

**FEATURES**

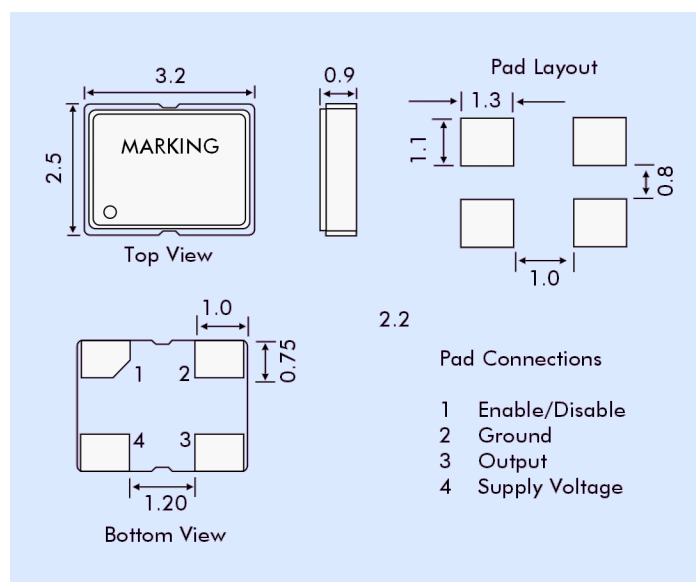
- **Micro-miniature 3.2 x 2.5mm package**
- **Exceptionally low supply current <1.5µA**
- **Wide supply voltage range, 1.5Volts to 5.5 Volts**
- **Standby current <250nA**
- **Stable and clean CMOS output**


**DESCRIPTION**

XO65 oscillators are produced in a micro-miniature 3.2 x 2.5mm package to provide 32.768kHz with very low power consumption, typically 1.5 µA maximum at 3.3 Volts supply, less for lower supply voltages. To conserve power the oscillator has a Standby function implemented. The oscillator can be supplied with any voltage from 1.5 Volts to 5.5 Volts. The XO65 oscillator is an ideal choice for a wide range of battery powered, hand held equipment.

**SPECIFICATION**

Frequency:	32.7680kHz
Frequency Tolerance:	+30ppm to -10ppm, Vdd +3.3V
Frequency stability	
From -20° to +70°C:	+30ppm to -90ppm
From -40° to +85°C:	+30ppm to -130ppm
Operating Conditions	
Operating Temperature:	-40° to +85°C
Storage Temperature:	-55° to +125°C
Input Voltage (Vdd):	+1.5V to +5.5V
Absolute Supply Voltage:	+1.5V to +5.5V
Input Current:	1.5 µA (+3.3 Vdd, -40° to +85°C)
Standby Current:	250nA max. (Unloaded, 25°C)
Output (-40° to +85°C)	
Symmetry:	40/60% at ½ Vdd level (CL = 15pF)
Rise and Fall Times:	200ns max (CL = 15pF)
Logic '0' Level (VOL):	0.4V max. (CL = 15pF, 25°C)
Logic '1' level (VOH):	Vdd -0.4V min. (CL = 15pF, 25°C)
Load:	15pF max (CMOS)
Disable Delay Time:	100ns max.
Enable Delay Time:	1s max.
Tri-State Control:	
Pad 1: 90%Vdd min:	Pad 3 output
Pad 1: 10% Vdd max:	Pad 3 high impedance
Start-up Time:	1s max.
Ageing:	±5ppm max. at 25±3°C 1st year
Reflow Conditions:	+255±5°C for 10 seconds +170±10°C for 1 to 2 minutes (Preheating)

**OUTLINE & DIMENSIONS**

**PART NUMBER**

XO64 oscillators part numbers are ordered with this part number:

**32.7680kHz XO65**

Euroquartz stock number: **VH32768B**