

### EQXOP-1000 SERIES 14 pin Dual-in-Line Programmable Oscillators

#### DESCRIPTION

The Euroquartz range of factory programmable oscillators provide custom frequency and specification oscillators within very short lead times. The parts are very reliable in use and have stabilities from  $\pm 25\text{ppm}$  over  $-40^\circ$  to  $85^\circ\text{C}$ . In addition to the stability over operating temperature range customers may also choose from supply voltages of 2.7, 3.3 and 5.0 Volts, Enable/Disable or Power Down functions and output synchronous or asynchronous.

#### FEATURES

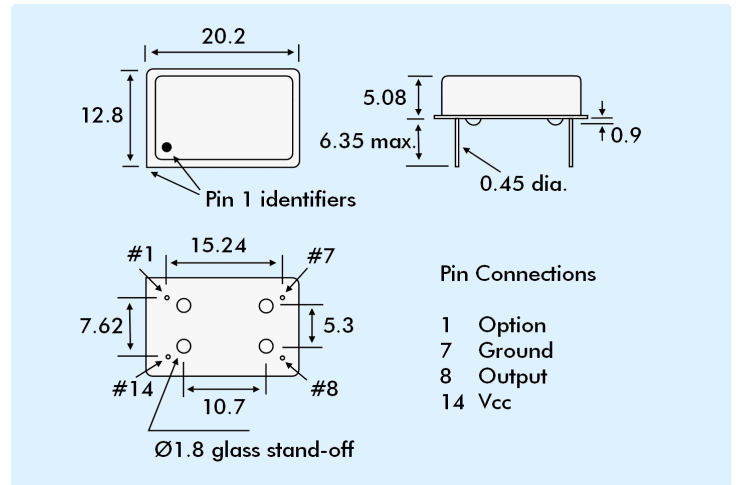
- Very quick delivery available
- Industry-standard 14 pin DIL package (SMD version available)
- Frequency range 1MHz to 133MHz
- Supply Voltages 2.7 Volts, 3.3 Volts or 5.0 Volts
- Enable/Disable or Power Down options

#### GENERAL SPECIFICATION

Package Type:	14 pin DIL Resistance-welded	
Frequency Range		
5.0 Volt Supply:	1.0MHz to 133.0MHz	
3.3 Volt Supply:	1.0MHz to 100.0MHz	
2.7 Volt Supply:	1.0MHz to 100.0MHz	
Frequency Stability*:	$\pm 25\text{ppm}$ to $\pm 100\text{ppm}$ (over operating temperature range)	
Operating Temperature Range		
Choice of three ranges:	0° ~ +70°C	Part code: 'C'
	-20° ~ +70°C	Part code: 'D'
	-40° ~ +85°C	Part code: 'I'
Storage Temperature Range:	-55° to +125°C	
Ageing:	$\pm 5\text{ppm}/\text{year}$ maximum ( $T_a=25^\circ\text{C}$ , $V_{dd}=2.7\text{V}$ , 3.3V or 5.0V)	
Packaging:	Bulk pack or tubed	
Output Levels:	TTL or CMOS	
Maximum Output Loads		
<40MHz:	30pF (See note opposite)	
>40MHz:	15pF (See note opposite)	
Duty Cycle		
CMOS <40MHz:	45/55% maximum	
CMOS >40MHz:	40/60% maximum	
Output Clock Rise/Fall Times:	4ns maximum	
Power Supply Current:	25mA (unloaded)	
Standby Current:	10mA typical 50mA maximum	
Start-up Time:	10ms maximum (from power-on)	
Power Down Delay Time		
Synchronous:	T/2ns typical, T+10ns maximum	
Asynchronous:	10ns typical, 15ns maximum	
Output Disable Time		
Synchronous:	T/2ns typical, T+10ns maximum	
Asynchronous:	10ns typical, 15ns maximum (T = frequency period)	
Output Enable Time:	100ns maximum	
RMS Jitter		
1MHz ~ 33MHz:	$\pm 50\text{ps}$ maximum	
33MHz ~ 133MHz:	$\pm 40\text{ps}$ maximum	

\* The frequency stability parameter is an inclusive figure and includes adjustment tolerance at 25°C, stability over operating temperature range, variations due to load change  $\pm 10\%$ , supply voltage change  $\pm 10\%$ , first year ageing, shock and vibration.

#### OUTLINE & DIMENSIONS



#### OPERATING LOAD CONDITIONS

##### Maximum Capacitive Load TTL

###### 5.0 Volt Supply

1.0MHz ~ 40MHz:	50pF
40.1MHz ~ 133MHz:	25pF

##### Maximum Capacitive Load CMOS

###### 5.0 Volt Supply

1.0MHz ~ 66MHz:	50pF
66.1MHz ~ 133MHz:	25pF

###### 3.3 Volt/2.7 Volt Supply

1.0MHz ~ 40MHz:	30pF
40.1MHz ~ 100MHz:	15pF

#### PRODUCT SELECTION

Model Number	Frequency Stability (ppm)	Operating Temperature Range
EQXOP-1100UC	$\pm 100$	0° ~ +70°
EQXOP-1050UC	$\pm 50$	0° ~ +70°
EQXOP-1025UC	$\pm 25$	0° ~ +70°
EQXOP-1100UD	$\pm 100$	-20° ~ +70°
EQXOP-1050UD	$\pm 50$	-20° ~ +70°
EQXOP-1025UD	$\pm 25$	-20° ~ +70°
EQXOP-1100UI	$\pm 100$	-40° ~ +85°
EQXOP-1050UI	$\pm 50$	-40° ~ +85°
EQXOP-1025UI	$\pm 25$	-40° ~ +85°

#### PART NUMBER GENERATION

Frequency	Model No.	Supply Voltage	Output Option
Nominal Frequency (MHz)	See table above	Blank = 5.0 Volts A = 3.3 Volts B = 2.7 Volts	T = Tristate (Enable/Disable) P = Power Down

EXAMPLE: 24.8920MHz EQXO-1050UDTA

Frequency = 24.8920MHz, EQXOP-1000 package,  $\pm 50\text{ppm}$   $-20^\circ \sim +70^\circ\text{C}$ , Tristate, supply voltage 3.3 Volts

#### SYNCHRONOUS/ASYNCHRONOUS

By default oscillators with Enable/Disable or Power Down functions are supplied ASYNCHRONOUS. If SYNCHRONOUS operation is required append 'SYNC' to the part number