



### Description

- Microcomputer Compensated Crystal Oscillator with voltage control (MCXO)
- Model IQMT-100-4-B
- Model Issue number 1

### Frequency Parameters

- Frequency 12.80MHz
- 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=10kΩ//10pF): ±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=10kΩ//10pF): ±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=10kΩ//10pF 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

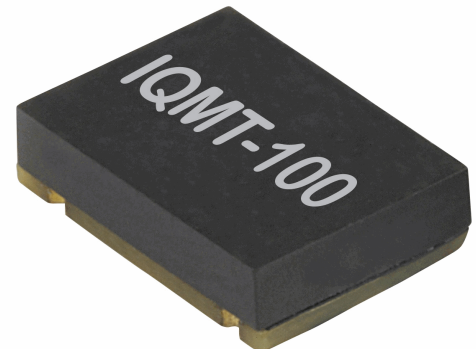
- Supply Voltage 3.3V
- Supply Voltage Tolerance ±5%
- Current Draw 10.00mA max
- Current: TA=25°C, Vs=3.3V, VC=1.65V and load=10kΩ//10pF

### Frequency Adjustment

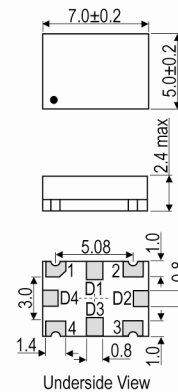
- Pulling ±10ppm to ±15ppm
- Control Voltage Details 1.65V ±1.65V
- Linearity: ±10% max
- Input Impedance: 100kΩ min
- Slope: Positive

### Output Details

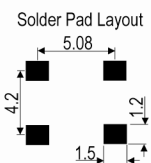
- Output Compatability Clipped Sine
- Output Load 10kΩ//10pF
- Output Level: 0.8V pk-pk min
- Phase Noise (@ 10MHz typ):
  - 90dBc/Hz @ 10Hz
  - 115dBc/Hz @ 100Hz
  - 135dBc/Hz @ 1kHz
  - 145dBc/Hz @ 10kHz
  - 148dBc/Hz @ 100kHz
  - 150dBc/Hz @ 1MHz



### Outline (mm)



- Pad Connections
- Voltage Control
  - GND
  - Output
  - +Vs
- D1, D2, D3, D4. N/C



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