
- **Highly reliable industrial CMOS oscillator**
- **-55°C to +125°C Wide operating temperature**
- **Supply voltage 1.8V, 2.5V or 3.3V Volts DC**
- **Femto second integrated phase jitter 150fs typical**
- **Superior phase noise performance**
- **ITAR FREE**

DESCRIPTION

The Euroquartz EQXO-2000XN series of 8 pin dual-in-line CMOS oscillators consist of a universal, hi-temp quartz crystal oscillator in a hermetically-sealed package. The oscillators provide a reliable source of clock signals with superior phase noise and jitter performance at low unit cost. The EQXO-2000XN series is ITAR free and manufactured in the UK.

OUTLINE & DIMENSIONS



SPECIFICATION

Series Number:		EQXO-2000XN
Frequency Range:		1.75MHz to 60MHz
Frequency Stability*:		±50ppm across -55°C +125°C ±100ppm across -55°C +125°C
Supply Voltage:		+1.8 Volts ±10%: +2.5 Volts ±10%: +3.3 Volts ±10%
Output Load	HCMOS:	15pF
Rise/Fall Time		
	1.8 - 2.5 V_{DD}:	7ns (max.)
	3.3 V_{DD}:	10ns (max.) Measured between10% to 90% waveform (CL=15pF)
Duty Cycle:		Standard:50% ±10%; Option 50%±5% is available, add 'S' to part number.
Operating Temperature Range:		-55° to +125°C
Storage Temperature Range:		-55° to +125°C
Start-up Time:		5ms (max.)
Current Consumption:		1.75 - 20MHz / 20 - 60MHz
1.8V_{DD}		2mA / 4mA
2.5V_{DD}		3mA / 5mA
3.3V_{DD}		4mA / 6mA
Tristate Option:		Output is high impedance when '0' (<0.8 Volts) is applied to Pin 1, (internal pull-up). Disable time = 150ns max.
SSB Phase Noise (26MHz, 3.3V)		
Offset:	10Hz 100Hz 1kHz 10kHz 100kHz 1MHz 5MHz	
dBc:	-94 -127 -142 -156 -161 -163 -163	
Phase Jitter(RMS) [26MHz, 3.3V]:		150fs(typ)[12kHz to 20MHz integ]
Ageing at Ta=+25°C		±2ppm max. For first year

** The frequency stability parameter is inclusive of frequency adjustment at 25°C and any variations due to load change, ageing, supply voltage change (±10%) and variations attributable to shock and vibration.*

Out Voltage Level	Supply Voltage		
	+1.8 V	+2.5 V	+3.3 V
Logic Hi '1' (90% $V_{DD\ max.}$)	1.62V	2.25V	2.97V
Logic Lo '0' (10% $V_{DD\ max.}$)	0.18V	0.25V	0.33V

PART NUMBER GENERATION

EQXO-2000XN series oscillator part numbers derived as follows:
Example: **10.000MHz EQXO-2050XNT3**:

10.000MHz EQXO-2 050 XN T 3 S

Frequency

Model number

Stability
050= ±50ppm over 55°C+125°C
100= ±100ppm over 55°C +125°C

XN - Series designation

Add "T" for Tristate

Supply Voltage
3 = 3.3 Volts
25 = 2.5 Volts
18 = 1.8 Volts

Option:
Blank = Standard
S= Duty cycle 50% ±5%

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