



### Description

- Oven controlled crystal oscillator (OCXO) with voltage control
- Model IQOV-164-4
- Model Issue number 2

### Frequency Parameters

- Frequency 10.0MHz
- Frequency Tolerance @ 25°C ±50.00ppb
- Frequency Stability ±1.00ppb
- Operating Temperature Range -30.00 to 75.00°C
- Ageing ±0.5ppb max per day, ±50ppb max per year
- Supply Voltage Variation (measurement referenced to frequency observed with TA=25°C, Vs varied from 3.13V to 3.47V, VC=1.65V and load=50Ω): ±0.5ppb max
- Ageing: Vs, VC, TA constant measurement referenced to frequency observed with TA=25°C, Vs=3.3V, VC=1.65V, load=50Ω and after 30 days of operation.
- Load Variation (5% load change measurement referenced to frequency observed with TA=25°C, Vs=3.3V, VC=1.65V and load=50Ω): ±0.5ppb max
- Short Term Stability - Allan Variance (temperature stability, no EMI/EMC or other interference test after power for 1hr ref. to 25°C; 1s, using PN9000 equipment): 0.01ppb max / 1sec
- Frequency Tolerance (measurement referenced to frequency observed with TA=25°C, Vs=3.3V, VC=1.65V and after 15 minutes of operation, within 30 days after ex-works): ±50ppb
- Frequency Stability: TA varied across the operating temperature range, measurement referenced to frequency observed with fref=(fmax+fmin)/2, Vs=3.3V, VC=1.65V, load=50Ω and temperature variable speed less than 2°C per minute.

### Electrical Parameters

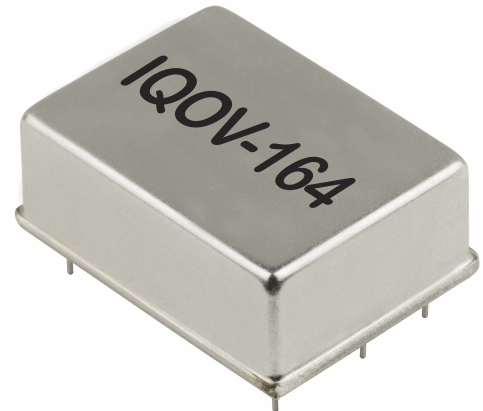
- Supply Voltage 3.3V
- Supply Voltage Tolerance ±5%
- Current Consumption:  
Warm up: 1400mA max  
Steady state (@ 25°C): 500mA max

### Frequency Adjustment

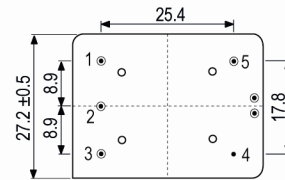
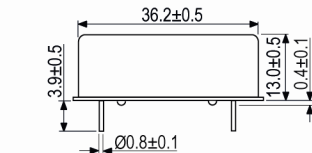
- Pulling ±0.7ppm to ±1ppm
- Control Voltage Details 1.65V ±1.65V
- Linearity: ±10% max
- Slope: Positive
- Input Impedance: 100kΩ min

### Output Details

- Output Compatability Sine
- Output Load 50Ω
- Output Amplitude: 6dBm min, 10dBm max



### Outline (mm)



Underside View

- Pin Connections
1. +Vs
  2. N/C
  3. Voltage Control
  4. GND
  5. Output

### Sales Office Contact Details:

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### **Noise Parameters**

- Phase Noise (@ 10MHz typ):
  - 125dBc/Hz @ 10Hz
  - 145dBc/Hz @ 100Hz
  - 150dBc/Hz @ 1kHz
  - 155dBc/Hz @ 10kHz
  - 155dBc/Hz @ 100kHz
  - 155dBc/Hz @ 1MHz
- Harmonic Suppression: -30dBc max
- Spurious Suppression: -60dBc max

### **Environmental Parameters**

- Shock: IEC 60068-2-27, Test Ea: 50G, 11ms duration, 1/2 sine wave, 3 times in each of 3 mutually perpendicular planes
- Vibration: IEC 60068-2-06, Test Fc: 10Hz-500Hz, 0.75mm displacement, 10G acceleration, one cycle per 30mins, 3 times in each of 3 mutually perpendicular planes, test 2hrs
- Storage Temperature Range: -55 to 105°C
- Operable Temperature Range: -40 to 85°C
- ESD Level:
  - HBM, Class 2: 2000V to 4000V, JEDEC JS-001-2010
  - Machine Model, Class B: 200V to 400V, JEDEC JS-001-2010

### **Manufacturing Details**

- Maximum Reflow Temperature: 260°C (30secs max)

### **Compliance**

- |              |           |
|--------------|-----------|
| RoHS Status  | Compliant |
| REACH Status | Compliant |

### **Packaging**

- |                 |                    |
|-----------------|--------------------|
| Pack Type: Bulk | Loose in bulk pack |
| Pack Size       | 1                  |
- Alternative packing option available

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

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