

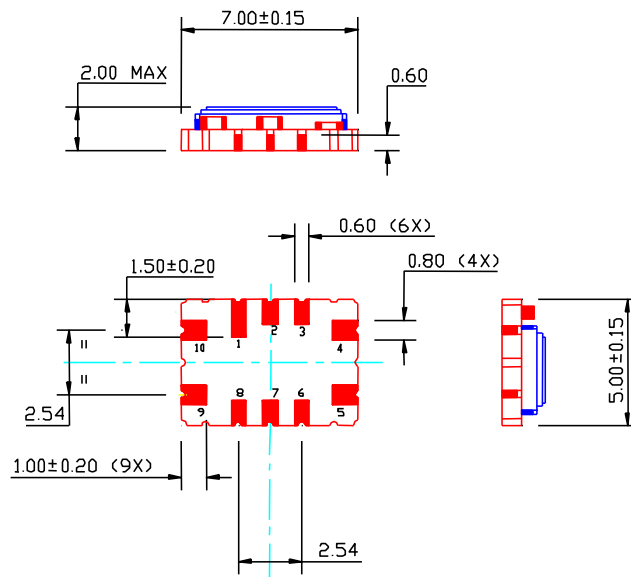
Oscillator Specification: E4940LF

Issue 1, 27th August 2009

Outline in mm

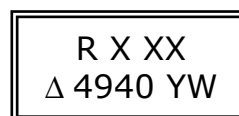
Pad Connections

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 (4940)
 Oscillator's Date of Manufacture (YW)
 Note sample marking may vary.



Electrical

| | |
|-----------------------|-------------------------|
| Nominal Frequency, Fo | 25.0 MHz |
| Supply Voltage, Vs | $3.3 \text{ V} \pm 5\%$ |
| Input Current | $\leq 6 \text{ mA}$ |
| Output: | |
| Type | HCMOS |
| Load | 15 pF max |
| V _{OL} | $\leq 0.1 \text{ Vs}$ |
| V _{OH} | $\geq 0.9 \text{ Vs}$ |
| 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 [$\pm(F_{\text{max}} - F_{\text{min}})/2$]

| | |
|---|-----------------------------|
| Temperature, -40°C to +85°C | $\leq \pm 0.28 \text{ ppm}$ |
| 24 hours drift (Telcordia GR-1244-CORE) | $\leq \pm 0.04 \text{ ppm}$ |

Free-Run Accuracy

| | |
|--|--|
| Calibration @25°C, Temperature -40 to 85°C, Supply Voltage $3.3\text{V} \pm 5\%$, Load $15\text{pF} \pm 5\%$, Reflow Soldering and Ageing 15 years | $\leq \pm 4.6 \text{ ppm ref. to Nominal Frequency}$ |
|--|--|

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Phase Noise

| | |
|-------|--------------------|
| 10Hz | ≤ -85 dBc/Hz |
| 100Hz | ≤ -110 dBc/Hz |
| 1kHz | ≤ -125 dBc/Hz |
| 10kHz | ≤ -135 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 10gn, 30 minutes in each of three mutually perpendicular axes at 1 octave per minute

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

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 parts are suitable for assembly using both Lead-free solders and Tin / Lead solders