

SPECIFICATION FOR RoHS 6 COMPLIANT SMT CRYSTAL MtronPTI M1253S164

Electrical Specifications:

| Parameter | Symbol | Min. | Typ. | Max. | Units | Conditions |
|-----------------------|----------------|----------------------|-----------|------|-------|---|
| Mode of Oscillation | | Fundamental (AT-Cut) | | | | |
| Frequency | F _o | | 48.000000 | | MHz | |
| Frequency Tolerance | F/F | -10 | | +10 | ppm | @ 25°C, 10pF Load |
| Frequency Stability | ΔF/F | -10 | | +10 | ppm | Over operating temperature range referenced to frequency @ 25°C |
| Operating Temperature | T _A | -20 | | +70 | °C | |
| Storage Temperature | T _S | -55 | | +125 | °C | |
| Aging | | -5 | | +5 | ppm | Per year @ +25°C |
| Load Capacitance | C _L | | 10 | | pF | |
| Shunt Capacitance | C _o | | | 3 | pF | |
| ESR | | | | 50 | Ω | |
| Insulation Resistance | | 500 | | | MΩ | |
| Drive Level | D _L | 10 | 100 | 300 | μW | DC100V |

Environmental Conditions:

| | |
|---------------------------|---|
| Mechanical Shock | Per MIL-STD-202, Method 213, Condition C (100 g's, 6 ms duration, ½ sinewave) |
| Vibration | Per MIL-STD-202, Method 201 & 204 (10 g's from 10-2000 Hz) |
| Thermal Cycle | Per MIL-STD-883, Method 1010, B (-55°C to 125°C, 15 min. dwell, 10 cycles) |
| Hermeticity | Per MIL-STD-202, Method 112 (1 x 10 ⁻⁸ atm cc/s of Helium) |
| Gross Leak | Per MIL-STD-202, Method 112 (30 sec. Immersion) |
| Fine Leak | Per MIL-STD-202, Method 112 (1 x 10 ⁻⁸ atm cc/s of Helium) |
| Resistance to Solvents | Per MIL-STD-883, Method 2015 |
| Solderability | Per EIAJ-STD-002 |
| Max. Soldering Conditions | See solder profile, Figure 1 |

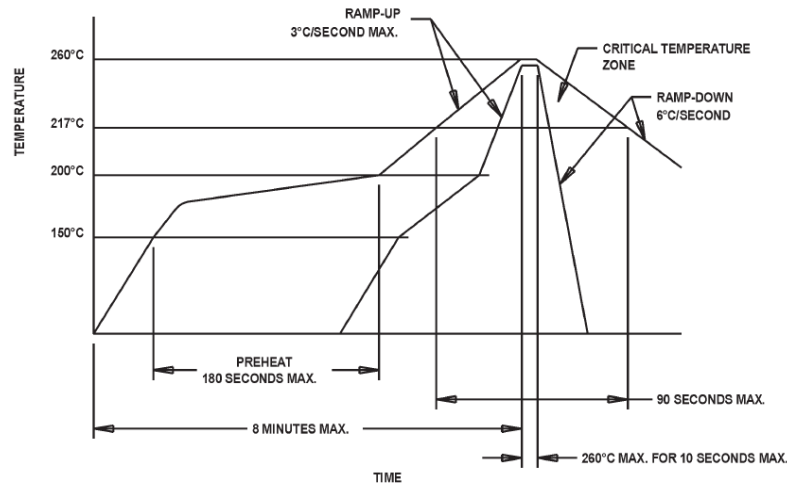
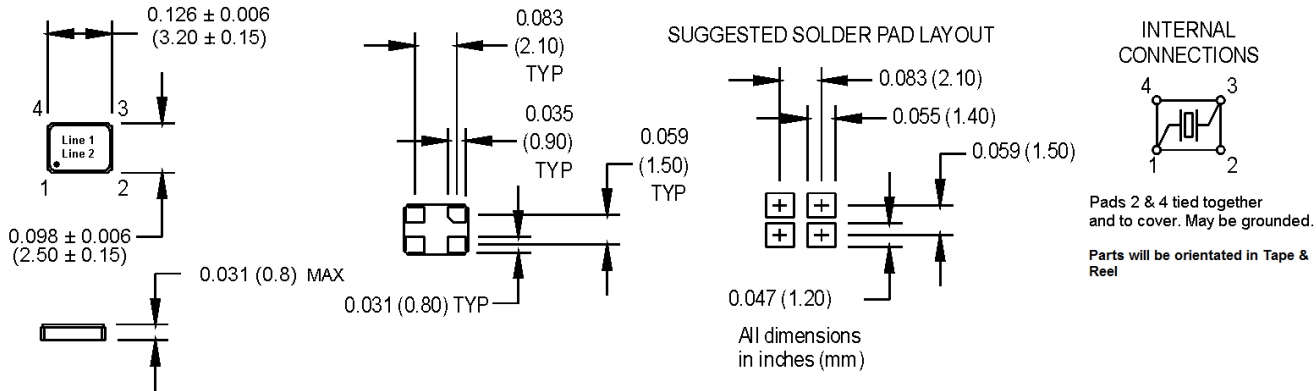
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Dimensions, Marking, and Pin Out Information:

| Pad | Function |
|-----|----------------|
| 1 | Input / Output |
| 2 | Cover / Ground |
| 3 | Input / Output |
| 4 | Cover / Ground |

| Part Marking | |
|--------------|----------|
| Line 1 | 48M000 |
| Line 2 | M y ww v |

| Line 2 Legend | |
|---------------|---------------|
| M | MtronPTI |
| y | Year |
| ww | Work Week No. |
| v | Factory code |



DATA SHEET REVISION TABLE:

| Date | Rev. | Author | Details of Revision |
|---------|------|--------|----------------------------|
| 7/3/13 | 0 | MM | Original release. |
| 7/26/13 | A | MM | Added customer part number |