

# SIMPLE PACKAGED CRYSTAL OSCILLATOR



Part Number: 830207370101 | IQXO-402

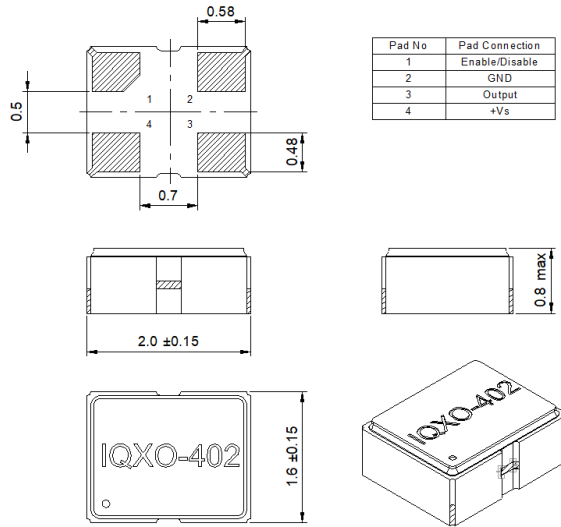
AKA Number: LFSPX0073701



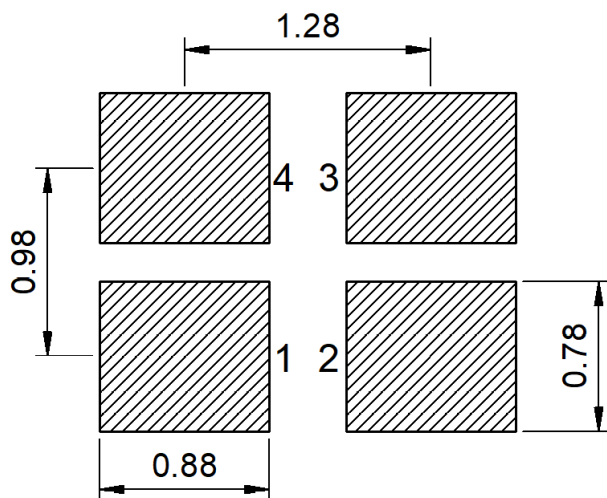
## General Information

32.768kHz miniature 2 x 1.6mm crystal oscillator in an hermetically sealed ceramic package with a seam sealed metal lid.

## Dimensions [mm]



## Recommended Land Pattern [mm]



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## Frequency Parameters

Frequency	32.7680 kHz
Frequency Tolerance	INCLUSIVE
Frequency Stability	± 100 ppm
Operating Temperature	-40 °C to 125 °C
Ageing	± 3 ppm max per year @ 25 °C
Stability inclusive of tolerance @ 25 °C ±3 °C and operating temperature range.	

## Output Details

Output Compatibility	CMOS
Drive Capability	15 pF max.

## Output Control

- Standby Operation:
  - Logic '1' (≥70%Vs) to pad 1 enables oscillator output.
  - Logic '0' (≤30%Vs) to pad 1 disables oscillator output; when disabled the oscillator output goes to the high impedance state.
  - No connection to pad 1 enables oscillator output.
- Standby Current:
  - 10 µA max @ -40 to 85 °C
  - 20 µA max @ -40 to 125 °C
- Start-up Time: 10 ms max 0.3 ms typ to 90 % of final amplitude (under ideal conditions @ 25 °C)

## Material Parameters

Termination Finish	Ni Au
Moisture Sensitivity Level (MSL)	Not Applicable

## Manufacturing Details

Reflow: 260 °C max for 10 s max.

## Company Address

IQD Frequency Products Ltd.  
Station Road  
Crewkerne  
Somerset  
TA18 8AR, United Kingdom

## Electrical Parameters

Supply Voltage	3.3 V ± 10 %
Current Consumption	0.2 mA max.
Rise Time $t_r$	100 ns max.
Fall Time $t_f$	100 ns max.
Duty Cycle	40/60 %

## Environmental Parameters

Storage Temperature Range:	-55 °C to 125 °C
▪ Shock : 1500 g, 0.5 ms, 3 times for each surface, total 18 times.	
▪ Vibration: Frequency range: 20~2000 Hz, peak to peak amplitude 1.52 mm, peak acceleration:20 g (196 m/s <sup>2</sup> ), 3 directions (X, Y, Z), each cycle: 20 min, 4 cycles for each direction.	

## Technical Standards

RoHS Status	2015/863/EU - Compliant
REACH Status	Compliant

## Packaging Details

Packaging SPQ	Tape & Reel 3000 pcs
Tape & reel in accordance with EIA-481	
Quantities below the standard reel size to be supplied on cut tape.	