## 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 20.0MHz
- Frequency Tolerance @ 25°C ±500.00ppb
- Frequency Stability ±20.00ppb
- Operating Temperature Range -40.00 to 85.00°C
- Ageing ±5ppb max per day, ±500ppb 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): ±10ppb 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): ±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
- 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 from -40°C to 85°C, measurement referenced to frequency observed with fref=(fmax+fmin )/2, Vs=3.3V, VC=1.65V, load=50Ω, temperature variable speed less than 2°C per minute.

## Electrical Parameters

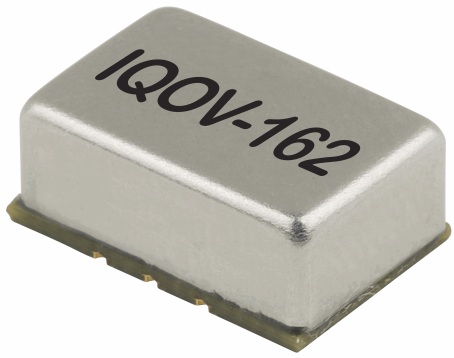
- Supply Voltage 3.3V
- Supply Voltage Tolerance ±5%
- Current Draw:
  Warm up: 560mA max
  Steady state (@ 25°C): 250mA max
- Warm-Up Time (@ 25°C, F<±100ppb of final frequency): 5mins max

## Frequency Adjustment

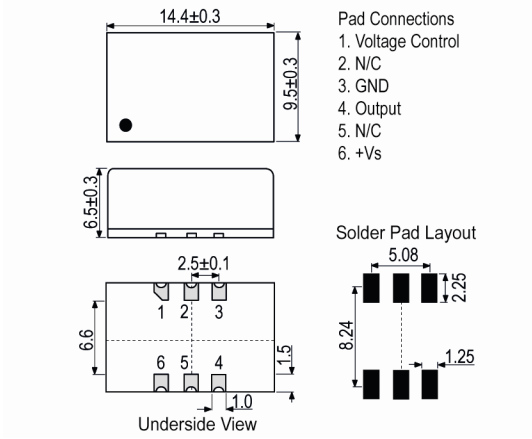
- Pulling ±3ppm to ±8ppm
- Control Voltage Details 1.65V ±1.65V
- Linearity: ±10% max
- Slope: Positive
- Input Impedance: 100kΩ min

## Output Details

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




**Outline (mm)**

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## Noise Parameters

- Phase Noise (@ 100MHz typ):
  -90dBc/Hz @ 10Hz
  -120dBc/Hz @ 100Hz
  -145dBc/Hz @ 1kHz
  -150dBc/Hz @ 10kHz
  -150dBc/Hz @ 100kHz
  -155dBc/Hz @ 1MHz
- Phase Noise (@ 10MHz typ):
  -100dBc/Hz @ 10Hz
  -130dBc/Hz @ 100Hz
  -145dBc/Hz @ 1kHz
  -150dBc/Hz @ 10kHz
  -150dBc/Hz @ 100kHz
  -155dBc/Hz @ 1MHz
- Harmonic Suppression: -30dBc max
  Spurious Suppression: -60dBc max

## Environmental Parameters

- 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
- 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)
- Moisture Sensitivity Level: 2

## Compliance

| | |
|---|---|
| RoHS Status | Compliant |
| REACh Status | Compliant |

## Packaging

| | |
|---|---|
| Pack Type: Bulk | Loose in bulk pack |
| Pack Size | 1 |

- Alternative packing option available

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