IQXO-625, -626, -627, -628 Military Oscillator

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Delivery Options

- Please contact our sales office for current leadtimes

Output Compatibility

- HCMOS/TTL
- Drive Capability: 50pF or 10TTL
- Non tri-state (IQXO-625, -626)
- Tri-state (IQXO-627, -628)

Package Outline

- 14-pin DIL compatible resistance welded enclosure, hermetically sealed with glass to metal seals and gold plated pins and bases. Available non-screened (IQXO-625, -627) and fully screened (IQXO-626, -628)

Standard Frequency Stabilities

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

Frequency Tolerance @ 25°C (Optional)

- ±10ppm, ±25ppm

Operating Temperature Range

- –55 to 125°C

Storage Temperature Range

- –55 to 125°C

Screening On Each Device (IQXO-626, -628)

- Acceleration: 49000m/s² for 1 minute in the 'Y_1' plane
- High Temperature Storage: 24hrs at 150°C
- Rapid Change of Temperature: -55 to 125°C, 10 cycles
- Dynamic burn-in for 168hrs at 125°C
- Check all parameters & assess

Environmental Specification

- Bump: 4000 bumps at 391m/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 for 6ms, three shocks in each direction along the three mutually perpendicular planes
- Solderability: test IEC 60068-TA
- Vibration: 10 to 60Hz 0.75mm displacement, 60 to 2000Hz 98.1m/s² acceleration, 30 minutes in each of three mutually perpendicular planes

Tri-state Operation (IQXO-627, -628)

- Logic '0' to pin 1 disables oscillator output; when disabled the oscillator output goes to the high impedance state
- No connection or Logic '1' to pin 1 enables oscillator output
- Disable current 50µA typical

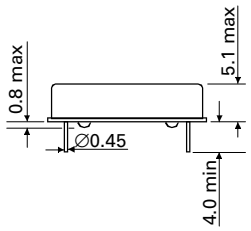
Marking

- Model number
- Frequency Stability Code
- Frequency Tolerance Code (Optional)
- Frequency
- Date Code (Year/Week)

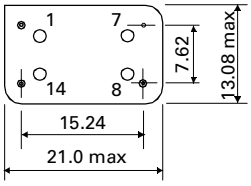
Minimum Order Information Required

- Frequency + Model Number + Frequency Stability

Outline in mm



Pin connections
1. N/C
7. GND
8. Output
14. +Vs



Electrical Specifications - maximum limiting values when measured in HCMOS test circuit.

Frequency Range	Frequency Stability	Supply Voltage	Supply Current	Rise Time(t_r)	Fall Time(t_f)	Duty Cycle	Model Number
250.0kHz to < 8.0MHz	±50ppm, ±100ppm	5V±0.5V	5mA	10ns	10ns	45/55%	IQXO-625, -626, -627, -628
8.0 to < 23.0MHz	±50ppm, ±100ppm	5V±0.5V	10mA	5ns	5ns	40/60%	IQXO-625, -626, -627, -628
23.0 to < 48.0MHz	±50ppm, ±100ppm	5V±0.5V	50mA	5ns	5ns	40/60%	IQXO-625, -626, -627, -628
48.0 to 72.0MHz	±50ppm, ±100ppm	5V±0.5V	65mA	3ns	3ns	40/60%	IQXO-625, -626, -627, -628

Ordering Example 50.0MHz IQXO-625 B E

Frequency

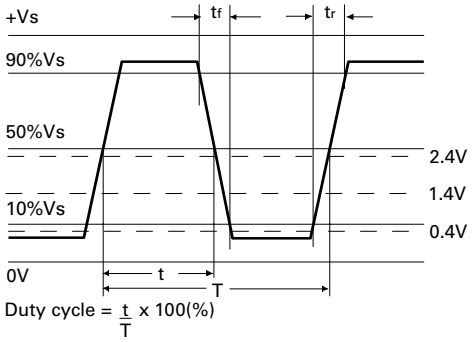
Model number -625,-626 = Non tri-state, -627,-628 = Tri-state

Frequency Stability: B = ±50ppm, C = ±100ppm

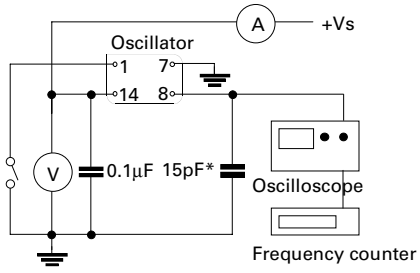
Frequency Tolerance @ 25°C: E = ±10ppm; F = ±25ppm

Please note: Code combination B F is not available

Output Waveform - HCMOS/TTL



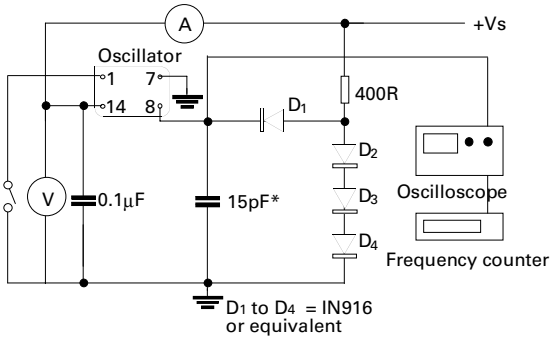
Test Circuit - HCMOS



*Inclusive of jigging & equipment capacitance

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

Test Circuit - TTL



*Inclusive of jigging & equipment capacitance

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