

MICRO CONTROLLED CRYSTAL OSCILLATOR



Part Number: 832006407801 | -B | IQMT-100-3

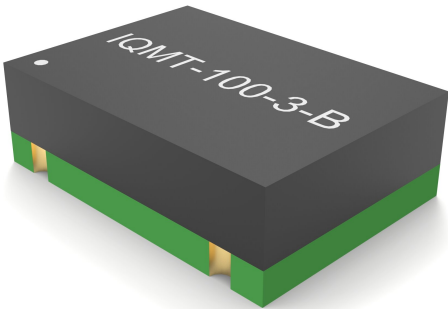
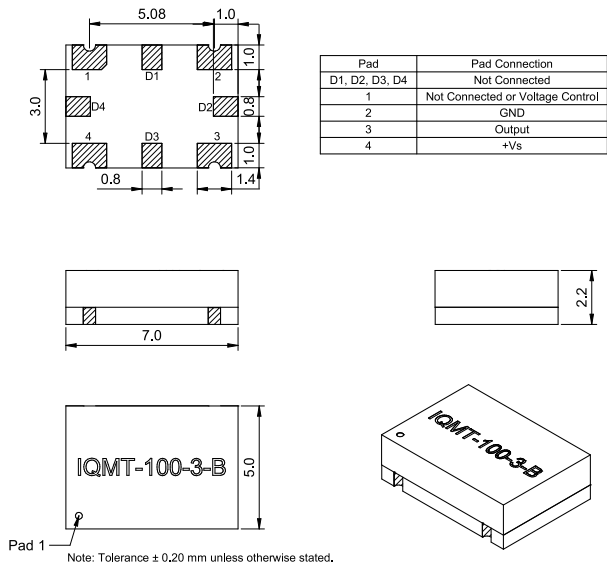
AKA Number: LFCMX0064078



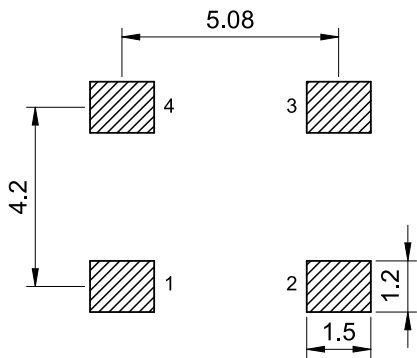
General Information

Microcomputer Compensated Crystal Oscillator with voltage control (MCXO)

Dimensions [mm]



Recommended Land Pattern [mm]



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Frequency Parameters

Frequency	12.80 MHz
Frequency Tolerance	± 0.5 ppm @ 25 °C, 3.3V & VC=1.65V
Frequency Stability	± 0.05 ppm
Operating Temperature	-40 °C to 85 °C
Ageing	± 0.02 ppm max per day, 1.0 ppm max per year

- Frequency Tolerance (measurement referenced to frequency observed with TA=25 °C, Vs=3.3V, VC=1.65V and within 30 days after ex-works)
- Frequency Stability: TA varied over temperature, measurement referenced to frequency observed with Fref = (Fmax-Fmin)/2, 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.
- 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): ±0.05ppm 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
- Short Term Stability (@ 25 °C after 10mins power on): 2E-10/s typ @ 10MHz
- Developed Frequencies: 10.0MHz, 12.80MHz, 13.0MHz, 16.320MHz, 16.3840MHz, 19.20MHz, 19.440MHz, 20.0MHz, 25.0MHz, 26.0MHz, 30.720MHz, 38.88MHz, 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 ± 10 ppm
Control Voltage	1.65 V ± 1.65 V
Slope	positive

- Linearity: ±10% max
- Input Impedance: 100kΩ min

Electrical Parameters

Supply Voltage	3.3 V ± 5 %
Current: TA=25 °C, Vs=3.3V, VC=1.65V and load=15pF	

Noise Parameters

Phase Noise (@ 10MHz typ):

- 90dBc/Hz @ 10Hz
- 115dBc/Hz @ 100Hz
- 135dBc/Hz @ 1kHz
- 145dBc/Hz @ 10kHz
- 148dBc/Hz @ 100kHz
- 150dBc/Hz @ 1MHz

Environmental Parameters

Storage Temperature Range: -55 °C 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: 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

Technical Standards

RoHS Status	2015/863/EU - Compliant
REACH Status	(EC)1907/2006 - Compliant

Packaging Details

Packaging SPQ	Tape & Reel 600 pcs
Loose in bulk pack	

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Material Parameters

Moisture Sensitivity Level (MSL)	2
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Manufacturing Details

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

Company Address

IQD Frequency Products Ltd.
Station Road
Crewkerne
Somerset
TA18 8AR, United Kingdom