

## E2791 SMD TCXO GR-1244 & GR-253 STRATUM 3

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### Description

- Zarlink approved TCXO for GR-1244 & GR-253 Stratum 3 applications, manufactured for us by Rakon utilising their Pluto™ ASIC technology

### Nominal Frequency, Fo

- 20.0MHz

### Output Compatibility & Load

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

### Supply Voltage

- 3.3V  $\pm 5\%$

### Input Current

- $\leq 6mA$

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

- Temperature,  $-20$  to  $70^\circ C$ :  $< \pm 0.28ppm$
- Temperature,  $-20$  to  $70^\circ C$ , inclusive of Supply Voltage,  $3.3V \pm 5\%$  and Ageing, 24 hours:  $< \pm 0.32ppm$

### Free-Run Accuracy, incl,

- Calibration @  $25^\circ C$ , Temperature  $-20$  to  $70^\circ C$ , Supply Voltage  $3.3V \pm 5\%$ , Load  $15pF \pm 5\%$ , Reflow Soldering and Ageing 20 years:  $< \pm 4.6ppm$  ref. to  $F_0$

### Phase Noise (max)

- $-85dBc/Hz$  @ 10Hz
- $-110dBc/Hz$  @ 100Hz
- $-125dBc/Hz$  @ 1kHz
- $-135dBc/Hz$  @ 10kHz

### 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  $< 1mA$ )

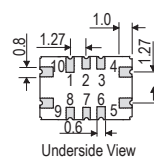
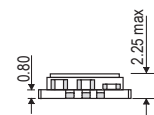
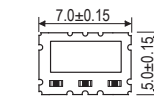
### Storage Temperature Range

- $-55$  to  $125^\circ C$

### Environmental

- Shock: IEC 60068-2-27, Test Ea:  $980m/s^2$  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  $98.1m/s^2$ , 30mins in 3 mutually perpendicular planes at 1 oct/min
- Solderability: MIL-STD-202, Method 208, Category 3

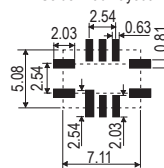
### Outline (mm)



### 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



### 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

- 20.0MHz E2791LF