



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



Contact us

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Description

- Microcomputer Compensated Crystal Oscillator with voltage control (MCXO)
- 8 pad package
- Model IQMT-100-3-B
- Model Issue number 1

Frequency Parameters

- Frequency 12.80MHz
- Frequency Tolerance ± 0.50 ppm
- Tolerance Condition @ 25°C, 3.3V & VC=1.65V
- Frequency Stability ± 0.05 ppm
- Operating Temperature Range -40.00 to 85.00°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 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.
- 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): ± 0.05 ppm max
- Load Variation (5% load change measurement referenced to frequency observed with TA=25°C, Vs=3.3V, VC=1.65V and load=15pF): ± 0.1 ppm max
- Short Term Stability (@ 25°C after 10mins power on): 2E-10/s typ @ 10MHz

Electrical Parameters

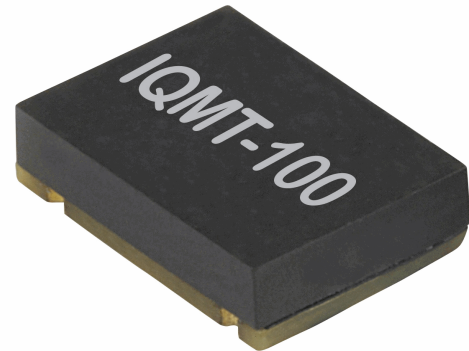
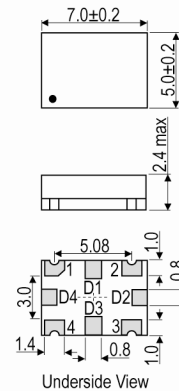
- Supply Voltage 3.3V $\pm 5\%$
- Current Draw 10.00mA
- Current: TA=25°C, Vs=3.3V, VC=1.65V and load=15pF

Frequency Adjustment

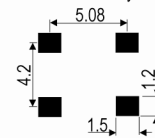
- Pulling ± 10 ppm to ± 15 ppm
- Control Voltage 1.65V ± 1.65 V
- Linearity: $\pm 10\%$ max
- Slope: Positive
- Input Impedance: 100k Ω min

Output Details

- Output Compatibility HCMOS
- Drive Capability 15pF
- Rise and Fall Time 8.0ns max
- Duty Cycle 45/55%
- Output Low (@ Vs=3.3V, load=15pF): 0.4V max
- Output High (@ Vs=3.3V, load=15pF): 2.4V min


Outline (mm)

Pad Connections

1. Voltage Control
 2. GND
 3. Output
 4. +Vs
- D1, D2, D3, D4. N/C

Solder Pad Layout

Sales Office Contact Details:

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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 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

Manufacturing Details

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

Compliance

- RoHS Status (2011/65/EU) Compliant
- REACH Status Compliant
- MSL Rating (JDEC-STD-033): 2

Packaging Details

- Pack Style: Bulk Loose in bulk pack
Pack Size: 1
- Alternative packing option available*

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