IQD Frequency Products

Crystal Clock Oscillator Specification
IQXO-642

ISSUE 2; July 2014 - RoHS 2011/65/EU

Description

- Standard 1.6 x 1.2 crystal oscillator in a ceramic package with a seam sealed metal lid, hermetically sealed

Frequency Parameters

- Frequency 1.0MHz to 80.0MHz
- Frequency Stability ±30.00ppm to ±100.00ppm
- Ageing ±5ppm

Electrical Parameters

- Supply Voltage 1.8V ±10%
- Standby Current: 10µA max

Operating Temperature Ranges

- -20 to 70°C
- -40 to 85°C

Output Details

- Output Compatability CMOS
- Drive Capability 15pF max

Output Control

- 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

Environmental Parameters

- Shock: IEC 60068-2-27: 1000G, 1ms, 3 times in each of 3 mutually perpendicular planes
- Vibration: IEC 60068-2-6: 1.5mm amplitude, 10Hz-55Hz, 1min in 3 mutually perpendicular planes, duration 2hrs each plane (total 6hrs)
- Storage Temperature Range: –40 to 85°C

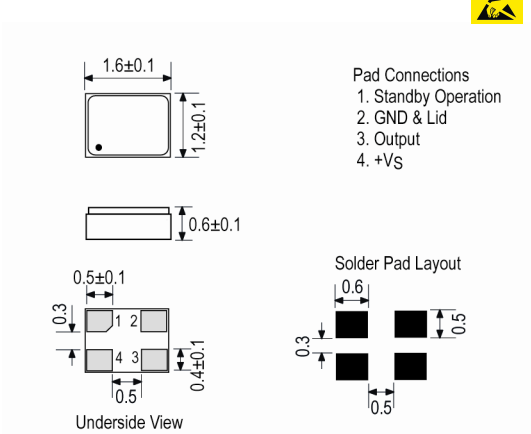
Ordering Information

- Frequency*
  Model*
  Output
  Frequency Stability*
  Operating Temperature Range*
  Supply Voltage
  (*minimum required)
- Example
  10.0MHz IQXO-642
  CMOS ±50ppm –20 to 70C 1.8V

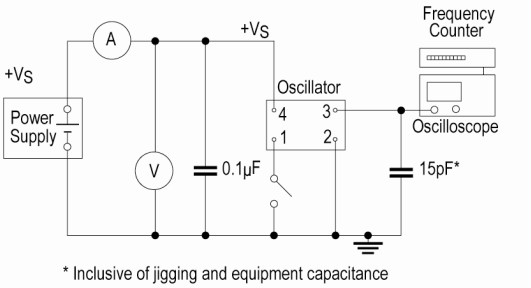
Compliance

- RoHS Status Compliant
- REACh Status Compliant
- MSL Rating (JDEC-STD-033): Not Applicable

Outline (mm)

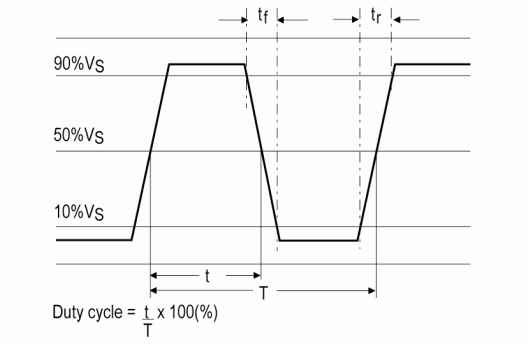


Test Circuit



* Inclusive of jigging and equipment capacitance

Wave Form



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Packaging Details

- Pack Style: Bulk — Loose in bulk pack
  Pack Size: 100
- Pack Style: Reel — Tape & reel in accordance with EIA-481-D
  Pack Size: 3,000

Electrical Specification - maximum limiting values 1.8V ±10%

Frequency Min	Frequency Max	Temperature Range	Stability (min)	Current Draw	Rise and Fall Time	Duty Cycle
		°C	ppm	mA	ns	%
1.0MHz	20.0MHz	-20 to 70	±30.0	3	5	45/55
		-40 to 85	±50.0	3	5	45/55
20.000001MHz	40.0MHz	-20 to 70	±30.0	4	5	45/55
		-40 to 85	±50.0	4	5	45/55
40.000001MHz	60.0MHz	-20 to 70	±30.0	5	5	45/55
		-40 to 85	±50.0	5	5	45/55
60.000001MHz	80.0MHz	-20 to 70	±30.0	7	5	45/55
		-40 to 85	±50.0	7	5	45/55

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