


Description

- Semtech approved TCXO for Stratum 3 applications.
- Model E2747
- Model Issue number 7

Frequency Parameters

- Frequency 12.80MHz
- Frequency Stability ± 0.28 ppm
- Operating Temperature Range -20.00 to 70.00°C
- Holdover Stability $[\pm(F_{max}-F_{min})/2F_0]$:
 Temperature, -20 to 70°C: $< \pm 0.28$ ppm
 Temperature, -20 to 70°C, inclusive of
 Supply Voltage, 3.3V $\pm 5\%$ and Ageing, 24 hours: $< \pm 0.32$ ppm
- Free-Run Accuracy, incl.
 Calibration @25°C, Temperature -20 to 70°C, Supply Voltage
 3.3V $\pm 5\%$, Load 15pF $\pm 5\%$, Reflow Soldering and Ageing 20
 years: $< \pm 4.6$ ppm ref to Fo

Electrical Parameters

- Supply Voltage 3.3V $\pm 5\%$
- Current Draw 4.00mA

Output Details

- Output Compatibility HCMOS
- Drive Capability 15pF
- Rise and Fall Time 8.0ns max
- Duty Cycle 45/55%
- VoL: $\leq 10\%$ Vs
- VoH: $\geq 90\%$ Vs

Output Control

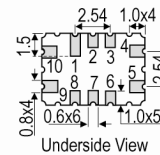
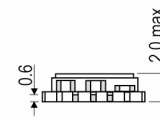
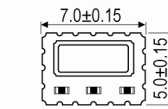
- Tri-State Operation:
 Logic '1' ($\geq 60\%$ VS) to pad 8 enables output
 Logic '0' ($\leq 20\%$ VS) to pad 8 disables output
 In Tri-state mode, the output stage is disabled but the oscillator
 and compensation circuit are still active (current consumption \approx
 1mA)

Noise Parameters

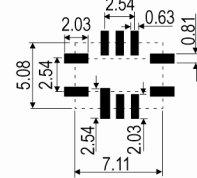
- Allan Deviation ($\tau=100$ ms): $< 1.10 \cdot 10^{-10}$
- Phase Noise (max):
 -90dBc/Hz @ 10Hz
 -115dBc/Hz @ 100Hz
 -127dBc/Hz @ 1kHz
 -137dBc/Hz @ 10kHz
 -143dBc/Hz @ ≥ 100 kHz

Environmental Parameters

- Storage Temperature: -55 to 125°C
- Vibration: IEC 60068-2-6, Test Fc, 10Hz-60Hz 1.5mm displacement at 10G, 30mins in each of 3 mutually perpendicular axes at 1 oct/min.
- Shock: IEC 60068-2-27, Test Ea: 100G acceleration for 6ms duration, 3 shocks in each direction along 3 mutually perpendicular axes.
- Solderability: MIL-STD-202, Method 208, Category 3
- Resistance to Soldering Heat: 260°C/10sec exposure


Outline (mm)


- Pad Connections
1. Do not connect
 2. N/C
 3. Do not connect
 4. GND
 5. Output
 6. N/C
 7. N/C
 8. Tri-state Control (Enable)
 9. +Vs
 10. Do not connect

Solder Pad Layout

Sales Office Contact Details:

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Compliance

- RoHS Status (2011/65/EU) Compliant
- REACH Status Compliant
- MSL Rating (JDEC-STD-033): Not Applicable

Packaging Details

- Pack Style: Bulk Loose in bulk pack
Pack Size: 10
- *Alternative packing option available*

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