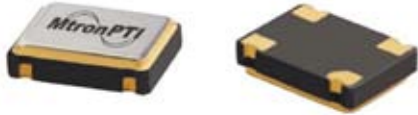
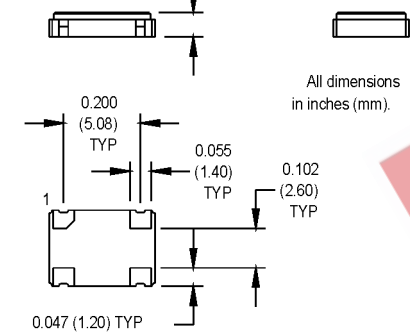
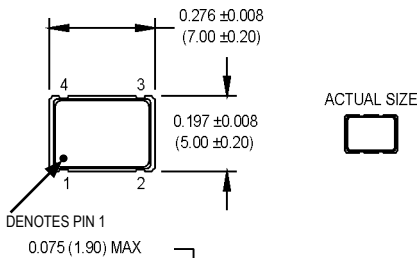


# M2250 Series

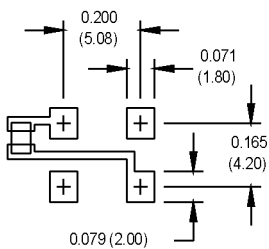
## 5x7 mm, 2.5 Volt, HCMOS/TTL, Clock Oscillator



- 2.5 Volt Operation
- Standby Option
- High density boards, low power circuits, portable test sets



SUGGESTED SOLDER PAD LAYOUT



**NOTE:** A capacitor of value 0.01  $\mu$ F or greater between Vdd and Ground is recommended.

Ordering Information		00.0000 MHz						
Product Series	M2250	1	3	T	C	N		
Temperature Range	1: 0°C to +70°C	2: -40°C to +85°C						
6: -20°C to +70°C								
Stability	3: $\pm$ 100 ppm	4: $\pm$ 50 ppm						
5: $\pm$ 35 ppm	6: $\pm$ 25 ppm							
Output Type	F: Fixed	Q: Standby Function						
T: Tristate								
Symmetry/Logic Compatibility	A: 40/60 TTL/HCMOS							
C: 45/55 HCMOS								
Package/Lead Configurations	N: Leadless							
Frequency (customer specified)								

### Pin Connections

PIN	FUNCTION
1	N/C, Tri-state or Standby
2	Ground
3	Output
4	+Vdd

	PARAMETER	Symbol	Min.	Typ.	Max.	Units	Condition
Electrical Specifications	Frequency Range	F	1.0		125	MHz	See Note 1
	Frequency Stability	$\Delta F/F$	(See Ordering Information)				
	Operating Temperature	T <sub>A</sub>	(See Ordering Information)				
	Storage Temperature	T <sub>s</sub>	-55		+125	°C	
	Input Voltage	V <sub>dd</sub>	2.375	2.5	2.625	V	
	Input Current	I <sub>dd</sub>			30	mA	
	Standby Current				10	$\mu$ A	Standby Mode
	Symmetry (Duty Cycle)		(See Ordering Information)				
	Load				15/10	pF/TTL	
	Rise/Fall Time	T <sub>r</sub> /T <sub>f</sub>			6	ns	Ref. 0.25 - 2.25 V
	Logic "1" Level	V <sub>oh</sub>	90% V <sub>dd</sub>			V	HCMOS Load
	Logic "0" Level	V <sub>ol</sub>			10% V <sub>dd</sub>	V	HCMOS Load
	Cycle to Cycle Jitter			8	15	ps RMS	1 Sigma
	Standby/Tristate Function		Input Logic "1" or floating; output active Input Logic "0"; output to high-Z				
Environmental	Mechanical Shock	Per MIL-STD-202, Method 213, Condition C					
	Vibration	Per MIL-STD-202, Method 201 & 204					
	Reflow Solder Conditions	See "Figure 2" on page 147					
	Hermeticity	Per MIL-STD-202, Method 112 (1 x 10 <sup>-5</sup> atm.cc/s of helium)					
	Solderability	Per EIAJ-STD-002					

1. Not all frequencies are available. Please contact factory for availability.

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.