



Description

- Oven controlled crystal oscillator (OCXO) on a FR4 base.
- Model IQOV-162-30
- Model Issue number 2

Frequency Parameters

- Frequency 20.0MHz
- Frequency Tolerance $\pm 500.00\text{ppb}$
- 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.
- Frequency Stability: TA varied over operating temperature range, measurement referenced to frequency observed with $f_{ref}=(f_{max}+f_{min})/2$, Vs=3.3V, VC=1.65V, load=15pF and temperature variable speed less than 2°C per minute.
- Ageing: Vs, TA constant, measurement referenced to frequency observed with TA=25°C, Vs= 3.3V, VC=1.65V 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=15pF): $\pm 10\text{ppb}$ max
- Load Variation (measurement referenced to frequency observed with TA=25°C, Vs=3.3V, VC=1.65V and load change=15pF $\pm 5\%$): $\pm 10\text{ppb}$ max
- Short Term Stability - Allan Variance (temperature stable, no EMI/EMC or other interference test after power for 1hr ref. to 25°C; 1s): 1E-11 max

Electrical Parameters

- Supply Voltage 3.3V $\pm 5\%$
- Current Draw:
Warm Up: 560mA max
Steady State (@ 25°C): 250mA max
- Warm Up Time (@ 25°C, F< $\pm 100\text{ppb}$ of final frequency with reference after 1hr on): 5mins max

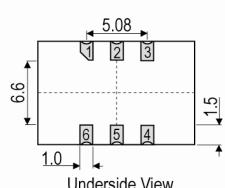
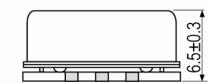
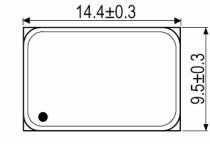
Frequency Adjustment

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

Output Details

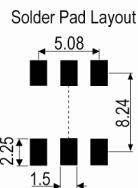
- Output Compatibility HCMOS
- Drive Capability 15pF
- Rise and Fall Time 8.0ns max
- Duty Cycle 45/55%
- Output Levels (@ Vs=3.3V, load=15pF):
VoL: 0.4V max
VoH: 2.4V min

Outline (mm)



Underside View

Pad Connections
1. Voltage Control
2. NC
3. GND
4. Output
5. NC
6. +Vs



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Noise Parameters

- Phase Noise (typ @ 25°C):
-100dBc/Hz @ 10Hz
-130dBc/Hz @ 100Hz
-150dBc/Hz @ 1kHz
-150dBc/Hz @ 10kHz
-150dBc/Hz @ 100kHz
-155dBc/Hz @ 1MHz

Environmental Parameters

- Storage Temperature Range: -55 to 105°C
- ESD Levels: JEDEC JS-001-2010:
HBM, Class 2: 2000V to 4000V
Machine Model, Class B: 200V to 400V
- 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.
- 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.

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

- Tape & reel in accordance with EIA-481
Quantities below the standard reel size to be supplied on cut tape

Standard Pack Quantity: 500

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