

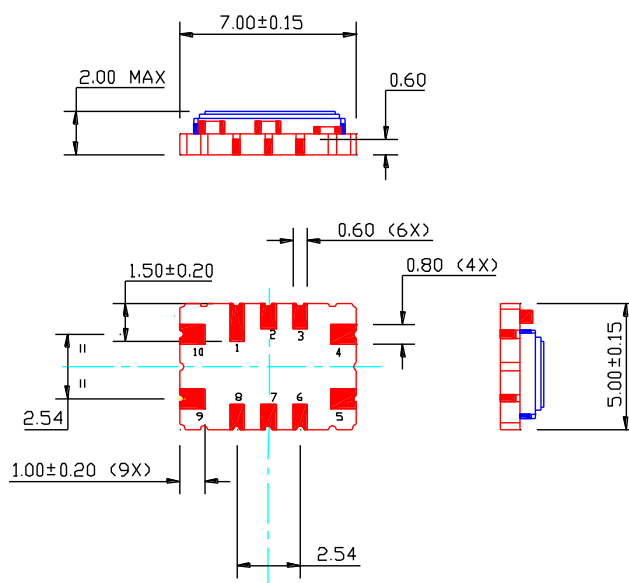
E2747LF(T) STRATUM 3 TCXO (-20 to 70°C)

Issue 6, 28th January 2014

Outline in mm

Pad Connections

1. Do not connect
2. NC
3. Do not connect
4. GND
5. RF Output
6. NC
7. NC
8. Tri-State Control (Enable)
9. Supply, +Vs
10. Do not connect



Marking

Manufacturers ID (R)
 Manufacturing identifier (X XX)
 Pad 1 / Static Sensitivity Identifier (Δ)
 Abbreviated Part Number (2747)
 Oscillator's Date of Manufacture (YW)

R X XX
 Δ 2747 YW

Electrical

| | |
|--------------------------|----------------|
| Nominal Frequency, F_0 | 12.8 MHz |
| Supply Voltage, V_s | 3.3 V \pm 5% |
| Input Current | \leq 4 mA |
| Output: | |
| Type | HCMOS |
| Load | 15 pF max |
| V_{OL} | \leq 0.1 Vs |
| V_{OH} | \geq 0.9 Vs |
| Duty cycle @ 50% | 45% to 55% |
| Rise time, 10% to 90% | \leq 8 ns |
| Fall time, 90% to 10% | \leq 8 ns |

Holdover Stability ref. $(F_{MAX} + F_{MIN})/2$

| | |
|--|---------------------|
| Temperature, -20°C to +70°C | $\leq \pm 0.28$ ppm |
| Temperature, -20°C to +70°C, inclusive of Supply | |
| Voltage, 3.3V \pm 5% and Ageing, 24 hours | $\leq \pm 0.32$ ppm |

Free-Run Accuracy

| | |
|---|--|
| Calibration @25°C, Temperature -20 to 70°C, Supply | |
| Voltage 3.3V \pm 5%, Load 15pF \pm 5%, Reflow Soldering | |
| and Ageing 20 years | $\leq \pm 4.6$ ppm ref. to Nominal Frequency |

Allan Deviation, $\tau=100$ ms

typ. $< 1.10^{-10}$

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Phase Noise

| | |
|----------------|--------------------|
| 10Hz | ≤ -90 dBc/Hz |
| 100Hz | ≤ -115 dBc/Hz |
| 1 kHz | ≤ -127 dBc/Hz |
| 10kHz | ≤ -137 dBc/Hz |
| ≥ 100 kHz | ≤ -143 dBc/Hz |

Tri-State

Pad 8 open circuit or ≥ 0.6 Vs

Output Enabled

Pad 8 ≤ 0.2 Vs

Output in Tri-State Mode

In Tri-state mode, the output stage is disabled but the oscillator and compensation circuit are still active (current consumption ≈ 1 mA)

Environmental

Storage Temperature Range -55 to +125°C

Vibration IEC 60068-2-6 Test Fc, 10-60Hz 1.5mm displacement, at $10g_n$, 30 minutes in each of three mutually perpendicular axes at 1 octave per minute

Shock IEC 60068-2-27 Test Ea, $100g_n$ acceleration for 6ms duration, three shocks in each direction along three mutually perpendicular axes

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

Resistance to Soldering Heat: 260°C / 10s exposure

Marking Laser Marked

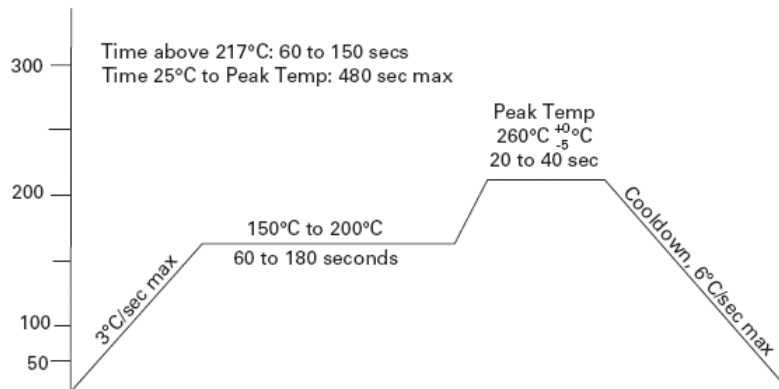
RoHS Parts are fully compliant with the European Union directives 2002/95/EC & 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment. Note parts are suitable for assembly using both Lead-free solders (see Lead-free Reflow soldering profile) and Tin / Lead solders (see Tin / Lead Reflow soldering profile).

Packaging Parts are supplied on tape & reel (for quantity ≥ 100 pieces)

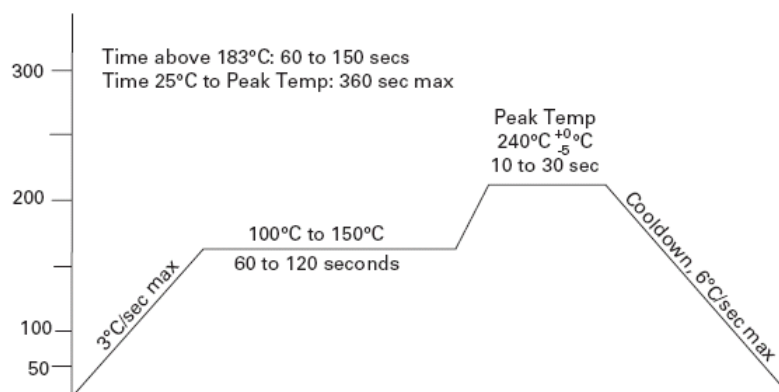
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Lead Free Reflow Soldering Profile *



Tin / Lead Reflow Soldering Profile *



*Note: These profiles were used during the qualification testing of the product and therefore represents worst case conditions. It is not recommended for use by the customer in the actual assembly of these parts.