

# K1601TE Series

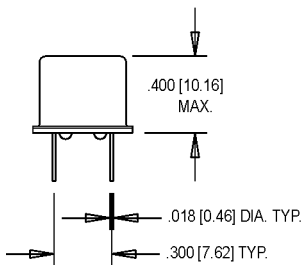
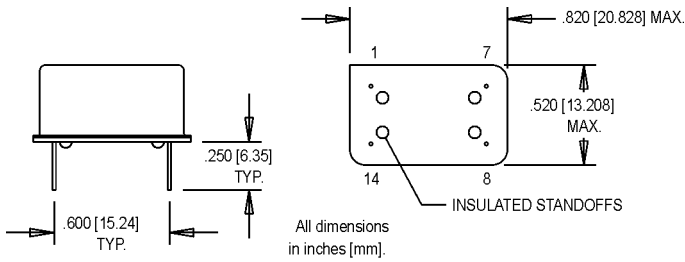
## 14 pin DIP, 5.0 Volt, CMOS/TTL, TCVCXO



- Former **Champion** TECHNOLOGIES, INC. Product
- Phase-Locked-Loops, Clocking “Sync” to NTSC Video Standards, Reference Signal, Signal Tracking

### Ordering Information

	K1601TE	X	-R	00.0000	MHz
Product Series					
Pullability					
Blank:	±28 ppm min.				
W:	±40 ppm min.				
RoHS Compliance					
Blank:	non-RoHS compliant part				
-R:	RoHS compliant part				
Frequency (customer specified)					
(Consult factory for “TEW” option)					



### Pin Connections

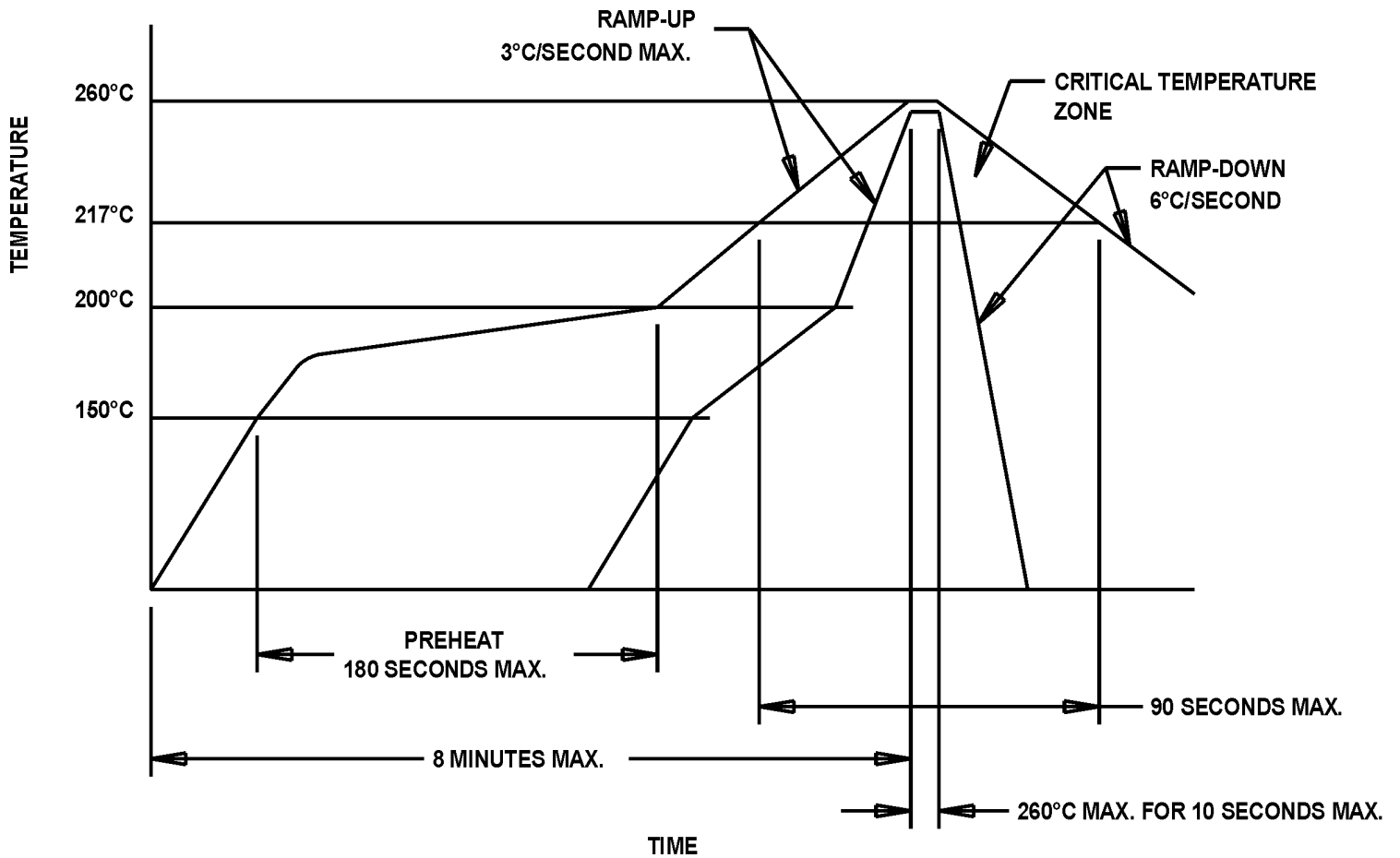
PIN	FUNCTION
1	Control Voltage
7	Ground/Case Gnd
8	Output
14	+Vdd

