

ISSUE 7; May 2021

Description

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



Frequency Parameters

- Frequency: 20.0MHz
- Frequency Stability: ± 0.28 ppm
- Ageing: ± 4.6 ppm max after 20 years
- Holdover Stability $[\pm(F_{max}-F_{min})/2F_0]$:
Temperature, -5 to 80°C , inclusive of Supply Voltage: 3.3V $\pm 5\%$ and Ageing, 24 hours: $< \pm 0.32$ ppm
- Free-Run Accuracy, incl. Calibration @ 25°C , Temperature -5 to 80°C , Supply Voltage 3.3V $\pm 5\%$, Load 15pF $\pm 5\%$, Reflow Soldering and Ageing 20 years: $< \pm 4.6$ ppm ref. to Follow

Electrical Parameters

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

Operating Temperature Ranges

- -5 to 80°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

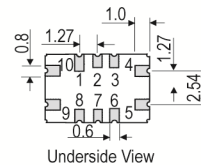
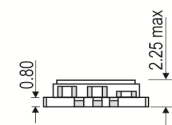
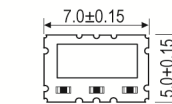
- Phase Noise (max):
 $-85\text{dBc/Hz @ } 10\text{Hz}$
 $-110\text{dBc/Hz @ } 100\text{Hz}$
 $-120\text{dBc/Hz @ } 1\text{kHz}$
 $-135\text{dBc/Hz @ } 10\text{kHz}$

Environmental Parameters

- Storage Temperature: -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 1 oct/min
- Solderability: MIL-STD-202, Method 208, Category 3



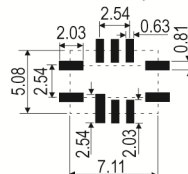
Outline (mm)



Pad Connections

- Do not connect
- N/C
- Do not connect
- GND
- Output
- & 7. N/C
- Tri-state Control *
- +V_S
- Do not connect
- Leave unconnected if not required

Solder Pad Layout



Sales Office Contact Details:

UK: +44 (0)1460 270200

USA: +1 760 318 2824

Email: info@iqdfrequencyproducts.com

Web: www.iqdfrequencyproducts.com

Manufacturing Details

- Resistance to Soldering Heat: 260°C, 60sec max above 220°C
- RoHS Terminations NiCoAu
- RoHS Reflow 260degC 30s

Ordering Information

- Frequency*
Model*
- Example:
12.8MHz E3179LF

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
- 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	-5 to 80	±0.28	6	9	45/55%

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Sales Office Contact Details:

UK: +44 (0)1460 270200

USA: +1 760 318 2824

Email: info@iqdfrequencyproducts.com

Web: www.iqdfrequencyproducts.com