This specification defines the operating characteristics of an ovenized crystal oscillator. Long term stability is assured through use of premium components.

<table>
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<th>REV.</th>
<th>DESCRIPTION OF REVISION</th>
<th>REQ. BY</th>
<th>DWN. BY</th>
<th>DATE</th>
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<td>LMH</td>
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<td>WCB</td>
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<td>ADB</td>
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<td>TST</td>
<td>DWR</td>
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1. OUTPUT
   1.1. Frequency 10.000 MHz
   1.2. Waveform Sine wave
   1.3. Level .99 Vp-p ±20%
   1.4. Load 50 Ω ±5%
   1.5. Harmonics < -30 dBc

2. FREQUENCY STABILITY
   2.1. Ambient < ±5x10⁻⁹ from -30°C to +60°C
        (referenced to +25°C)
        (with V ref at constant current)
   2.2. Aging < ±1x10⁻⁹/day averaged over 3 days
        < ±1.5x10⁻⁷/year
   2.3. Voltage < ±2x10⁻¹⁰/2% change
   2.4. Short term < 1x10⁻¹⁰/10 seconds
        Root Allan variance
   2.5. Load < ±5x10⁻¹⁰/5%
   2.6. Warm-up < ±5x10⁻⁸ in 30 minutes @ -20°C
        referenced to 2 hours

3. MECHANICAL FREQUENCY ADJUSTMENT
   3.1. Range > ±0.5 PPM
   3.2. Resolution < ±3x10⁻⁹
   3.3. Control Multi-turn trimmer

4. ELECTRICAL FREQUENCY ADJUSTMENT
   4.1. Range > 1.0 PPM
        < 1.4 PPM
        > ±0.3 PPM (referenced to V ref/2)
   4.2. Control 0 VDC to V ref
   4.3. Slope Negative

5. INPUT POWER
   5.1. Voltage 14.2 VDC ±6%
   5.2. Regulation ±2%
   5.3. Current < 700 mA

6. REFERENCE VOLTAGE
   6.1. Voltage 8.3 VDC ±10%
   6.2. Ambient stability < ±3.0 mV for ambient range
        specified in 2.1
   6.3. Current < 4 mA

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ISOTEMP RESEARCH INC.
CHARLOTTESVILLE, VA.
USA

CODE ID. PART NO. PAGE OF TOTAL DWG. NO. REV.
31785 OCXO 118-12 2 3 114-322 F
7. OVEN MONITOR
Output voltage will be 800 mV ±100 mV when oven is at temperature. Voltage will be below 600 mV when oven is not at temperature.

8. MECHANICAL
8.1. Applicable series
   OCXO 118 series
8.2. Model number
   OCXO 118-12
8.3. Outline drawing
   125-415