



Description

- Oven controlled crystal oscillator (OCXO) with voltage control
- Model IQOV-164-4
- Model Issue number 2

Frequency Parameters

- Frequency 12.80MHz
- Frequency Tolerance @ 25°C ± 50.00 ppb
- Frequency Stability ± 1.00 ppb
- Operating Temperature Range -30.00 to 75.00°C
- Ageing ± 0.5 ppb max per day, ± 50 ppb 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): ± 0.5 ppb 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): ± 0.5 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): 0.01ppb 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): ± 50 ppb
- Frequency Stability: TA varied across the operating temperature range, measurement referenced to frequency observed with fref= (fmax+fmin)/2, Vs=3.3V, VC=1.65V, load=50Ω and temperature variable speed less than 2°C per minute.

Electrical Parameters

- Supply Voltage 3.3V
- Supply Voltage Tolerance $\pm 5\%$
- Current Consumption:
Warm up: 1400mA max
Steady state (@ 25°C): 500mA max
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Warm up: 1400mA max
Steady state (@ 25°C): 500mA max

Frequency Adjustment

- Pulling ± 0.7 ppm to ± 1 ppm
- Control Voltage Details 1.65V ± 1.65 V
- Linearity: $\pm 10\%$ max
- Slope: Positive
- Input Impedance: 100kΩ min

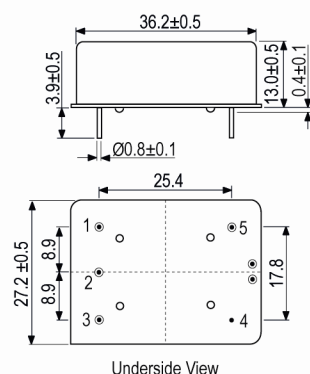
Output Details

- Output Compatibility Sine
- Output Load 50Ω
- Output Amplitude: 6dBm min, 10dBm max

Noise Parameters



Outline (mm)



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

Sales Office Contact Details:

UK: +44 (0)1460 270200

Germany: +49 (0) 30 408 192 300

France: +33 (0)5 34 50 91 18

USA: +1 408.273.4530

Email: info@iqdfrequencyproducts.com

Web: www.iqdfrequencyproducts.com



- Phase Noise (@ 10MHz typ):
 - 125dBc/Hz @ 10Hz
 - 145dBc/Hz @ 100Hz
 - 150dBc/Hz @ 1kHz
 - 155dBc/Hz @ 10kHz
 - 155dBc/Hz @ 100kHz
 - 155dBc/Hz @ 1MHz
- Harmonic Suppression: -30dBc max
- Spurious Suppression: -60dBc max

Environmental Parameters

- Shock: IEC 60068-2-27, Test Ea: 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)

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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