OCXO Specification

Part No. + Packaging: ***LFOCXO063801Bulk***

Description

- Oven controlled crystal oscillator (OCXO) with voltage control on a FR4 base with a metal lid.
- Model: IQOV-162-3
- Model Issue number: 2

Frequency Parameters

- Frequency: 12.80MHz
- Frequency Tolerance: ±500.00ppb
- Frequency Stability: ±20.00ppb
- Operating Temperature Range: -40.00 to 85.00°C
- Ageing: ±5ppb max per day, ±500ppb 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): ±500ppb
- Frequency Stability: TA varied over temperature, measurement referenced to frequency observed with fref=(fmax+fmin)/2, Vs=3.3V, VC=1.65V, load=15pF, 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 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): ±10ppb max
- Load Variation (5% load change measurement referenced to frequency observed with TA=25°C, Vs=3.3V, VC =1.65V and load=15pF): ±10ppb 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

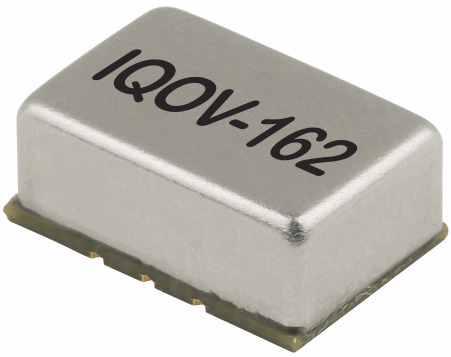
- Supply Voltage: 3.3V ±5%
- Current Draw:
  Warm up: 600mA max
  Steady state (@ 25°C): 300mA max
- Warm-Up Time (@ 25°C, F<±100ppb of final frequency): 5mins max

Frequency Adjustment

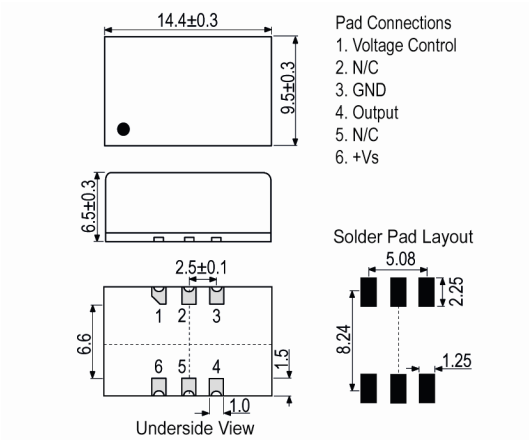
- Pulling: ±3ppm to ±8ppm
- Control Voltage: 1.65V ±1.65V
- Input Impedence: 100kΩ min
- Linearity: ±10% max
- Slope: Positive

Output Details

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



Outline (mm)



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Noise Parameters

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

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 (2011/65/EU) Compliant
- REACh Status Compliant
- MSL Rating (JDEC-STD-033): 2

Packaging Details

- Pack Style: Bulk Loose in bulk pack
  Pack Size: 1
- *Alternative packing option available*

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