

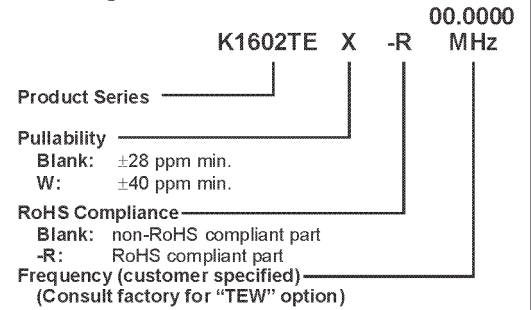
# K1602TE Series

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



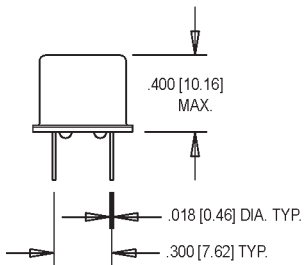
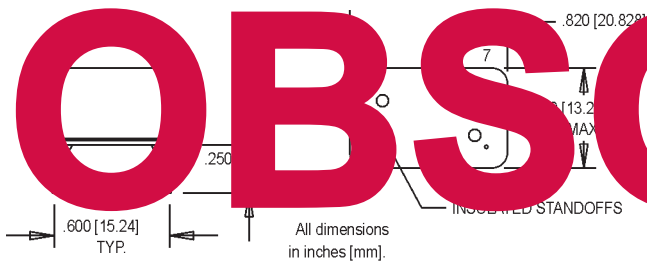
- Former **Champion** Product  
TECHNOLOGIES, INC.
- Phase-Locked Loops Clocking "Sync" to NTSC Video Standards, Reference Signal, Signal Tracking

### Ordering Information



M6034Sxxx - Contact factory for datasheet.

# OBSOLETE



### Pin Connections

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

	PARAMETER	Symbol	Min.	Typ.	Max.	Units	Condition/Notes	
Electrical Specifications	Frequency Range	F	2.0 to 35.0	38.88 to 40.0		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>	0.5	2.5	4.5	V	Positive Monotonic Slope	
	Tuning Range			±28 ("TEW" model ±40)		ppm	See Ordering Information	
	Modulation Bandwidth	f <sub>m</sub>	20			kHz	±3dB	
	Input Impedance	Z <sub>in</sub>	50k			Ohms	@ 10 kHz	
	Input Voltage	V <sub>dd</sub>	4.75	5.0	5.25	V		
	Input Current	I <sub>dd</sub>			20	mA		
	Output Type						HCMOS/TTL	
	Load			5 TTL or 15 pF HCMOS max.				See Note 2
	Symmetry (Duty Cycle)							See Note 3
	< 14 MHz			45		55	%	
	≥ 14 MHz			40		60	%	
	Logic "1" Level	V <sub>oh</sub>	4.5				V	
Logic "0" Level	V <sub>ol</sub>			0.5		V		
Rise/Fall Time	T <sub>r</sub> /T <sub>f</sub>		3.5	9.0		ns		
Start Up Time				20		ms		
Phase Noise (typical)		10 Hz	100 Hz	1 kHz	10 kHz	100 kHz	Offset from carrier	
@ 20 MHz		-80	-108	-125	-132	-155	dBc/Hz	
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						
Max Wave Soldering Conditions	See solder profile, Figure 2							

- Inclusive of calibration, temperature, voltage, load and aging.
- TTL Load – see load circuit diagram #1. HCMOS load – see load circuit diagram #2.
- Symmetry is measured at 1.4 V with TTL load, and at 50% V<sub>dd</sub> with HCMOS load.

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.