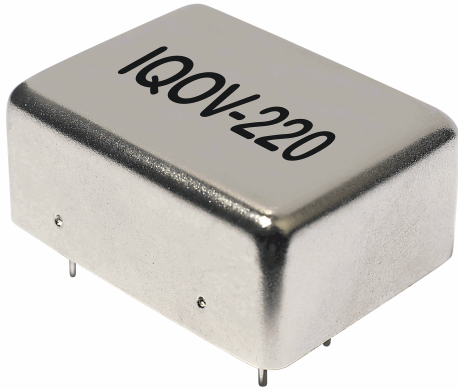
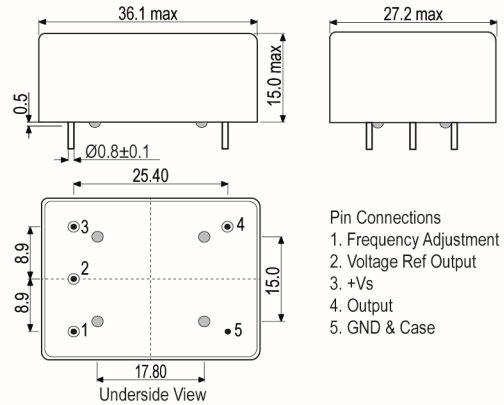


ISSUE 2; January 2021



### Outline (mm)



### Description

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

### Frequency Parameters

- Frequency 10.0MHz
- Frequency Stability  $\pm 0.50$ ppb
- Ageing (after 30 days of continuous operation):  
 $\pm 0.5$ ppb max per day  
 $\pm 30$ ppb max per year
- Supply Voltage Variation ( $\pm 10\%$  change):  $\pm 1$ ppb max
- Short Term Stability ( $\tau=1s$ ): 2ppt max

### Electrical Parameters

- Supply Voltage 12.0V  $\pm 5\%$
- Power Consumption:  
 Warm Up: 4.5W max  
 Steady State (@ 20°C): 1.2W max
- Warm Up Time from 25°C:  $\pm 2$ ppb max after 10mins

### Frequency Adjustment

- Pulling  $\pm 0.4$ ppm min
- Control Voltage 0 to 8V
- Input Impedance 50k $\Omega$  min
- Slope: Positive
- Pulling: sufficient for 10years minimum of ageing.
- Voltage Reference Output: 8V

### Operating Temperature Ranges

- -40 to 85°C

### Output Details

- Output Compatibility Sine
- Drive Capability 50 $\Omega$
- Output Level: (AC coupled into 50 $\Omega$ ): +8dBm min,  $\pm 13$ dBm max

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### Noise Parameters

- Phase Noise (typ @ 25°C):
  - 118dBc/Hz @ 1Hz
  - 140dBc/Hz @ 10Hz
  - 152dBc/Hz @ 100Hz
  - 155dBc/Hz @ 1kHz
  - 160dBc/Hz @ 10kHz
  - 160dBc/Hz @ 100kHz
- Harmonic Distortion: -30dBc max
- Spurious: -90dBc 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.

### 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.

The case is internally grounded to the main ground pin.

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 (2015/863/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	-	-	-

*This document was correct at the time of printing; please contact your local sales office for the latest version.*

[Click to view latest version on our website.](#)

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