

Oscillator Specification: E4496LF/E4497LF

Issue 1, 14th November 2007, LN4278

Outline: 337

Pin Function

1 Do not connect

7 Ground8 Output

14 Supply Voltage, Vs

Marking: shall include as a minimum:

1) Manufacturer (RAKON)

2) Device number (Exxxx)

3) Frequency (38.88 MHz)

4) Date Code (YYWWL)

5) Antistatic symbol (Δ , denotes pin 1)

Electrical:

Frequency F0 38.88 MHz Supply Voltage, Vs $3.3 \text{ V} \pm 5\%$ Input Current $\leq 15 \text{ mA}$

Output

Type HCMOS
Load 15 pF
Vol \leq 10% Vs
Voh \geq 90% Vs
Rise time 10% to 90% \leq 8 ns
Fall time 90% to 10% \leq 8 ns
Duty Cycle, @ 50% 45% to 55%

Frequency Stability

Calibration tolerance at 25°C

Temperature

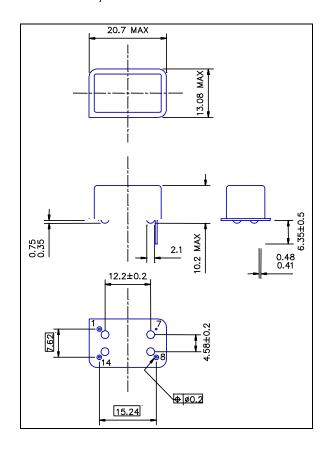
E4496LF: 0 to 70°C E4497LF: -40 to 85°C Supply Voltage, ± 5%

Load, ± 5pF

Ageing, 24 hours

Ageing, first year

Ageing, 10 years incl. year 1



≤ ± 1.0 ppm reference to F0

 \leq ± 0.28 ppm reference to (F_{max}+F_{min})/2

 \leq ± 0.28 ppm reference to $(F_{max}+F_{min})/2$

typ. ± 0.2 ppm reference to frequency at 3.3V

typ. ± 0.1 ppm reference to frequency at 15 pF

≤ ± 30 ppb (at constant Vs, Temp & Load)

 \leq ± 1.0 ppm

 \leq ± 3.0 ppm

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Environmental:

Storage temperature range: -50 to 95°C

Vibration IEC 60068-2-6 Test Fc Procedure B4, 10 - 58 Hz 1.5mm displacement,

58 - 500 Hz at 100 ms⁻² (10_{gn}), 30 minutes in each of three mutually

perpendicular planes at 1 octave per minute.

Shock IEC 60068-2-27 Test Ea, 1000ms⁻²(100_{gn}) acceleration for 6ms duration, half sine,

shocks in each direction along 3 mutually perpendicular axes.

Sealing IEC 60068-2-17 Test Qk (Fine Leak), (MIL-STD-202 Method 112 Test condition C)

and IEC 60068-2-17 Test Qc (Gross Leak), (MIL-STD-202 Method 112 Test condition

D)

Solderability IEC 60068-2-20 Test Ta Method 1 (solder bath), (MIL-STD-202 Method 208),

Temperature 235°C.

RoHS: Parts 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: These RoHS compliant parts are suitable for assembly using both

Lead-free solders and Tin/Lead solders.

Marking Indelibly marked, resistant to all common solvents.