

Customer Part:



Description

- Oven controlled crystal oscillator (OCXO) with voltage control on a FR4 base with a metal lid.
- Model IQOV-162-4
- Model Issue number 2

Frequency Parameters

- Frequency 38.880MHz
- Frequency Tolerance $\pm 500.00\text{ppb}$
- Tolerance Condition @ 25°C, 3.3V, VC=1.65V after 15mins warm-up
- Frequency Stability $\pm 20.00\text{ppb}$
- Operating Temperature Range -40.00 to 85.00°C
- Ageing $\pm 5\text{ppb}$ max per day, $\pm 500\text{ppb}$ max per year
- 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): $\pm 500\text{ppb}$
- Frequency Stability: TA varied over temperature, measurement referenced to frequency observed with $f_{\text{ref}} = (f_{\text{max}} + f_{\text{min}}) / 2$, Vs=3.3V, VC=1.65V, load=50Ω, temperature variable speed less than 2°C per minute.
- 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.
- 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): $\pm 10\text{ppb}$ max
- Load Variation (5% load change measurement referenced to frequency observed with TA=25°C, Vs=3.3V, VC=1.65V and load=50Ω): $\pm 10\text{ppb}$ 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): 0.1ppb max / 1sec

Electrical Parameters

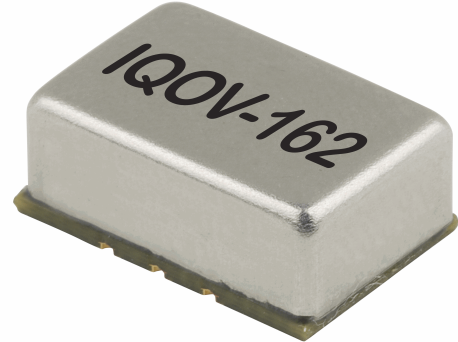
- Supply Voltage 3.3V $\pm 5\%$
- Current Draw:
Warm up: 600mA max
Steady state (@ 25°C): 300mA max
- Warm-Up Time (@ 25°C, F< $\pm 100\text{ppb}$ of final frequency): 5mins max

Frequency Adjustment

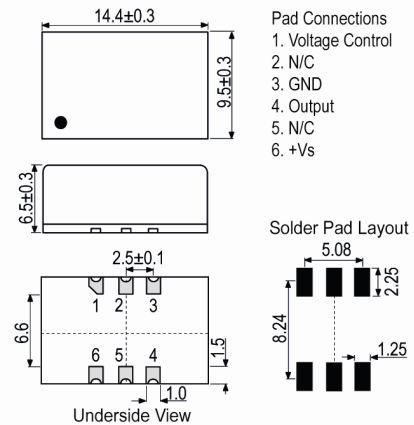
- Pulling $\pm 3\text{ppm}$ to $\pm 8\text{ppm}$
- Control Voltage 1.65V $\pm 1.65\text{V}$
- Input Impedance 100kΩ min
- Linearity: $\pm 10\%$ max
- Slope: Positive

Output Details

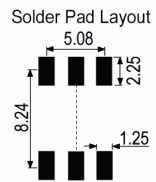
- Output Compatibility Sine
- Drive Capability 50Ω
- Output Level: 6dBm min, 10dBm max



Outline (mm)



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



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Customer Part:**Noise Parameters**

- Phase Noise (@ 10MHz typ):
 - 100dBc/Hz @ 10Hz
 - 130dBc/Hz @ 100Hz
 - 150dBc/Hz @ 1kHz
 - 150dBc/Hz @ 10kHz
 - 150dBc/Hz @ 100kHz
 - 155dBc/Hz @ 1MHz
- Harmonic Suppression: -30dBc max
- Spurious Suppression: -60dBc max

Environmental Parameters

- Operable Temperature Range: -40 to 85°C
- Storage Temperature Range: -55 to 105°C
- ESD Level:
 - HBM, Class 2: 2000V to 4000V, JEDEC JS-001-2010
 - Machine Model, Class B: 200V to 400V, JEDEC JS-001-2010
- Shock: IEC 60068-2-27, Test Ea, Severity 50A: 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

Manufacturing Details

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

Compliance

- RoHS Status (2015/863/EU) Compliant
- REACH Status Compliant
- MSL Rating (JDEC-STD-033): 2

Packaging Details

- Pack Style: Reel Tape & reel in accordance with EIA-481-D
Pack Size: 500
- *Alternative packing option available*

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