

SPECIFICATION FOR RoHS 6 COMPLIANT SMT TCXO

MtronPTI P/N M6181S002

Electrical Specifications:

| Parameter | Symbol | Min. | Typ. | Max. | Units | Conditions |
|-------------------------|--------------------------------|---------------------|------------|---------------------|--------|---|
| Frequency of Operation | F _O | | 12.8000000 | | MHz | |
| Initial Accuracy | F _I | -1.0 | | +1.0 | ppm | @ 25°C |
| Frequency Stability | ΔF/F | -0.3 | | +0.3 | ppm | Over operating temperature (F _{Max} – F _{Min})/2 |
| Frequency Vs. Reflow | | -1.0 | | +1.0 | ppm | |
| Frequency Vs. Supply | | | | ± 0.2 | ppm | For 5% supply change |
| Frequency Vs. Load | | | | ± 0.2 | ppm | For 5% load change |
| Operating Temperature | T _A | -40 | | +85 | °C | |
| Operating Voltage | V _{DD} | 3.135 | 3.3 | 3.465 | V | |
| Operating Current | I _{DD} | | | 3.0 | mA | |
| Output Type | | HCMOS Compatible | | | | |
| Output Load | | | | 15 | pF | |
| Symmetry (duty cycle) | T _{DC} | 45 | 50 | 55 | % | @ 50% of V _{DD} |
| Logic "1" Level | V _{OH} | 80% V _{DD} | | | V | HCMOS load |
| Logic "0" Level | V _{OL} | | | 20% V _{DD} | V | HCMOS load |
| Rise/Fall Time | T _R /T _F | | | 7 | nS | From 10% to 90% V _{DD} |
| Tri-state Enable Logic | | 70% V _{DD} | | | V | Pad C |
| Tri-state Disable Logic | | | | 30% V _{DD} | V | Pad C. Output to high-Z |
| Phase Noise | | | -102 | | dBc/Hz | @ 10 Hz |
| | | | -132 | | dBc/Hz | @ 100 Hz |
| | | | -150 | | dBc/Hz | @ 1 kHz |
| | | | -155 | | dBc/Hz | @ 10 kHz |
| | | | -156 | | dBc/Hz | @ 100 kHz |

Environmental Conditions:

| | |
|---------------------------|--|
| 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) |
| Hermeticity | Per MIL-STD-202, Method 112 (1 x 10 ⁻⁸ atm cc/s of Helium) (Crystal Only) |
| Storage Temperature | -55°C to +125°C |
| Solderability | Per EIAJ-STD-002 |
| Max. Soldering Conditions | See solder profile, Figure 1 |
| Package Type | 5.0 x 3.2 x 1.58 mm, Ceramic Leadless Chip Carrier |

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Mechanical, Marking and Layout Information:

| Pad | Function |
|-----|----------------------------------|
| 1 | N/C |
| A | N/C |
| B | N/C |
| 2 | Ground/Case |
| 3 | Output |
| C | Enable/Disable or N/C |
| D | Low Phase Noise Capacitor or N/C |
| 4 | Supply Voltage |

| Part Marking | |
|--------------|--------|
| Line 1 | M61 ym |
| Line 2 | 10M000 |

| Legend | |
|--------|-------|
| Y | Year |
| m | Month |

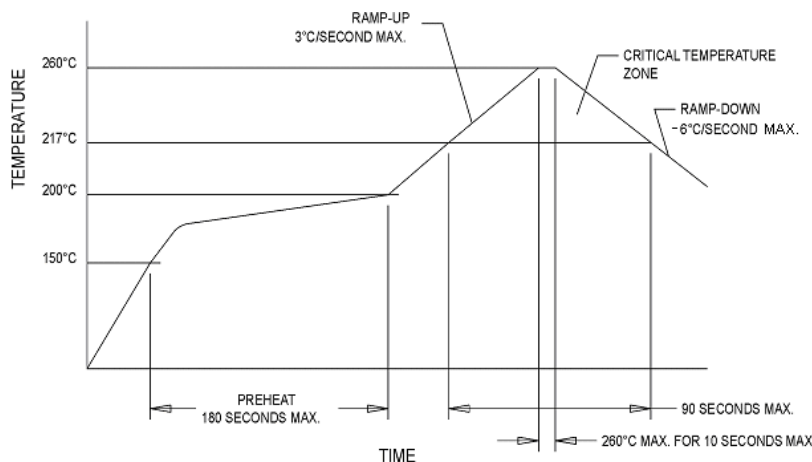
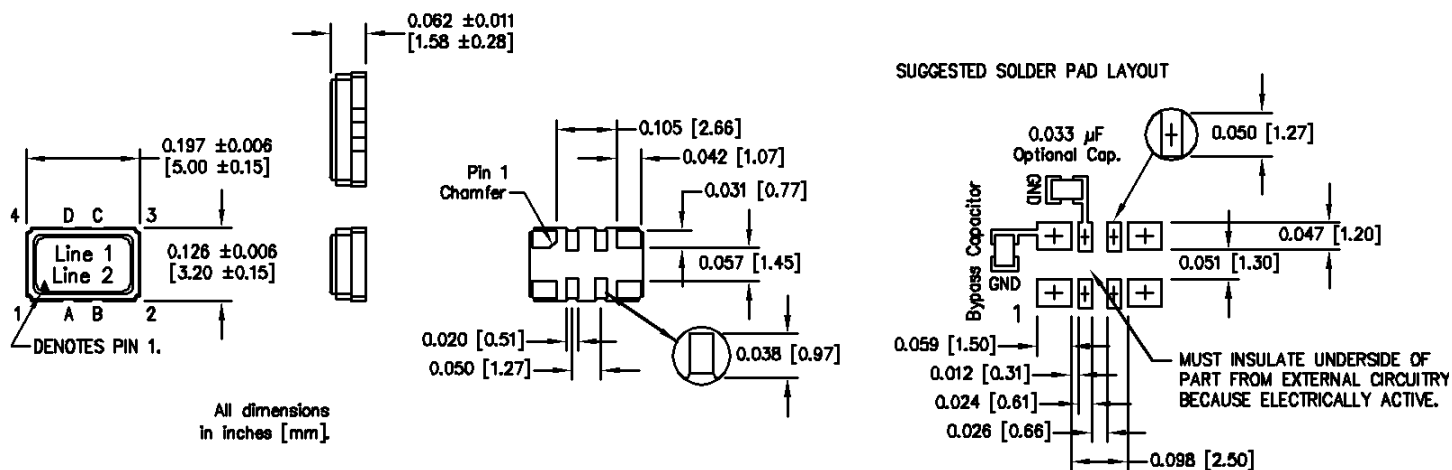


Figure 1

Datasheet Revision Table:

| Date | Rev. | Author | Details of Revision |
|--------|------|--------|---------------------|
| 4/5/13 | 0 | MM | Original release. |