

E3179/E3179LF GR-1244 and GR-253 Core Stratum 3 Minature Surface Mount TCXO

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Nominal Frequency, Fo

■ 20.0MHz

Supply Voltage

■ 3.3V ±5%

Input Current

■ <u><</u> 6mA

Output

Type: HCMOS
 Load: 15pF max
 Vol : ≤ 0.1 * Vs

■ Voh : ≥ 0.9 * Vs

■ Duty Cycle @ 50%: 45% to 55%

■ Rise Time, 10% to 90%: ≤ 9ns

■ Fall Time, 90% to 10%: ≤ 9ns

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

■ Temperature, -5 to 80°C ±0.28ppm

■ Temperature, -5 to 80°C, inclusive of Supply Voltage, 3.3V ±5% and Ageing 24 hours: ≤ ±0.32ppm

Free-Run Accuracy, incl,

■ Calibration@ 25°C, Temperature -5 to 80°C, Supply Voltage 3.3V ±5%, Load 15pF±5%, Reflow Soldering and Ageing 20 years: ≤ ±4.6ppm ref. to F₀

Phase Noise

■ 10Hz ≤ -85dBc/Hz

■ 100Hz <u><</u> -110dBc/Hz

■ 1kHz <u><</u> -125dBc/Hz

■ \geq 10kHz \leq -135 dBc/Hz

Tri-state

Pad 8 open circuit or ≥ 0.6Vs: Output Enabled

Pad 8 ≤ 0.2Vs: Output in Tri-state mode

When Tri-stated, the output is disabled but the oscillator and compensation circuit are still active (Current consumption ≤ 1mA).

Marking

- Manufacturers ID (R)
- Manufacturers identifier (X XX)
- Pad 1 / Static Sensitivity Identifier (△)
- Abbreviated Part Number (3179)
- Oscillator's Date of Manufacture (YW)



Note: Production parts will be marked in this format. Sample marking may vary.

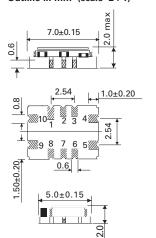
Environmental Specification

- Storage Temperature Range: -55 to 125°C.
- Vibration: IEC 60068-2-6Test Fc Procedure B4, 10-60Hz 1.5mm displacement, at 98.1 ms⁻², 30 minutes in each of three mutually perpendicular axes at 1 octave per minute.
- Shock: IEC 60068-2-27 Test Ea, 980ms⁻² acceleration for 6ms duration, 3 shocks in each direction along three mutually perpendicular axes.
- Soldering: SMD product suitable for Convection Reflow soldering. Peak temperature 260°C. Maximum time above 220°C, 60 secs.(compatible with lead-free soldering processes)
- Marking: Laser marked.
- RoHS/Soldering: Parts with the suffix 'LF' on the part number are fully compliant with the European Union directive 2002/95/EC on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

Note: The RoHS compliant parts are suitable for assembly using both Lead-free solders (see Lead-free Reflow soldering profile) and Tin / Lead solders (see Tin / Lead Reflow soldering profile).

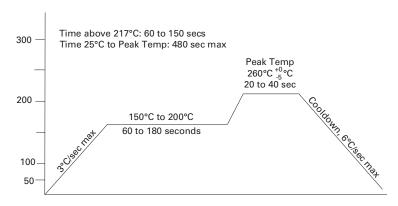
rakon

Outline in mm (scale 2:1)

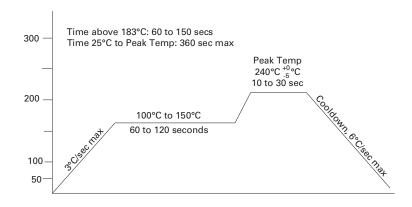


Pad Connections
1.Do not connect
2.N/C
3.Do not connect
4.GND
5.Output
6.N/C
7.N/C
8.Tri-state Control*
9.Supply, +Vs
10.Do not connect,
or connect to GND
*Decouple with capacitor
10nF connected to GND

Lead Free Reflow Soldering Profile *



Tin / Lead Reflow Soldering Profile *



*Note:

These profiles were used during the qualification testing of the product and therefore represent worst case conditions. They are not recommended for use by the customer in the actual assembly of these parts