

ISSUE 1; July 2020

### Description

- The IQPP-73 is a PLL based, one time only factory programmable (for a fast lead time) crystal oscillator in a hermetically sealed ceramic package with a metal lid. This model is not approved for on-board avionics, automotive & safety critical applications; in such instances our 'IQPP-73 AVIATION' version should be specified. See our CFPS-73 for our standard crystal oscillator alternative.
- -A Enable/Disable
- -B Power-Down



### Frequency Parameters

- Frequency 1.0MHz to 200.0MHz
- Frequency Stability  $\pm 15.00\text{ppm}$  to  $\pm 50.00\text{ppm}$
- Ageing  $\pm 3\text{ppm}$  max in 1st year @ 25°C

### Electrical Parameters

- Supply Voltage 3.3V  $\pm 5\%$

### Operating Temperature Ranges

- -20 to 70°C
- -40 to 85°C
- -40 to 105°C

### Output Details

- Output Compatibility CMOS
- Drive Capability 15pF max
- Start Up Time: 5ms max.  
In Power-Down mode, the internal oscillator shuts down and the start-up time will be longer compared to Enable/Disable mode.
- 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

### Output Control

- Standby Current (Enable/Disable): 20mA max
- Standby Current (Power-Down): 400µA max

### Noise Parameters

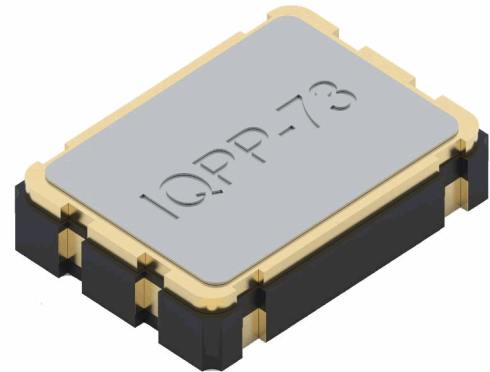
- RMS Phase Jitter (12KHz to 20MHz)@3.3V: 1ps max

### Environmental Parameters

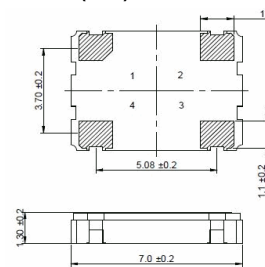
- Storage Temperature Range: -50 to 125°C

### Manufacturing Details

- RoHS Terminations Au
- RoHS Reflow 260degC 10s

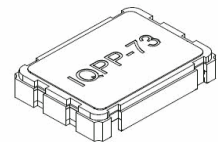


### Outline (mm) -A = Enable/Disable

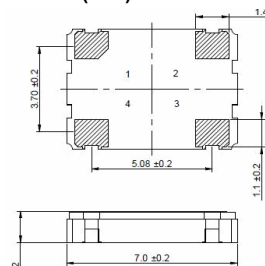


#### Pad Connections

1. Enable/Disable
2. GND
3. Output
4. Vs

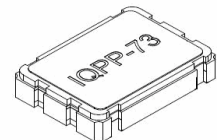


### Outline (mm) -B = Power-Down



#### Pad Connections

1. Power-Down
2. GND
3. Output
4. Vs



### Sales Office Contact Details:

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### Ordering Information

- Frequency\*  
Model\*  
-A = Enable/Disable or -B = Power-Down  
Output Compatibility  
Frequency Stability (over operating temperature range)\*  
Operating Temperature Range\*  
Supply Voltage
- Example  
20.0MHz IQPP-73-A  
CMOS  $\pm 50$ ppm  $-40$  to  $85$ C 3.3V

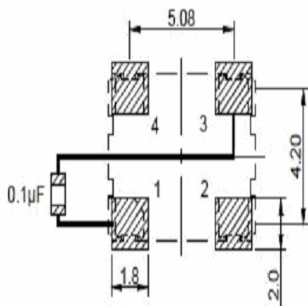
### Compliance

- RoHS Status (2011/65/EU)      Compliant
- REACH Status                      Compliant
- MSL Rating (JDEC-STD-033):    Not Applicable

### Packaging Details

- Pack Style: Bulk      Loose in bulk pack  
Pack Size: 1
- Pack Style: Reel      Tape & reel in accordance with EIA-481-D  
Pack Size: 1,000
- Pack Style: Cutt      In tape, cut from a reel  
Pack Size: 100

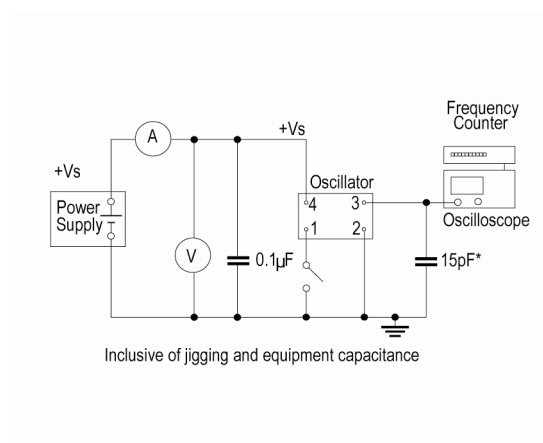
### Solder Pad Layout



To ensure optimal oscillator performance, place a by-pass capacitor of 0.1µF as close to the part as possible between Vdd & GND pads

### Wave Form

### Test Circuit

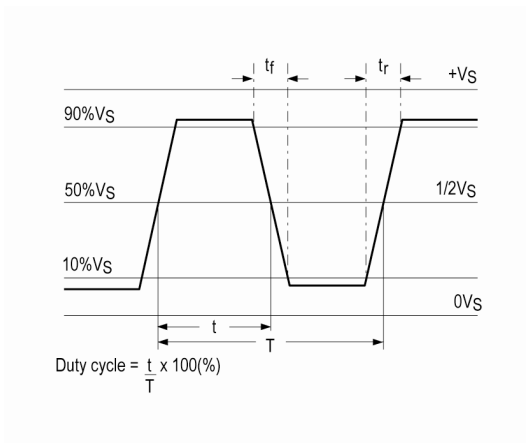


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**Electrical Specification - maximum limiting values 3.3V ±5%**

Frequency Min	Frequency Max	Temperature Range	Stability (Min)	Current Draw	Rise and Fall Time	Duty Cycle
		°C	ppm	mA	ns	%
1.0MHz	200.0MHz	-20 to 70	±15.0	30	2	45/55%
		-40 to 85	±25.0	30	2	45/55%
		-40 to 105	±50.0	30	2	45/55%

*This document was correct at the time of printing; please contact your local sales office for the latest version.*  
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