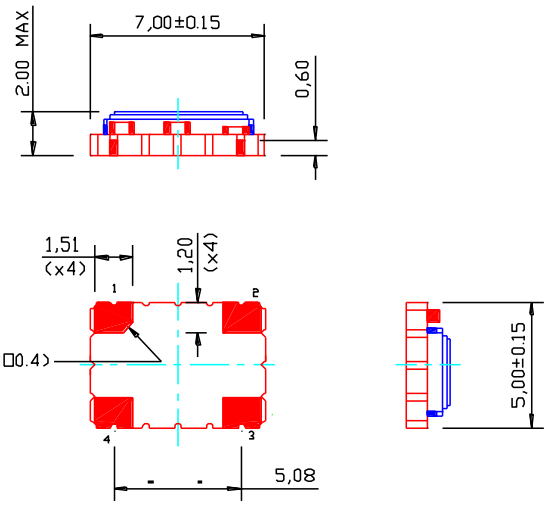
Oscillator Specification: E4837LF

Issue 1, 14th November 2007, LN4277

Outline:

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

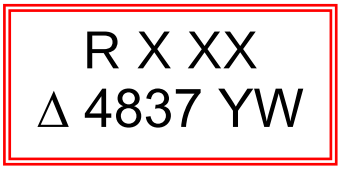
* leave unconnected if not required



Marking:

To include:-

1) Manufacturers ID (R)
2) Manufacturing identifier (X XX)
3) Pad 1 / Static Sensitivity Identifier (Δ)
4) Abbreviated Part Number (4837)
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, Fo	12.8 MHz
Supply Voltage, Vs	3.3 V ± 5%
Input Current	≤ 4 mA
Output:	
Type	HCMOS
Load	15 pF
Vol	≤ 0.1 * Vs
Voh	≥ 0.9 * Vs
Duty cycle @ 50%	45% to 55%
Rise time, 10% to 90%	≤ 8 ns
Fall time, 90% to 10%	≤ 8 ns

Holdover Stability [±(Fmax-Fmin)/2]

Temperature, -20 to 70°C	≤ ± 0.28 ppm
ditto, inclusive of	
Supply Voltage, 3.3V ± 5% and	
Ageing, 24 hours	≤ ± 0.32 ppm

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Free-Run Accuracy

Calibration @ 25°C, Temperature, -20 to 70°C, Supply Voltage, 3.3V ± 5%, Load, 15pF±5pF Reflow soldering and Ageing, 20 years	≤ ± 4.6 ppm ref. to F_O
Drift as per G.813 (Option 1)	≤ ± 0.01 ppm/day

Phase Noise

10 Hz	≤ -90 dBc/Hz
100 Hz	≤ -115 dBc/Hz
1 kHz	≤ -127 dBc/Hz
10 kHz	≤ -137 dBc/Hz
≥100 kHz	≤ -140 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^{-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.

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.

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