PARAMETER	Symbol						Units
Frequency Range	F	2.0 to 35, 38.888, 40.000					MHz
Frequency Stability	$\Delta F/F$						
Overall		Inclusive of Calibration, Temperature, Voltage, Load, and Aging					
25° Calibration		±3.0					ppm
Aging 10 Years		±2.0					ppm
Over Operating Temperature		±1.0					ppm
Minimum Deviation		±2.8 (“TEW” model ±40)					ppm
Minimum Deviation Sensitivity		+14					ppm/V
Linearity		10					%
Modulation Bandwidth (±3dB) fm		>20					KHz
Nominal Control Voltage		2.5					V
Control Voltage Range	Vc	0.5 to 4.5					V
Transfer Function		Positive					
Input Impedance		>50Ω @ 10 KHz					
Operating Temperature	T <sub>A</sub>	0 to 55					°C
Storage Temperature	T <sub>S</sub>	-40 to 85					°C
Input Voltage	Vdd	+5.0 ±5%					V
Input Current	I <sub>dd</sub>	<20					mA
Symmetry (Duty Cycle)		45/55 < 14 MHz; 40/60 ≥ 14 MHz					%
Start up Time		<20					ms
Phase Noise (Typical)		10 Hz	100 Hz	1KHz	10 KHz	100 KHz	dBc/Hz
		-70	-95	-120	-140	-150	
Temperature Cycle	MIL-STD-883, Method 1010, Condition B	-55°C to +125°C; Air-to-Air; 100 cycles; 10 min. dwell					
Mechanical Shock	MIL-STD-883, Method 2002, Condition B	1500 g's					
Vibration	MIL-STD-883, method 2007, Condition B	20-2000 Hz; 0.06 inch; 15 g's; 3 planes					
Humidity Steady State	MIL-STD-202, Method 103	40°C, 90%-95% R.H.; 56 days					
Thermal Shock	MIL-STD-883, Method 1011.7, Condition B	100°C to 0°C; Water-to-Water; 15 cycles					
Electrostatic Discharge	MIL-STD-883, Method 3015, Class II	2 KV to 4 KV Threshold					
Solderability	MIL-STD-883, Method 2022.2	Solder dip; Meniscograph Criteria					
Hermeticity	MIL-STD-883, Method 1014.8, Condition A1	Mass pectro. 2 x 10 <sup>-8</sup> atoms. CC/sec He					
Lead Integrity	MIL-STD-883, Method 2004.5, Condition A, B1	Lead tension & bend stress					
Marking Permanence	MIL-STD-883, Method 2015.8	Resistance to solvents					
Life Test	MIL-STD-883, Method 1005.6	125°C, powered, 1000 hours minimum					

MtronPTI reserves the right to make changes to the product(s) and service(s) described herein without notice. No liability is assumed as a result of their use or application.

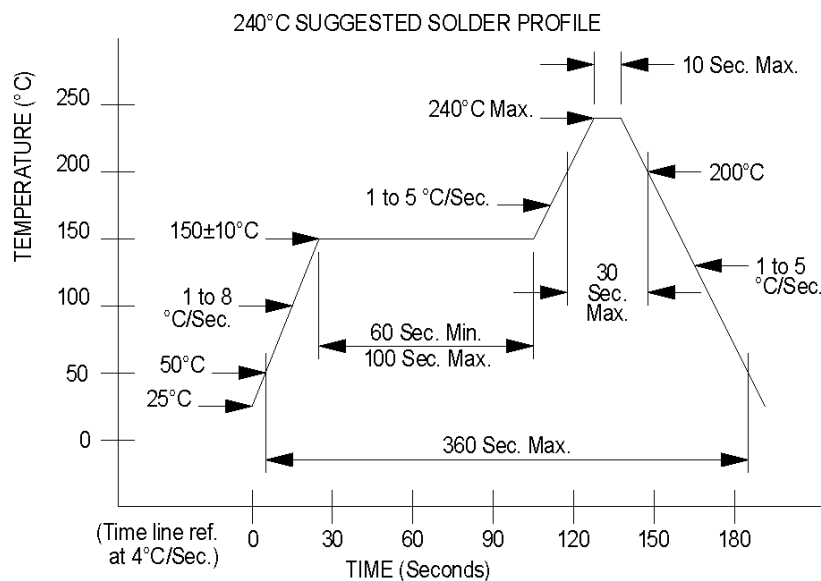
Please see [www.mtronpti.com](http://www.mtronpti.com) for our complete offering and detailed datasheets. Contact us for your application specific requirements: MtronPTI 1-800-762-8800.

# MtronPTI Lead Free Solder Profile



# MtronPTI Non-RoHS Profile

240°C  
All the remaining surface mount,  
both crystal and oscillator.



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