

# K1601T Series

## 14 DIP, 5.0 Volt, CMOS/TTL, TCXO



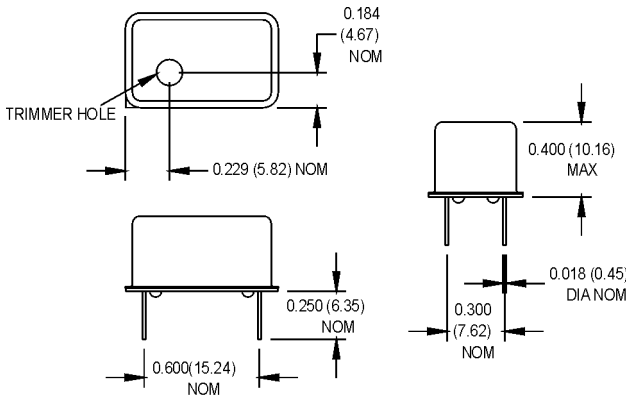
- Former **Champion** Product  
TECHNOLOGIES, INC.
- Phase-Locked Loops, SONET, Reference Signal, Signal Tracking, ATM

**Ordering Information**

**00.0000**  
**MHz**

**K1601T -R**

Product Series ———|  
 RoHS Compliance ———|  
 Blank: non-RoHS compliant part  
 -R: RoHS compliant part  
 Frequency (customer specified) ———|



All dimensions in inches (mm).

### Pin Connections

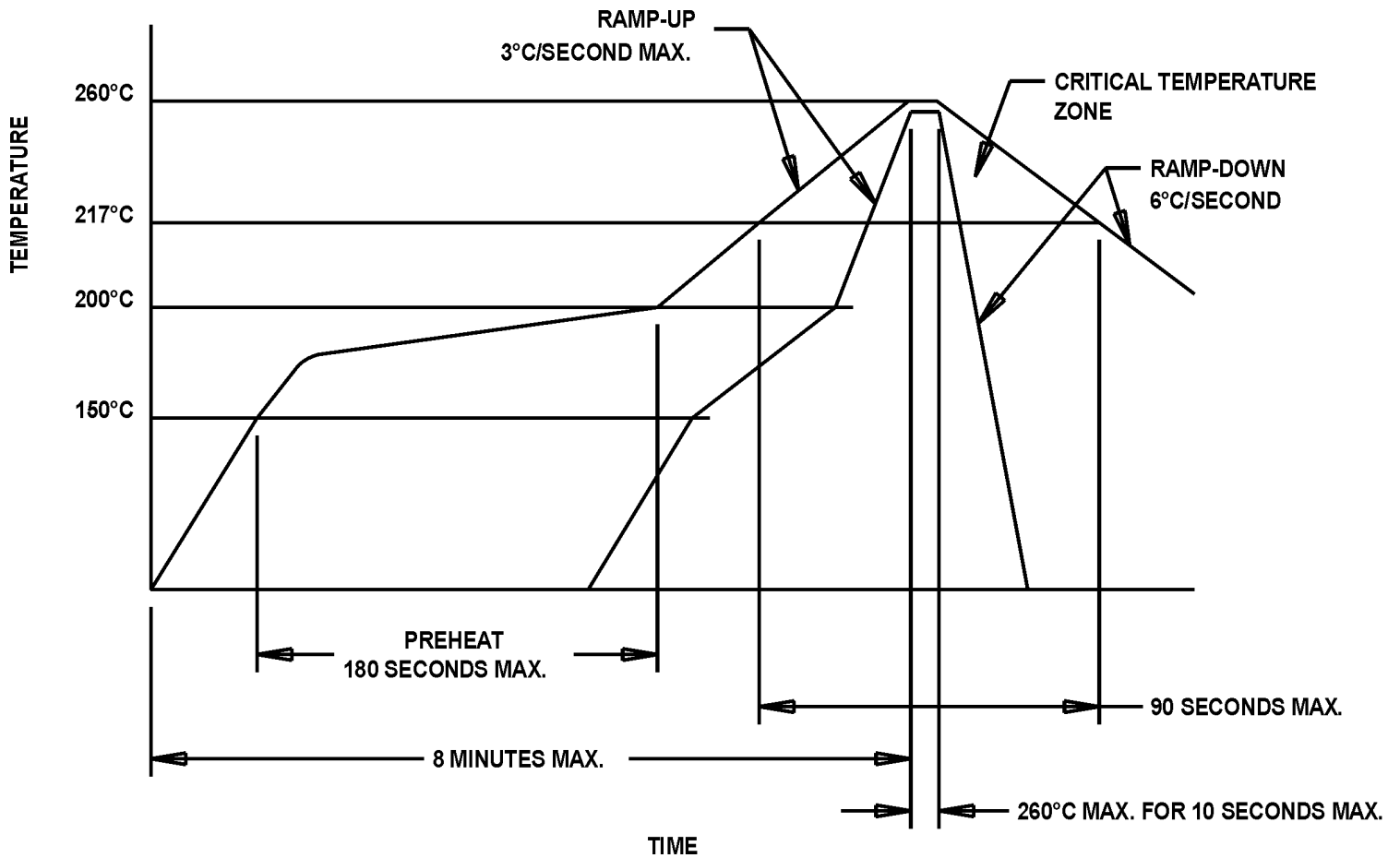
PIN	FUNCTION
1	N/C
7	Ground/Case Ground
8	Output
14	+Vdd

