



ISSUE 9; July 2014 - RoHS 2011/65/EU

Description

- A 5V supply, 14-pin DIL crystal oscillator in a hermetically sealed metal package designed to meet tight stabilities over temperature
- For standard parts in this package please see our IQXO-821
- For parts that meet tough environmental specifications and military temperature range please see our IQXO-627
- For individually screened parts that meet tough environmental specifications and military temperature range please see our IQXO-628

Frequency Parameters

- Frequency: 250.0kHz to 80.0MHz
- Frequency Tolerance: $\pm 5.00\text{ppm}$ to $\pm 10.00\text{ppm}$
- Frequency Stability: $\pm 15.00\text{ppm}$ to $\pm 50.00\text{ppm}$
- Ageing: $\pm 5\text{ppm}$ after 5 years

Electrical Parameters

- Supply Voltage: 5.0V $\pm 0.5\text{V}$

Operating Temperature Ranges

- 0 to 70°C
- 40 to 85°C

Output Details

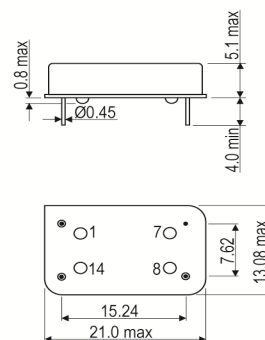
- Output Compatibility: HCMOS/TTL
- Drive Capability: 50pF or 10TTL
- Standby Operation:
No connection or Logic '1' to pin 1 enables oscillator output
Logic '0' to pin 1 disables oscillator output; when disabled the oscillator output goes to the high impedance state
Standby Current: 50 μA typical

Environmental Parameters

- Storage Temperature Range: -55 to 125°C
- Acceleration: 490m/s² for 1 minute in the 'Y1' plane
- Bump: 4000 bumps at 390m/s² in each of the three mutually perpendicular planes.
- Hermetic Seal: Not to exceed 1 x 10⁻⁸ mBar litres of Helium leakage
- 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 six cycles
- Shock: 981m/s², 6ms, 3 times in each of 3 mutually perpendicular planes
- Solderability: IEC 60068, Test TA
- Thermal Shock: 10 cycles from -55 to 125°C
- Vibration: 10Hz-60Hz, 0.75mm amplitude, 60Hz-2000Hz, 98.1m/s², 30mins in 3 mutually perpendicular planes

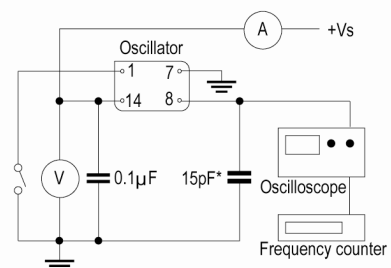


Outline (mm)



Pin Connections
 1. Standby Operation
 7. GND
 8. Output
 14. +Vs

Test Circuit



*Inclusive of jigging and equipment capacitance

Note: Pin 1 = no connection on non tri-state models

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Ordering Information

- Frequency*
- Model*
- Output
- Frequency Tolerance
- Frequency Stability*
- Operating Temperature Range*
- Supply Voltage
- Example
- 20.0MHz IQXO-415
- HCMOS $\pm 10\text{ppm}$ $\pm 50\text{ppm}$ 0 to 70C 5.0V

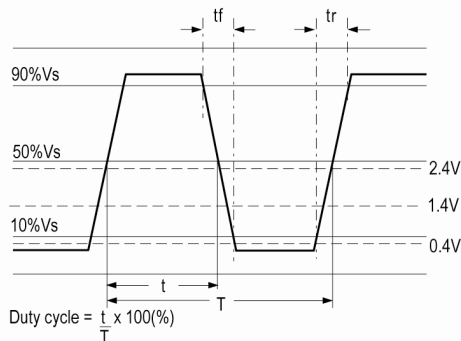
Compliance

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

Packaging Details

- Pack Style: Bulk Loose in bulk pack
- Pack Size: 25

Wave Form



Electrical Specification - maximum limiting values 5.0V $\pm 0.5\text{V}$

Frequency Min	Frequency Max	Temperature Range	Stability (min)	Current Draw	Rise and Fall Time	Duty Cycle
		$^{\circ}\text{C}$	ppm	mA	ns	%
250.00kHz	7.999999MHz	0 to 70	± 15.0	5	10	45/55
		-40 to 85	± 15.0	5	10	45/55
8.0MHz	22.999999MHz	0 to 70	± 15.0	10	5	45/55
		-40 to 85	± 15.0	10	5	45/55
23.0MHz	80.0MHz	0 to 70	± 15.0	65	3	45/55
		-40 to 85	± 15.0	65	3	45/55

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