

ISSUE 7; April 2016

Description

- Semtech approved TCXO for Stratum 3 applications.



Frequency Parameters

- Frequency 12.8MHz
- Frequency Stability ± 0.28 ppm
- 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 F_0

Electrical Parameters

- Supply Voltage 3.3V $\pm 5\%$

Operating Temperature Ranges

- 20 to 70°C

Output Details

- Output Compatibility HCMOS
- Drive Capability 15pF
- 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

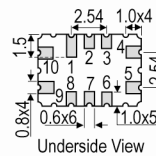
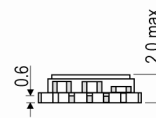
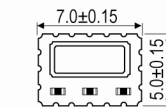
- Allan Deviation ($\tau=100$ ms): < 1.10 -10
- Phase Noise (max):
-90dBc/Hz @ 10Hz
-115dBc/Hz @ 100Hz
-127dBc/Hz @ 1kHz
-137dBc/Hz @ 10kHz
-143dBc/Hz @ ≥ 100 kHz

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



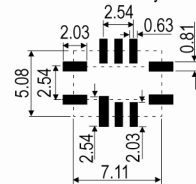
Outline (mm)



Pad Connections

- Do not connect
- N/C
- Do not connect
- GND
- Output
- N/C
- N/C
- Tri-state Control (Enable)
- +Vs
- Do not connect

Solder Pad Layout



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Ordering Information

- Frequency*
Model*
- Example:
12.8MHz E2747LF

Compliance

- RoHS Status (2011/65/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%

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