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# SPECIFICATION FOR SMT VCXO MtronPTI P/N 1674-008

## I. GENERAL & ELECTRICAL REQUIREMENTS:

- 1. FREQUENCY OF OPERATION: 32.768000 MHz
- 2. FREQUENCY STABILITY VS. TEMPERATURE: ± 50 ppm (Inclusive of initial tolerance, operating temperature, voltage & load variation, shock, vibration, and aging).
- 3. OPERATING TEMPERATURE RANGE: -40°C to +85°C
- 4. OPERATING VOLTAGE (Vdd): 3.3 V ± 0.15 V
- 5. OPERATING CURRENT: 25 mA max.
- 6. OUTPUT TYPE: CMOS/TTL Compatible
- 7. SYMMETRY: 45/55% ref. to 1/2 Vdd
- 8. RISE/FALL TIME: 5 nS max. ref. to 20% to 80%
- 9. OUTPUT LOGIC LEVELS:  $V_{OL} = 0.33$  V max.  $V_{OH} = Vdd 0.33$  V min.
- 10. OUTPUT LOAD: 15 pF max.
- 11. PULLABILITY (APR): ± 50 ppm (With respect to nominal frequency at any combination of temperature, supply voltage, shock, vibration, load, and aging).
- 12. CONTROL VOLTAGE (Pin 1): 0.3 V to 3.3 V (Center frequency at + 1.65 V)
- 13. LINEARITY: 10% max. with positive monotonic slope.
- 14. MODULATION BANDWIDTH: 10 kHz min. (-3 dB)
- 15. PHASE JITTER: 10 pS RMS max. (Integrated from 12 kHz to 20 MHz).
- 16. PHASE NOISE (Typical): 10 Hz -60 dBc/Hz, 100 Hz 90 dBc/Hz, 1 kHz -112 dBc/Hz,
  - 10 kHz 131 dBc/Hz, 100 kHz 128 dBc/Hz
- 17. TRISTATE FUNCTION (Pin 2): Logic "1", or floating enables the output.

Logic "0" disables the output to a high impedance.

### **II. ENVIRONMENTAL & MECHANICAL REQUIREMENTS:**

### Figure 1

- 1. SHOCK: MIL-STD-202, Method 213, Condition C.
- 2. VIBRATION: MIL-STD-202. Methods 201 & 204.
- 3. HERMETICITY: 1 X 10<sup>-8</sup> atm cc/sec min.
- 4. STORAGE TEMPERATURE: -55°C to +125°C
- 5. SOLDERABILITY: Per EIAJ-STD-002
- 6. MAXIMUM SOLDERING CONDITIONS: See Figure 1.
- 7. PACKAGE: 6- pad leadless ceramic. RoHS 6/6 compliant.

### **III. DIMENSIONS:**





#### **IV. DATA SHEET REVISION TABLE:**

Date	Rev.	PCN	Details of Revision
6/11/03	0	N/A	Original release.
1/16/08	А	N/A	Updated drawing format & added RoHS compliance information.