

Oscillator Specification

Part No. + Packaging: LFMCXO063769BULK

Description

 Microcomputer Compensated Crystal Oscillator with voltage control (MCXO)

■ Model IQMT-100-3-B

■ Model Issue number

Frequency Parameters

■ Frequency 20.0MHz
 ■ Frequency Tolerance @ 25°C ±0.50ppm
 ■ Frequency Stability ±0.14ppm

■ Operating Temperature Range -40.00 to 85.00°C

■ Ageing ±0.02ppm max per day, ±1ppm

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=15pF): ±0.1ppm max

■ Load Variation (5% load change measurement referenced to frequency observed with TA=25°C, Vs=3.3V, VC=1.65V and load=15pF): ±0.1ppm max

 Frequency Tolerance (measurement referenced to frequency observed with TA=25°C, Vs=3.3V, VC=1.65V and within 30 days after ex-works): ±0.5ppm

 Short Term Stability (@ 25°C after 10mins power on): 2E-10/s typ @ 10MHz

 Frequency Stability: TA varied from -40°C to 85°C, measurement referenced to frequency observed with TA=25°C, Vs=3.3V, VC=1.65V, load=15pF and temperature variable speed less than 2°C per minute.

■ Ageing: TA=25°C, Vs=3.3V, VC=1.65V and after 1hr of operation.

Electrical Parameters

■ Supply Voltage 3.3V Supply Voltage Tolerance ±5%

■ Current Draw 10.00mA max

Current: TA=25°C, Vs=3.3V, VC=1.65V and load=15pF

Frequency Adjustment

Pulling ±10ppm to ±15ppm
 Control Voltage Details 1.65V ±1.65V

■ Linearity: ±10% max

■ Input Impedance: 100kΩ min

■ Slope: Positive

Output Details

Output Compatability
 Output Load
 Rise and Fall time (10% - 90%)
 Buty Cycle
 Output Low (@ Vs=3.3V, load=15pF): 0.4V max
 Output High (@ Vs=3.3V, load=15pF): 2.4V min

Noise Parameters

■ Phase Noise (@ 10MHz typ):

-90dBc/Hz @ 10Hz

-115dBc/Hz @ 100Hz

-135dBc/Hz @ 1kHz

-145dBc/Hz @ 10kHz

-148dBc/Hz @ 100kHz

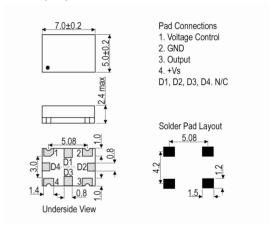
-150dBc/Hz @ 1MHz

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Environmental Parameters

- Shock: IEC 60068-2-27, Test Ea: 100G acceleration for 6ms, half sinewave, in 3 mutually perpendicular planes
- Vibration: IEC 60068-2-6, Test Fc: 10Hz-2000Hz, 0.75mm amplitude, 10G acceleration, 30mins per cycle, in 3 mutually perpendicular planes, test duration 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

- Moisture Sensitivity Level: 2
- Maximum Reflow Temperature: 260°C (30secs max)

Compliance

RoHS Status CompliantREACh Status Compliant

Packaging

■ Pack Type: Bulk Loose in bulk pack

Pack Size

Alternative packing option available

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