

Customer Part:

Description

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

Frequency Parameters

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

Electrical Parameters

- Supply Voltage $3.3\text{V} \pm 5\%$
- Current Draw 4.000mA

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

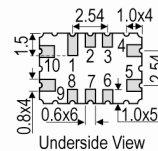
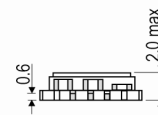
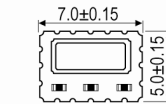
- Tri-State Operation:
Logic '1' ($\geq 60\%V_S$) to pad 8 enables output
Logic '0' ($\leq 20\%V_S$) to pad 8 disables output
In Tri-state mode, the output stage is disabled but the oscillator
and compensation circuit are still active (current consumption $\approx$
 1mA)

Noise Parameters

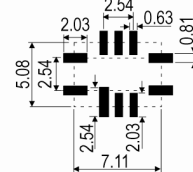
- Allan Deviation ($\tau=100\text{ms}$): $< 1.10 \cdot 10^{-10}$
- Phase Noise (max):
 -90dBc/Hz @ 10Hz
 -115dBc/Hz @ 100Hz
 -127dBc/Hz @ 1kHz
 -137dBc/Hz @ 10kHz
 -143dBc/Hz @ $\geq 100\text{kHz}$

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: $260^\circ\text{C}/10\text{sec}$ 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 (Enable)
 9. +Vs
 10. Do not connect

Solder Pad Layout

Sales Office Contact Details:

UK: +44 (0)1460 270200

USA: +1.760 668 8935

Email: info@iqdfrequencyproducts.com

Web: www.iqdfrequencyproducts.com



TCXO Specification

Part No. + Packaging: **LFPTXO006980Bulk**

Customer Part:

Manufacturing Details

- RoHS Terminations NiCoAu
- RoHS Reflow Temp 260degC 30s

Compliance

- RoHS Status (2015/863/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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