

# K1602SE Series

## 14 DIP, 5.0 Volt, Sinewave, TCVCXO



**Ordering Information**

**00.0000**  
**MHz**

**K1602SE -R**

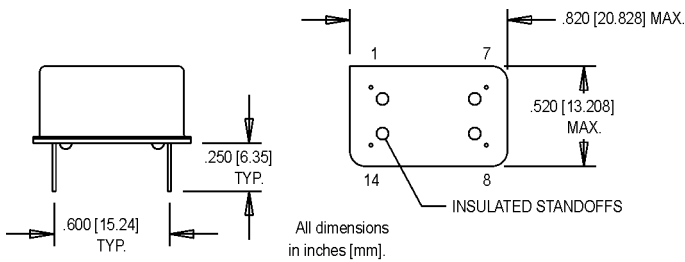
Product Series \_\_\_\_\_

RoHS Compliance \_\_\_\_\_

Blank: non-RoHS compliant part  
-R: RoHS compliant part

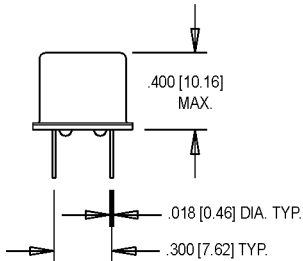
Frequency (customer specified) \_\_\_\_\_

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



### Pin Connections

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



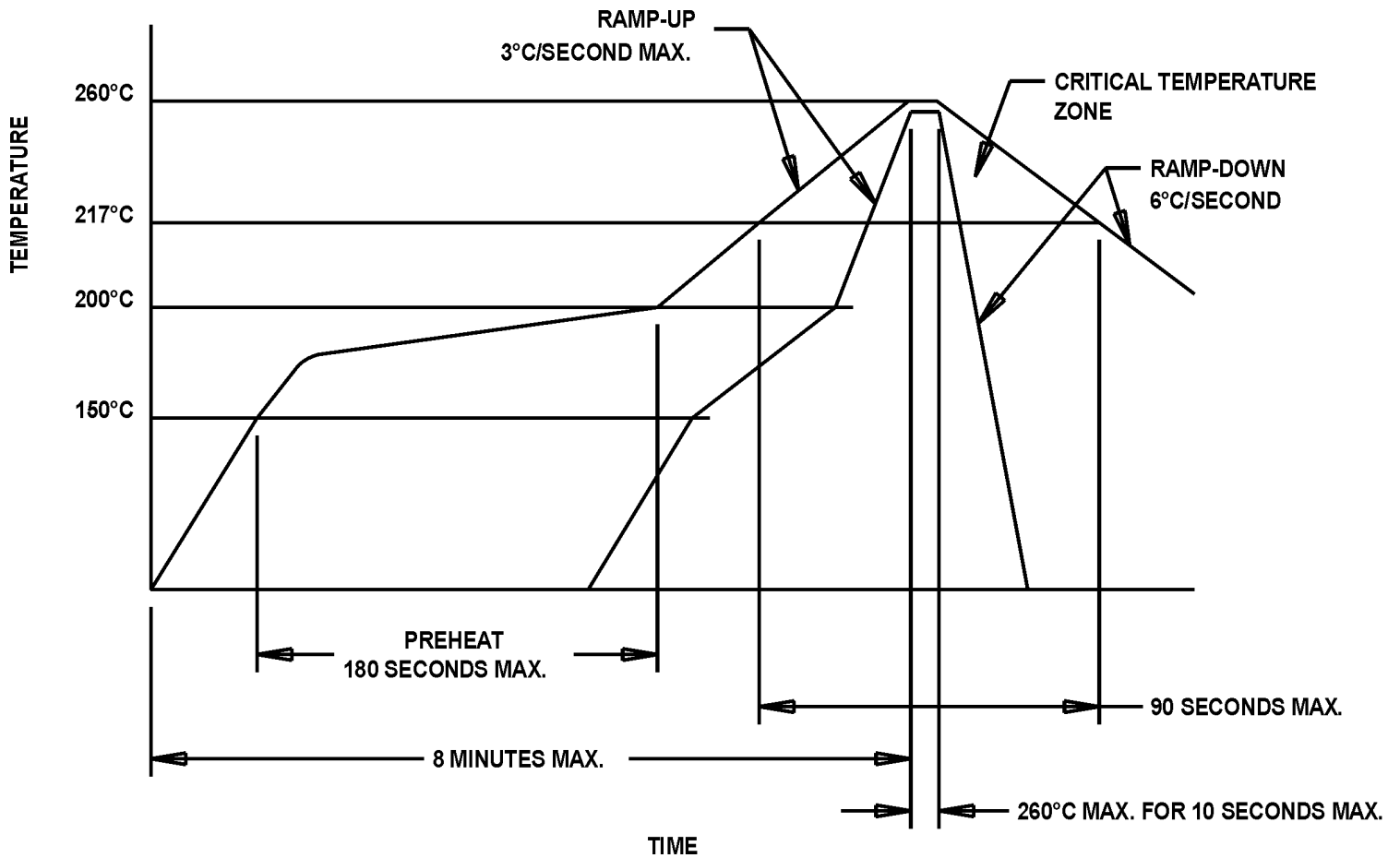
	PARAMETER	Symbol	Min.	Typ.	Max.	Units	Condition/Notes
edElectrical Specifications	Frequency Range	F	90		115	MHz	
	Operating Temperature	T <sub>A</sub>	-40		+85	°C	
	Storage Temperature	T <sub>S</sub>	-40		+85	°C	
	Frequency Stability	ΔF/F			±7.0	ppm	See Note 1
	Aging (10 year)		-2		+2	ppm	
	Control Voltage	V <sub>c</sub>	0	2.0	4	V	Positive monotonic slope
	Tuning Range		±4		±15	ppm	V <sub>c</sub> = 0.5V to 3.5V
	Modulation Bandwidth	f <sub>m</sub>				kHz	±3dB
	Input Impedance	Z <sub>in</sub>	50k			Ω	@ 10kHz
	Input Voltage	V <sub>dd</sub>	4.75	5.0	5.25	V	
	Input Current	I <sub>dd</sub>			20	mA	
	Output Type						Sinewave
	Load			50 Ω			See Note 2
	Output Level		1.0			V p-p	Into 50 Ω
	Output Power	P <sub>o</sub>		+2	+4	dBm	50 Ω
	Start up Time				10	ms	
Phase Noise (Typical)		10 Hz	100 Hz	1 kHz	10 kHz	100 kHz	Offset from carrier dBc/Hz
		-65	-95	-120	-140	-150	
Environmental	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)					
	Hermeticity	Per MIL-STD-202, Method 112, (1x10 <sup>-8</sup> atm. cc/s of Helium)					
	Thermal Cycle	Per MIL-STD-883, Method 1010, Condition B (-55°C to +125°C, 15 min. dwell, 10 cycles)					
	Solderability	Per EIAJ-STD-002					
Soldering Conditions	+240°C max. for 10 secs.						

