EUROQUARTZ

XO7050 OSCILLATOR

Low Power AT-Cut Clock Oscillator 32.768kHz

FEATURES

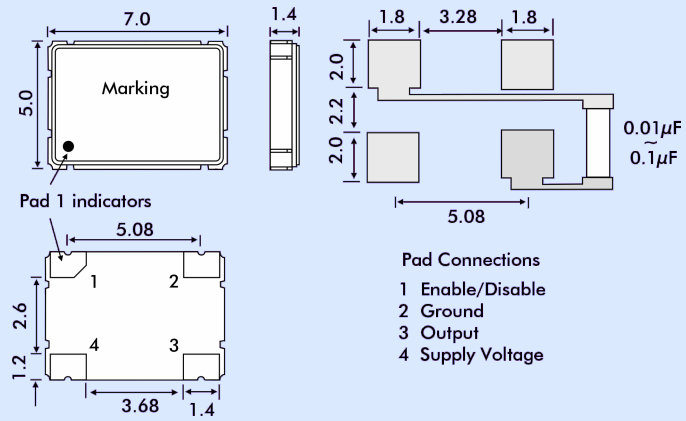
- **AT-Cut crystal for excellent temperature stability**
- **Low power consumption: 50µA typical at 15pF load**
- **Wide supply voltage: +1.8 V to 5.0 Volts**
- **Stability ±20ppm, 25ppm or ±30ppm**
- **Fast start-up time**
- **Miniature 7.0mm x 5.0mm package**

RoHS

DESCRIPTION

XO7050 oscillators utilise AT-Cut crystals providing much improved, tight frequency stability as opposed to that stabiity provided by 32.768kHz oscillators using the more usual X-Cut (tuning fork) crystals. The tight control of frequency provided by these oscillators results in a typical variation of 52 seconds for one month of continuous operation as against 260 seconds over the same period for oscillators that use tuning fork crystals.Other benefits include low supply current consumption coupled with quick start-up times.

OUTLINE & DIMENSIONS



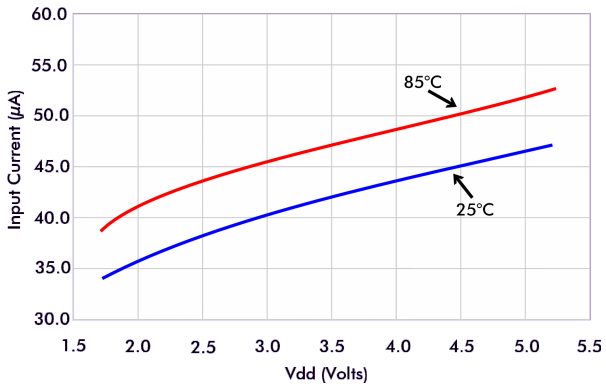
SPECIFICATION

Frequency:	32.7680kHz
Frequency stability*	±20ppm, ±25ppm, ±30ppm (Overall conditions)
Operating Temperature Range:	-40° to +80°C
Storage Temperature Range:	-40° to +80°C
Input Voltage:	+1.8 Volts to 5.0 Volts ±5%
Input Current:	80µA maximum (50µA typical)
Output Symmetry:	45% to 55% at ½ Vdd level
Rise/Fall Times:	6ns maximum (10% to 90%Vdd)
Logic Low '0' Level (Vol):	10% Vdd maximum
Logic High '1' Level (Voh):	90% Vdd minimum
Output Load:	CMOS 15pF maximum
Start-up Time:	1ms maximum
Ageing:	±3ppm max. at 25±3°C 1st year
Enable/Disable Delay Time*:	100ns maximum

NOTE

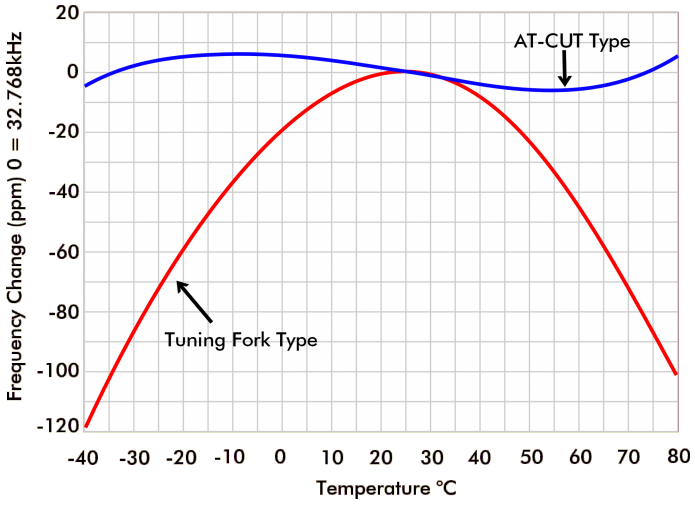
** The Output (Pad 3) is active if not connected or a voltage to Pad 1 is 'HIGH'. Output is high impedance when 'LOW' or Ground is applied to Pad 1.*

INPUT CURRENT vs. VDD



STABILITY OVER TEMPERATURE

(High stability over -40° to +85°C for XO7050 AT-Cut Type)



PART NUMBERS

XO7050 oscillators part numbers are ordered as follows:

32.7680kHz XO7050 - 25 - B

Frequency
32.768kHz

Model Number
XO7050

Stability in ppm
20, 25 or 30ppm

Supply Voltage
Blank = 5.0 Volts
A = 3.3 Volts
B = 2.5 Volts
C = 1.8 Volts

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