

ISSUE 1; May 2019

Description

- The IQOV-220 is a high stability Oven Controlled Crystal Oscillator OCXO in a hermetically sealed package with excellent phase noise and Allan Deviation.



Frequency Parameters

- Frequency 10.0MHz
- Frequency Stability ± 0.50 ppb
- Ageing (after 30 days of continuous operation): ± 0.1 ppb max per day, ± 30 ppb max per year
- Supply Voltage Variation ($\pm 10\%$ change): ± 1 ppb max
- Short Term Stability ($\tau=1s$): 0.5ppt

Electrical Parameters

- Supply Voltage 12.0V $\pm 5\%$
- Power Consumption:
Warm Up: 5W max
Steady State (@ 25°C): 1.2W max
- Warm Up Time from 25°C: ± 2 ppb max after 10mins

Frequency Adjustment

- Pulling ± 0.4 ppm min
- Control Voltage 0 to 8V
- Input Impedance 50k Ω min
- Slope: Positive
- Pulling: sufficient for 10years ageing minimum

Operating Temperature Ranges

- -40 to 85°C

Output Details

- Output Compatibility Sinewave
- Drive Capability 50 Ω
- Output Level: (AC coupled into 50 Ω): +10dBm (± 2 dBm)

Noise Parameters

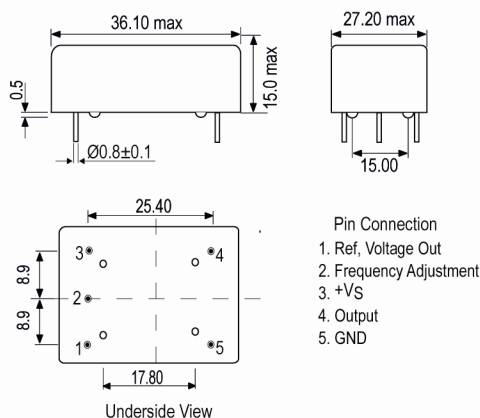
- Phase Noise (typ @ 25°C):
-118dBc/Hz @ 1Hz
-140dBc/Hz @ 10Hz
-152dBc/Hz @ 100kHz
-155dBc/Hz @ 1kHz
-160dBc/Hz @ 10kHz
-160dBc/Hz @ 100kHz
- Harmonic Distortion: -30dBc max
- Spurious: -80dBc max

Environmental Parameters

- Vibration: (IEC 60068-2-06, Test Fc, 10Hz-55Hz, 1.5mm displacement, 55Hz-500Hz 10G)
- Shock: IEC 60068-2-27, Test Ea, acceleration of 50g peak amplitude for 11ms duration.



Outline (mm)



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Manufacturing Details

■ Soldering Guidelines:

The OCXO should be mounted on the circuit board after any cleaning & drying process. Hand soldering is recommended with a tip temperature of 370°C for 7 sec & 430°C for 5 seconds max.

Care must be taken to avoid any excessive bending or stress on the mounting pins. This can cause failure of the glass seals in the base.

This products is not suitable for immersion in cleaning fluids and should not undergo any ultrasonic cleaning process.

Ordering Information

- Storage Temperature: -55°C to 150°C

Compliance

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

Packaging Details

- Pack Style: Bulk Bulk pack
Pack Size: 1

Electrical Specification - maximum limiting values 12.0V ±5%

| Frequency Min | Frequency Max | Temperature Range | Stability (Min) | Current Draw | Rise and Fall Time | Duty Cycle |
|---------------|---------------|-------------------|-----------------|--------------|--------------------|------------|
| | | °C | ppb | mA | ns | % |
| 10.0MHz | 10.0MHz | -40 to 85 | ±0.5 | - | - | - |

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