1. Inclusive of calibration, temperature, voltage, load and aging.
2. See load circuit diagram #8

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.

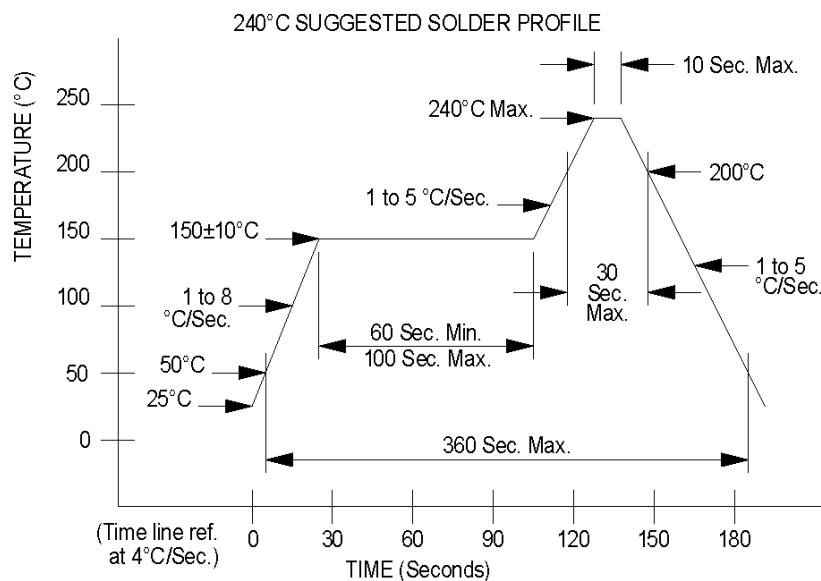
Please see [www.mtronpti.com](http://www.mtronpti.com) for our complete offering and detailed datasheets. Contact us for your application specific requirements: MtronPTI 1-800-762-8800.

## MtronPTI Lead Free Solder Profile



## MtronPTI Non-RoHS Profile

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



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.