

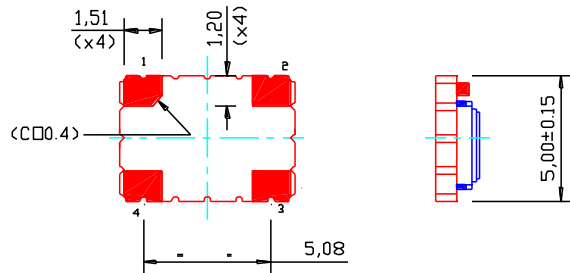
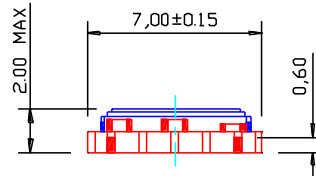
## Provisional Oscillator Specification: E4950LF

Issue B, 11<sup>th</sup> February 2008

### Outline:

Pin	Function
1	Tri-State Control*
2	GND
3	Output
4	Supply, +Vs

\* leave unconnected if not required



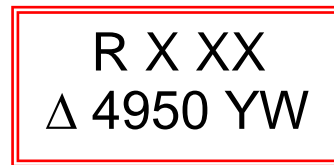
### Marking:

To include:-

- 1) Manufacturers ID (R)
- 2) Manufacturing identifier (X XX)
- 3) Pad 1 / Static Sensitivity Identifier ( $\Delta$ )
- 4) Abbreviated Part Number (4950)
- 5) Oscillator's Date of Manufacture (YW)

Notes: 1) Sample marking may vary.

2) Parts may be marked 'CMAC' (a trademark used under licence) instead of 'R' for a limited time.



### Electrical:

Nominal Frequency, $F_0$	10.0 MHz
Supply Voltage, $V_s$	$3.3 \text{ V} \pm 5\%$
Input Current	$\leq 4 \text{ mA}$
Output:	
Type	HCMOS
Load	15 pF
$V_{ol}$	$\leq 0.1 * V_s$
$V_{oh}$	$\geq 0.9 * V_s$
Duty cycle @ 50%	45% to 55%
Rise time, 10% to 90%	$\leq 8 \text{ ns}$
Fall time, 90% to 10%	$\leq 8 \text{ ns}$

### Holdover Stability

Temperature, -40 to 85°C	$\leq \pm 0.28 \text{ ppm}$ reference to $(F_{MAX} + F_{MIN})/2$
Drift, 24 hours (GR-1244-CORE)	$\leq \pm 0.04 \text{ ppm}$ (at constant temperature)

#### Rakon Limited

T +64 9 573 5554, F +64 9 573 5559  
 1 Pacific Rise, Mt Wellington, Auckland 1060, New Zealand  
 Private Bag 99943, Newmarket, Auckland 1149, New Zealand

## Provisional Oscillator Specification: E4950LF

### Issue B, 11<sup>th</sup> February 2008

#### Free-Run Accuracy

Calibration @ 25°C,  
 Temperature, -40 to 85°C,  
 Supply Voltage, 3.3V ± 5%,  
 Load, 15pF±5pF  
 Reflow soldering and Ageing, 20 years ≤ ± 4.6 ppm ref. to F<sub>0</sub>

Supply Voltage, 3.3V ± 5% ≤ ± 0.1 ppm

#### Phase Noise

10 Hz	≤ -90 dBc/Hz
100 Hz	≤ -110 dBc/Hz
1 kHz	≤ -122 dBc/Hz
10 kHz	≤ -132 dBc/Hz
≥100 kHz	≤ -135 dBc/Hz

#### Tri-State:

Pad 1 open circuit or ≥ 0.6Vs	Output Enabled
Pad 1 ≤ 0.2Vs	Output in Tri-state mode

When in Tri-state mode, the output stage is disabled but the oscillator and compensation circuit are still active (Current consumption 1mA typ.).

#### Environmental:

Storage Temperature Range: -55 to +125°C

Vibration: IEC 60068-2-6 Test Fc Procedure B4, 10-60Hz 1.5mm displacement, at 98.1 ms<sup>-2</sup>, 30 minutes in each of three mutually perpendicular axes at 1 octave per minute

Shock: IEC 60068-2-27 Test Ea, 980ms<sup>-2</sup> 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.

Solderability: MIL-STD-202, Method 208, Category 3

Marking: Laser Marked

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.

"Samples supplied according to this specification are supplied from our development or pre-production programme and as such are not qualification approved products. No condition, warranty or representation regarding quality, suitability, performance, life or continuation of supply is given or implied and Guarantee in clause 6.1 of our standard Conditions of Sale is not applicable. The right is reserved to change the design or specification or cease supply without notice." RAKON UK Limited

#### Rakon Limited

T +64 9 573 5554, F +64 9 573 5559  
 1 Pacific Rise, Mt Wellington, Auckland 1060, New Zealand  
 Private Bag 99943, Newmarket, Auckland 1149, New Zealand