

E2747 SMD TCXO STRATUM 3

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Description

- Semtech approved TCXO for Stratum 3 applications, manufactured for us by Rakon utilising their Pluto™ ASIC technology

Nominal Frequency, Fo

- 12.8MHz

Output Compatibility & Load

- HCMOS
- 15pF max
- V_{OL} : $\leq 10\% V_S$
- V_{OH} : $\geq 90\% V_S$
- Duty Cycle @ 50%: 45% to 55%
- Rise Time, 10% to 90%: $\leq 9\text{ns}$
- Fall Time, 90% to 10%: $\leq 9\text{ns}$

Supply Voltage

- 3.3V $\pm 5\%$

Input Current

- $\leq 4\text{mA}$

Holdover Stability [$\pm(F_{\text{max}} - F_{\text{min}})/2F_0$]

- Temperature, -20 to 70°C : $\leq \pm 0.28\text{ppm}$
- Temperature, -20 to 70°C , inclusive of Supply Voltage, 3.3V $\pm 5\%$ and Ageing, 24 hours: $\leq \pm 0.32\text{ppm}$

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: $\leq \pm 4.6\text{ppm}$ ref. to F_0

Phase Noise (max)

- -90dBc/Hz @ 10Hz
- -115dBc/Hz @ 100Hz
- -127dBc/Hz @ 1kHz
- -137dBc/Hz @ 10kHz
- -143dBc/Hz @ 100kHz

Tri-State Operation

- Logic '1' ($> 60\%V_S$) to pad 8 enables output
- Logic '0' ($< 20\%V_S$) to pad 8 disables output
- When at logic '0' the output stage is disabled for all output options, but the oscillator and compensation circuit are still active (Current consumption $< 1\text{mA}$)

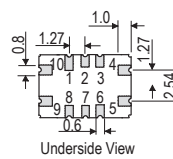
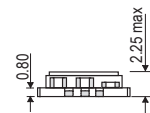
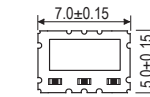
Storage Temperature Range

- -55 to 125°C

Environmental

- Shock: IEC 60068-2-27, Test Ea: 980m/s² acceleration for 6ms, 3 shocks in each of 3 mutually perpendicular planes
- Vibration: IEC 60068-2-6, Test Fc, Procedure B4: 10Hz-60Hz 1.5mm displacement, 60-2000Hz at 98.1m/s², 30mins in 3 mutually perpendicular planes at 1 oct/min
- Solderability: MIL-STD-202, Method 208, Category 3
- Resistance to Soldering Heat: $260^\circ\text{C}/10\text{sec}$ exposure

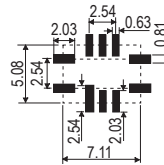
Outline (mm)



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 *
 9. +VS
 10. Do not connect
- * Leave unconnected if not required

Solder Pad Layout



Packaging

- Loose in bulk pack, 10pcs per pack
- Tape and reel in accordance with EIA-481-D, 1kpcs per reel (please see pages 372 & 373)

Ordering Information (*minimum required)

- Frequency*
- Model*

Example

- 12.8MHz E2747LF