

ISSUE 9; June 2016

Description

- 5V supply crystal oscillator with standby function in a 14-pin DIL metal package, hermetically sealed
- Meets military temperature range and tough environmental specifications
- See IQXO-628 for screened product
- See IQXO-625 for product with no Standby Operation
- See IQXO-626 for screened product with no Standby Operation
- For standard parts that meet tough environmental specifications please see our IQXO-366
- For standard parts with tight stabilities over temperature please see our IQXO-415
- For standard parts in this package please see our IQXO-149



Frequency Parameters

- Frequency: 250.0kHz to 72.0MHz
- Frequency Tolerance: $\pm 10.00\text{ppm}$ to $\pm 25.00\text{ppm}$
- Frequency Stability: $\pm 50.00\text{ppm}$ to $\pm 100.00\text{ppm}$
- Ageing: $\pm 5\text{ppm}$ max per year

Electrical Parameters

- Supply Voltage: 5.0V $\pm 0.5\text{V}$
- Standby Current: 50 μA typ

Operating Temperature Ranges

- 55 to 125°C

Output Details

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

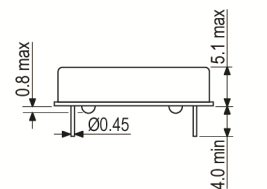
Output Control

- 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

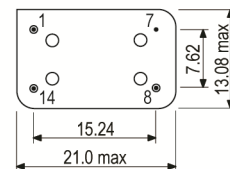
Environmental Parameters

- Bump: 4000 bumps at 391m/s² in each of 3 mutually perpendicular planes
- Shock: 981m/s², 6ms, 3 times in each of 3 mutually perpendicular planes
- Vibration: 10Hz-60Hz, 0.75mm amplitude, 60Hz-2000Hz, 98.1m/s², 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
- Hermetic Seal: Not to exceed 1 x 10⁻⁸ mBar litres of Helium leakage
- Storage Temperature Range: -55 to 125°C

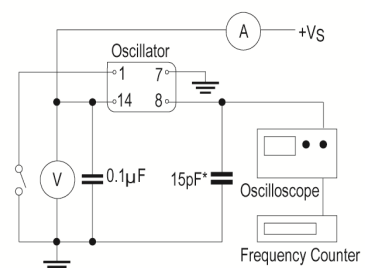
Outline (mm)



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 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-627
- HCMOS ±10ppm ±50ppm -55 to 125C 5.0V

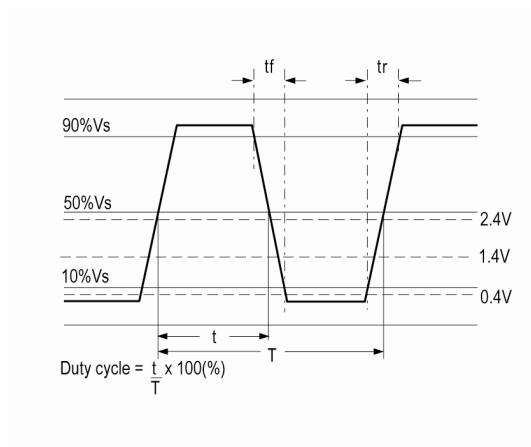
Compliance

- 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: 25

Wave Form



Electrical Specification - maximum limiting values 5.0V ±0.5V

Frequency Min	Frequency Max	Temperature Range	Stability (Min)	Current Draw	Rise and Fall Time	Duty Cycle
		°C	ppm	mA	ns	%
250.00kHz	7.999999MHz	-55 to 125	±50.0	5	10	45/55%
8.0MHz	22.999999MHz	-55 to 125	±50.0	10	5	40/60%
23.0MHz	47.999999MHz	-55 to 125	±50.0	50	5	40/60%
48.0MHz	72.0MHz	-55 to 125	±50.0	65	3	40/60%

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