

ISSUE 10; April 2016

### Description

- A 5V supply, 8-pin DIL crystal oscillator in a hermetically sealed metal package designed to meet tough environmental specifications
- See our IQXO-36 for product with standby function
- For standard parts in this package please see our IQXO-825
- For parts that meet tough environmental specifications and military temperature range please see our IQXO-85
- For individually screened parts that meet tough environmental specifications and military temperature range please see our IQXO-86

### Frequency Parameters

- |                     |                         |
|---------------------|-------------------------|
| Frequency           | 500.0kHz to 70.0MHz     |
| Frequency Tolerance | ±5.00ppm to ±25.00ppm   |
| Frequency Stability | ±25.00ppm to ±100.00ppm |
| Ageing              | ±5ppm max per year      |

### Electrical Parameters

- |                |             |
|----------------|-------------|
| Supply Voltage | 5.0V ±0.25V |
|----------------|-------------|

### Operating Temperature Ranges

- 40 to 85°C

### Output Details

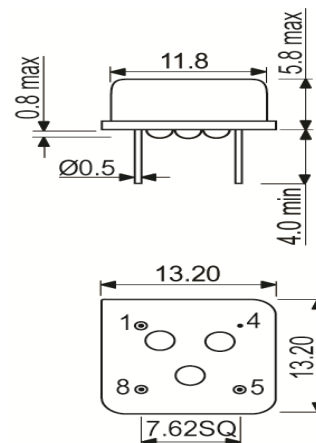
- |                      |                   |
|----------------------|-------------------|
| Output Compatibility | HCMOS/TTL         |
| Drive Capability     | 50pF max or 10TTL |

### Environmental Parameters

- Acceleration: 490m/s<sup>2</sup> for 1min in the 'Y1' plane
- Bump: 4000 bumps at 391m/s<sup>2</sup> in each of 3 mutually perpendicular planes
- Shock: 981m/s<sup>2</sup>, 6ms, 3 times in each of 3 mutually perpendicular planes
- Vibration: 10Hz-60Hz, 0.75mm amplitude, 60Hz-2000Hz, 98.1m/s<sup>2</sup>, 30mins in each of 3 mutually perpendicular planes
- Humidity:
  - Steady State: In accordance with Test Ca of IEC 60068-2-3, for 56 days at 40°C at a relative humidity of 93%
  - Cyclic: In accordance with Test Db (variant 1) of IEC 60068-2-30, at severity b, 55°C for 6 cycles
- Solderability: In accordance with Test Ta of IEC 60068
- Rapid Change of Temperature over Operating Temperature Range:
  - 10 cycles
- Hermetic Seal: Not to exceed 1 x 10<sup>-8</sup> mBar litres of Helium leakage
- Storage Temperature Range: -55 to 125°C



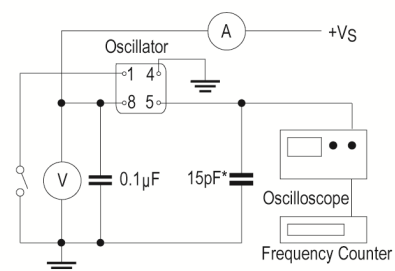
### Outline (mm)



### Pin Connection

1. N/C
4. GND
5. Output
8. +Vs

### Test Circuit



\*Inclusive of jigging and equipment capacitance

Note: Pin 1 = No connection on non standby option models

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### Ordering Information

- Frequency\*
- Model\*
- Output
- Frequency Tolerance\*
- Frequency Stability\*
- Operating Temperature Range
- Supply Voltage
- (\*minimum required)
- Example
- 20.0MHz IQXO-35
- HCMOS  $\pm 10\text{ppm}$   $\pm 50\text{ppm}$   $-40$  to  $85^\circ\text{C}$  5.0V

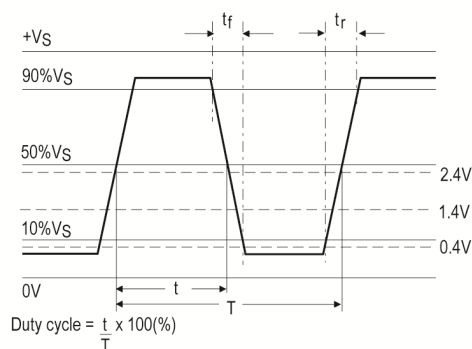
### Compliance

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

### Packaging Details

- Pack Style: Bulk Loose in bulk pack
- Pack Size: 1

### Wave Form



### Electrical Specification - maximum limiting values 5.0V $\pm 0.25\text{V}$

Frequency Min	Frequency Max	Temperature Range	Stability (Min)	Current Draw	Rise and Fall Time	Duty Cycle
		$^\circ\text{C}$	ppm	mA	ns	%
500.0kHz	4.999999MHz	-40 to 85	$\pm 25.0$	20	15	45/55%
5.0MHz	15.999999MHz	-40 to 85	$\pm 25.0$	20	10	45/55%
16.0MHz	29.999999MHz	-40 to 85	$\pm 25.0$	30	10	45/55%
30.0MHz	49.999999MHz	-40 to 85	$\pm 25.0$	40	8	45/55%
50.0MHz	70.0MHz	-40 to 85	$\pm 25.0$	50	6	40/60%

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