ISSUE 7; February 2022

Description

- Semtech approved TCXO for Stratum 3 applications.

Frequency Parameters

- Frequency 12.8MHz
- Frequency Stability ±0.28ppm
- Holdover Stability [±(Fmax-Fmin)/2Fo]:
  Temperature, –20 to 70°C: <±0.28ppm
  Temperature, –20 to 70°C, inclusive of
  Supply Voltage, 3.3V ±5% and Ageing, 24 hours: <±0.32ppm
- Free-Run Accuracy, incl.
  Calibration @25°C, Temperature –20 to 70°C, Supply Voltage 3.3V ±5%, Load 15pF ±5%, Reflow Soldering and Ageing 20 years: <±4.6ppm ref to Fo

Electrical Parameters

- Supply Voltage 3.3V ±5%

Operating Temperature Ranges

- -20 to 70°C

Output Details

- Output Compatibility HCMOS
- Drive Capability 15pF
- VoL: ≤10% Vs
  VoH: ≥90% Vs

Output Control

- Tri-State Operation:
  Logic ‘1’ (≥60%VS) to pad 8 enables output
  Logic ‘0’ (≤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 ≈ 1mA)

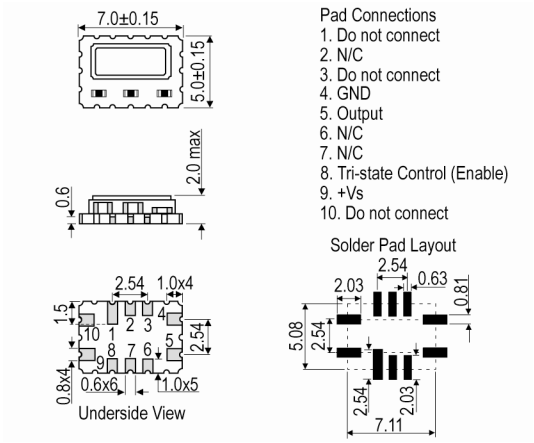
Noise Parameters

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

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)



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Manufacturing Details

- RoHS Terminations NiCoAu
- RoHS Reflow 260degC 30s

Ordering Information

- Frequency*
  Model*
- Example:
  12.8MHz E2747LF

Compliance

- RoHS Status (2015/863/EU) Compliant
- REACh Status Compliant
- MSL Rating (JDEC-STD-033): Not Applicable

Packaging Details

- Pack Style: Reel Tape & reel in accordance with EIA-481-D
  Pack Size: 1,000
- Pack Style: Bulk Loose in bulk pack
  Pack Size: 10

Electrical Specification - maximum limiting values 3.30V ±5%

Frequency	Temperature Range	Stability (Min)	Current Draw	Rise and Fall Time	Duty Cycle
	°C	ppm	mA	ns	%
12.8MHz	-20 to 70	±0.28	4	8	45/55%

This document was correct at the time of printing; please contact your local sales office for the latest version.
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