



ISSUE 5; September 2014 - RoHS 2011/65/EU

Description

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



Frequency Parameters

- Frequency 12.8MHz
- Frequency Stability $\pm 0.28\text{ppm}$

Electrical Parameters

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

Operating Temperature Ranges

- -40 to 85°C

Output Details

- Output Compatibility HCMOS
- Drive Capability 15pF max

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
When at logic '0' the output stage is disabled for all output options, but the oscillator and compensation circuit are still active
(Current consumption $< 1\text{mA}$)

Output Levels

- VOL: $\leq 10\% V_s$
VOH: $\geq 90\% V_s$

Noise Parameters

- Phase Noise (max):
-90dBc/Hz @ 10Hz
-115dBc/Hz @ 100Hz
-127dBc/Hz @ 1kHz
-137dBc/Hz @ 10kHz
-143dBc/Hz @ 100kHz

Environmental Parameters

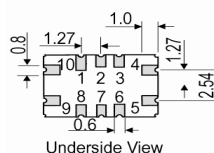
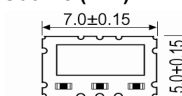
- Storage Temperature Range: -55 to 125°C
- Shock: IEC 60068-2-27, Test Ea: 980m/s² acceleration for 6ms, 3 shocks in each of 3 mutually perpendicular planes
- Vibration: IEC 60068-2-6, Test Fc, Procedure B4: 10Hz-60Hz 1.5mm displacement, 60-2000Hz at 98.1m/s², 30mins in 3 mutually perpendicular planes at 1oct/min
- Solderability: MIL-STD-202, Method 208, Category 3
- Resistance to Soldering Heat: 260°C/10sec exposure

Ordering Information

- Frequency*
Model*
(*minimum required)
- Example:
12.8MHz E3198LF



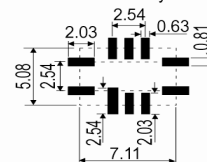
Outline (mm)



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



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Compliance

- RoHS Status Compliant
- REACH Status Compliant
- MSL Rating (JDEC-STD-033): Not Applicable

Packaging Details

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

Electrical Specification - maximum limiting values 3.3V $\pm$ 5%

Frequency	Temperature Range	Stability (min)	Current Draw	Rise and Fall Time	Duty Cycle
	°C	ppm	mA	ns	%
12.8MHz	-40 to 85	$\pm$ 0.28	4	9	45/55

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