

OVEN CONTROLLED CRYSTAL OSCILLATOR



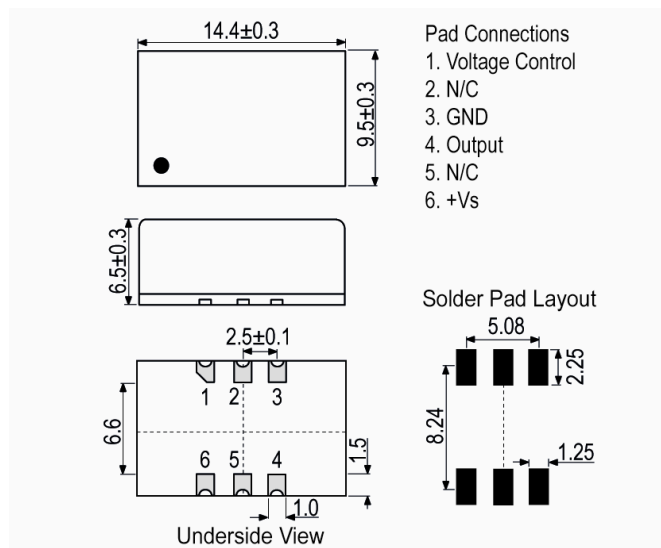
Part Number: 830606380202 | IQOV-162-3

AKA Number: LFOCX0063802

General Information

Oven controlled crystal oscillator (OCXO) with voltage control on a FR4 base with a metal lid.

Dimensions [mm]



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Frequency Parameters

Frequency	19.20 MHz
Frequency Tolerance	± 500 ppb
Frequency Stability	± 20 ppb
Operating Temperature	-40 °C to 85 °C
Ageing	± 5 ppb max per day, ± 500 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): ±500ppb
- Frequency Stability: TA varied over temperature, measurement referenced to frequency observed with $f_{ref} = (f_{max} + f_{min}) / 2$, 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
- Developed Frequencies: 10.0MHz, 12.80MHz, 19.20MHz, 20.0MHz, 25.0MHz, 38.880MHz, 40.0MHz

Output Details

Output Compatibility CMOS

Output Low (@ Vs=3.3V, load=15pF): 0.4V max

Output High (@ Vs=3.3V, load=15pF): 2.4V min

Frequency Adjustment

Pulling	Total Pulling ± 3 ppm
Control Voltage	1.65 V ± 1.65 V
Input Impedance	100 kΩ min.
Slope	positive

Linearity: ±10% max

Material Parameters

Moisture Sensitivity Level (MSL) 2

Electrical Parameters

Supply Voltage 3.3 V ± 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

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

Storage Temperature Range: -55 °C to 105 °C

- 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
- 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
- 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

Technical Standards

RoHS Status 2015/863/EU

REACH Status (EC)1907/2006

Packaging Details

Packaging SPQ Tape & Reel 500 pcs

Tape & reel in accordance with EIA-481

Quantities below the standard reel size to be supplied on cut tape

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Manufacturing Details

Maximum Reflow Temperature: 260 °C (30secs max)

Company Address

IQD Frequency Products Ltd.

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