



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 $T_A=25^\circ\text{C}$, $V_s=3.3\text{V}$, $V_C=1.65\text{V}$ 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 $f_{\text{ref}}=(f_{\text{max}}+f_{\text{min}})/2$, $V_s=3.3\text{V}$, $V_C=1.65\text{V}$, load= 15pF and temperature variable speed less than 2°C per minute.
- Ageing: V_s , T_A constant, measurement referenced to frequency observed with $T_A=25^\circ\text{C}$, $V_s=3.3\text{V}$, $V_C=1.65\text{V}$ and after 30 days of operation.
- Supply Voltage Variation (measurement referenced to frequency observed with $T_A=25^\circ\text{C}$, V_s varied from 3.13V to 3.47V , $V_C=1.65\text{V}$ and load= 15pF): $\pm 10\text{ppb}$ max
- Load Variation (measurement referenced to frequency observed with $T_A=25^\circ\text{C}$, $V_s=3.3\text{V}$, $V_C=1.65\text{V}$ and load change= $15\text{pF} \pm 5\%$): $\pm 10\text{ppb}$ max
- Short Term Stability - Allan Variance (temperature stable, no EMI/EMC or other interference) test after power for 1hr ref. to 25°C ; 1s): $1\text{E}-11$ max

Electrical Parameters

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

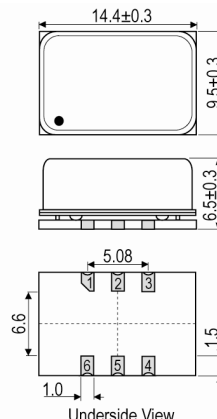
Frequency Adjustment

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

Output Details

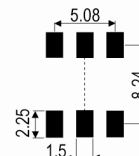
- Output Compatibility HCMOS
- Drive Capability 15pF
- Rise and Fall Time 8.0ns max
- Duty Cycle 45/55%
- Output Levels (@ $V_s=3.3\text{V}$, load= 15pF):
VoL: 0.4V max
VoH: 2.4V min

Outline (mm)



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

Solder Pad Layout



Sales Office Contact Details:

UK: +44 (0)1460 270200

Email: info@iqdfrequencyproducts.com

Web: www.iqdfrequencyproducts.com

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

Sales Office Contact Details:

UK: +44 (0)1460 270200

Email: info@iqdfrequencyproducts.com
Web: www.iqdfrequencyproducts.com