

ISSUE 5; March 2016

**Description**

- Zarlink approved TCXO for GR-1244 & GR-253 Stratum 3 applications.

**Frequency Parameters**

- Frequency 20.0MHz
- 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 Compatability 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):  
 -85dBc/Hz @ 10Hz  
 -110dBc/Hz @ 100Hz  
 -125dBc/Hz @ 1kHz  
 -130dBc/Hz @ 10kHz

**Environmental Parameters**

- Storage Temperature: -55 to 125°C
- Shock: IEC 60068-2-27, Test Ea: 980m/s<sup>2</sup> 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/s<sup>2</sup>, 30mins in 3 mutually perpendicular planes at 1 oct/min

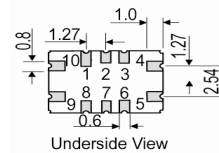
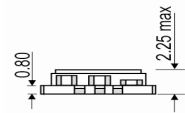
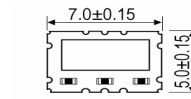
**Ordering Information**

- Frequency\*  
Model\*
- Example:  
20.0MHz E3199

**Compliance**

- RoHS Status (2011/65/EU) Compliant
- REACH Status Compliant
- MSL Rating (JDEC-STD-033): Not Applicable
- Soldering: Suitable for Convection Reflow soldering. Peak tempera

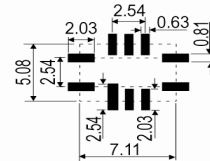
**Outline (mm)**



**Pad Connections**

- Do not connect
  - N/C
  - Do not connect
  - GND
  - Output
  - N/C
  - N/C
  - Tri-state Control \*
  - +Vs
  - Do not connect
- \* Leave unconnected if not required

**Solder Pad Layout**



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**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 3.30V ±5%**

Frequency	Temperature Range	Stability (Min)	Current Draw	Rise and Fall Time	Duty Cycle
	°C	ppm	mA	ns	%
20.0MHz	-40 to 85	±0.28	6	8	45/55%

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