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Specification for an SMT Oscillator MtronPTI P/N M6300S005

I. General & Electrical Requirements:

- 1. Frequency of Operation: 212.500000MHz
- Frequency Stability: ± 20ppm maximum (Inclusive of initial calibration, operating temperature, supply voltage, and 1 year aging at +50°C).
- 3. Operating Temperature Range: -55°C to +85°C
- 4. Operating Voltage (V_{dd}): $+ 3.3 V \pm 5\%$
- 5. Operating Current (I_{dd}): 125 mA max.
- 6. Output Logic: Complementary LVPECL Compatible
- 7. Output Logic Levels: $V_{OL} = V_{dd}$ -1.63 V max. $V_{OH} = V_{dd}$ -1.02 V min.
- 8. Symmetry: 45/55% ref. to 50% of waveform.
- 9. Rise/Fall Time: 0.55*nsec* maximum. ref. at 20% and 80%.
- 10. Output Load: 50Ω to V_{dd} 2V.
- 11. Enable/Disable (Pad 1): Logic "1" enables outputs. Logic "0" disables outputs.
- 12. Start-Up Time (for oscillation): 10msec typical
- 13. Phase Jitter: 1psec RMS maximum (12kHz to 20MHz)
- 14. Random Jitter: 3psec typical, 3.5psec maximum
- 15. SSB Phase Noise (Typical, Under Static Conditions): -70dBc/Hz @ 10Hz offset, -90dBc/Hz @ 100Hz offset, -113dBc/Hz @ 1kHz Offset, -125dBc/Hz @ 10kHz offset

II. Environmental/Mechanical Requirements:

- 1. Shock: Per MIL-STD-202, Method 213, Condition C.
- 2. Vibration: Per MIL-STD-202, Methods 201 & 204.
- 3. Hermeticity: 1 X 10⁻⁸ atm cc/sec min.
- 4. Storage Temperature: -55°C to +125°C.
- 5. Maximum Soldering Conditions: See Figure 1.
- 6. Package: 6- pad leadless ceramic. RoHS compliant.

III. Dimensions:









IV. Data Sheet Revision Table:

Date	Rev.	Author	Details of Revision
1/27/09	0	WNJ	Original release.
2/3/09	А	WNJ	Changed Operating Temperature to -55°C to +85°C from -55°C to +125°C.
8/17/10	В	WNJ	Updated Mechanical Drawing. Added termination (pad) material information.
1/4/12	С	BRM	Added specifications for Random Jitter and Start-up Time

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