IQXO-70, -71 SMD CLOCK OSCILLATORS

ISSUE 10; 1 NOVEMBER 2008 - RoHS 2002/95/EC

Description

- Surface mount oscillators in a ceramic package with a hermetically sealed metal lid available in two voltages

Fast Make Capability

- Please see CFPP-72, 73 series Programmable Oscillators for nearest equivalent fast make parts

Package Outline

- 7 x 5mm

Frequency Range

- 12kHz to 170MHz

Output Compatibility & Load

- Tri-state HCMOS/TTL (5.0V) (IQXO-70), Load 50pF max
- Tri-state HCMOS (3.3V) (IQXO-71), Load 15pF max

Standard Frequency Stabilities

- ±25ppm, ±50ppm, ±100ppm (inclusive of supply voltage and output load variations over the operating temperature range)

Operating Temperature Range

- –10 to 70°C (IQXO-70, -71)
- –40 to 85°C (IQXO-70I, -71I)

Storage Temperature Range

- –55 to 125°C

Tri-state Operation

- Logic '1' (IQXO-70 2.2V min, IQXO-71 0.7Vs min) to pad 1 enables oscillator output
- Logic '0' (IQXO-70 0.8V max, IQXO-71 0.3Vs max) 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

Environmental

- Shock: MIL-STD-202F, Method 213B (1000G, 0.5ms, 1/2 sine)
- Vibration: MIL-STD-202F, Method 204D, Test condition D 20G Frequency range 10-2000Hz, 4 hrs in X, Y & Z axes (total 12 hrs)

Marking Includes

- Model Number + Frequency

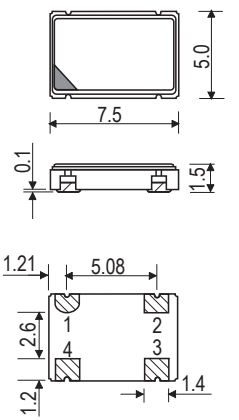
Packaging

- Bulk or Tape and Reel

Minimum Order Information Required

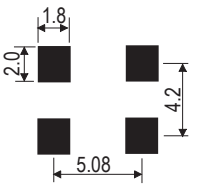
- Frequency + Model Number + Operating Temperature Code (if applicable) + Frequency Stability

Outline (mm)

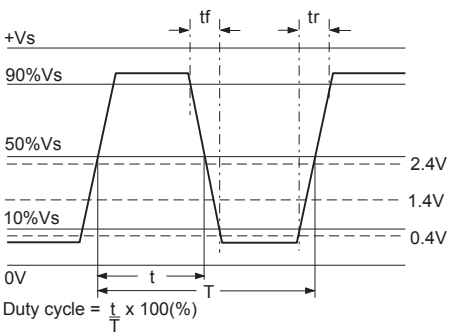


Pad Connections
1. Enable/Disable
2. GND
3. Output
4. +Vs

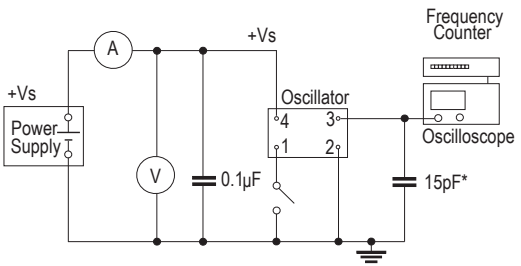
Solder pad layout



Output Waveform



Test Circuit



Inclusive of jigging and equipment capacitance

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Registration No. FS540259

Electrical Specifications - maximum limiting values

Frequency Range	Frequency Stability	Supply Voltage	Supply Current	Rise Time (tr)	Fall Time (tf)	Duty Cycle	Model Number
12.0kHz to 1.544MHz	±25ppm*, ±50ppm, ±100ppm	3.3V ±0.3V	12mA	6ns	6ns	45/55%	IQXO-71, -71I
> 1.544 to 25.0MHz		5.0V ±0.5V	27mA	7ns	7ns		IQXO-70, -70I
		3.3V ±0.3V	12mA	6ns	6ns		IQXO-71, -71I
> 25.0 to 32.0MHz		5.0V ±0.5V	27mA	7ns	7ns		IQXO-70, -70I
		3.3V ±0.3V	12mA	6ns	6ns		IQXO-71, -71I
> 32.0 to 50.0MHz		5.0V ±0.5V	45mA	7ns	7ns		IQXO-70, -70I
		3.3V ±0.3V	16.5mA	6ns	6ns		IQXO-71, -71I
> 50.0 to 67.0MHz		5.0V ±0.5V	75mA	7ns	7ns		IQXO-70, -70I
		3.3V ±0.3V	18mA	6ns	6ns	40/60%	IQXO-71, -71I
> 67.0 to 80.0MHz		5.0V ±0.5V	75mA	7ns	7ns	45/55%	IQXO-70, -70I
		3.3V ±0.3V	40mA	6ns	6ns	40/60%	IQXO-71, -71I
> 80.0 to 125.0MHz				4ns	4ns		
> 125.0 to 170.0MHz			50mA				

Ordering Example 24.0MHz IQXO-71 I C

Frequency

Model No.

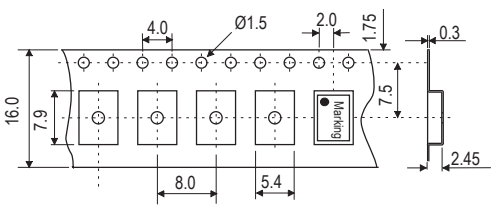
Operating Temperature Code: I = –40 to 85°C; Not applicable over –10 to 70°C

Frequency Stability: A = ±25ppm; B = ±50ppm; C = ±100ppm

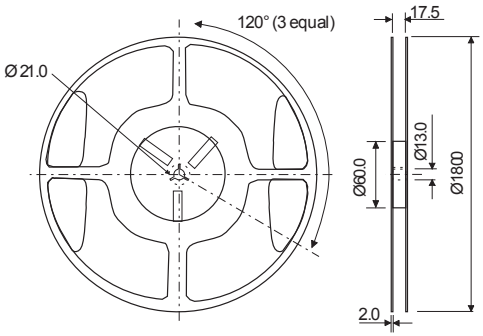
*Note - Code IA, ±25ppm over –40 to 85°C is not available

Please note that the rise and fall times listed are the maximum values we specify to cover various frequency breaks. In practice the actual values are generally lower depending upon the spot frequency chosen. For typical values please contact our sales office.

Tape (mm)



Reel (mm)



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