	PARAMETER	Symbol	Min.	Typ.	Max.	Unit	Condition/Notes	
Electrical Specification	Frequency Range	F	2		30	MHz		
	Frequency Stability	$\Delta F/F$						
	Overall		Inclusive of Calibration, Temperature, Voltage, Load, and Aging					
	25°C Calibration		-1.5		+1.5	ppm		
	Over Operating Temperature		-1.0		+1.0	ppm		
	Aging (10 Years)		-2.0		+2.0	ppm		
	Frequency Adjustment		-5.0		+5.0	ppm		
	Operating Temperature	$T_A$	0		+55	°C		
	Storage Temperature	$T_S$	-40		+85	°C		
	Input Voltage	Vdd	4.75	5.0	5.25	V		
	Input Current	Idd			<20	mA		
	Symmetry (Duty Cycle)		45		55	%	<14 MHz	
			50		60	%	≥14 MHz	
	Rise Time	$T_r$		3.5	9.0	ns		
	Fall Time	$T_f$		2.0	8.0	ns		
Logic "1" Level	Voh	4.5			V			
Logic "0" Level	Vol			0.5	V			
Start up Time				<20	ms			
Environmental Specification	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. $2 \times 10^{-8}$ 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.

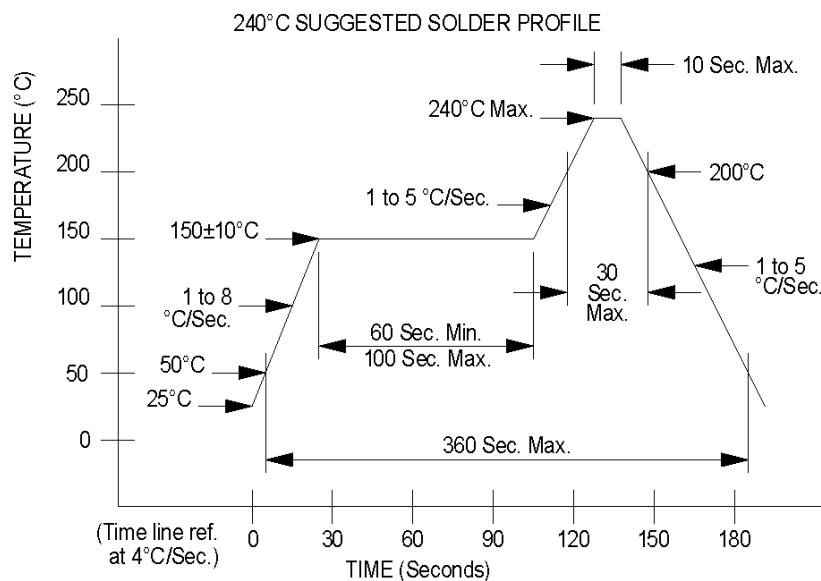
Please see [www.mtronpti.com](http://www.mtronpti.com) for our complete offering and detailed datasheets. Contact us for your application specific requirements: MtronPTI 1-800-762-8800.

# MtronPTI Lead Free Solder Profile



# MtronPTI Non-RoHS Profile

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



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