

E2799 SMD TCXO SONET

ISSUE 7; 1 NOVEMBER 2010

Description

- SEMTECH approved surface mount TCXO designed for use in SONET applications, manufactured for us by Rakon utilising their Pluto™ ASIC technology

Nominal Frequency, Fo

- 12.8MHz

Output Compatibility & Load

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

Supply Voltage

- 3.3V±5%

Input Current

- ≤4mA

Holdover Stability [±(F_{max}-F_{min})/2F_o]

- Temperature, -40 to 85°C, inclusive of Supply Voltage, 3.3V ±5% and Ageing, 24 hours: ≤±4.6ppm

Free-Run Accuracy, incl.

- Calibration @25°C, Temperature -40 to 85°C, Supply Voltage 3.3V ±5% Load 15pF ±5%, Reflow Soldering and Ageing 20 years: ≤ ±20ppm ref. to F_o

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 ≤1mA)

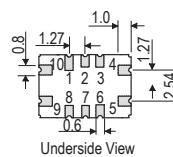
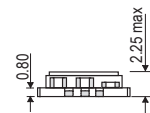
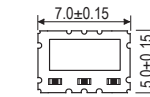
Storage Temperature Range

- 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°C/10sec exposure

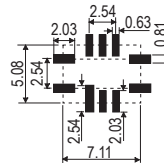
Outline (mm)



Pad Connections

- Do not connect
- N/C
- Do not connect
- GND
- Output
- N/C
- N/C
- Tri-state Control *
- +V_S
- 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 E2799LF