

## M4005, M4006 & M4007 Series 3.3 V, 5.0 V or 12.0 V, Sine Wave, SAW Oscillator

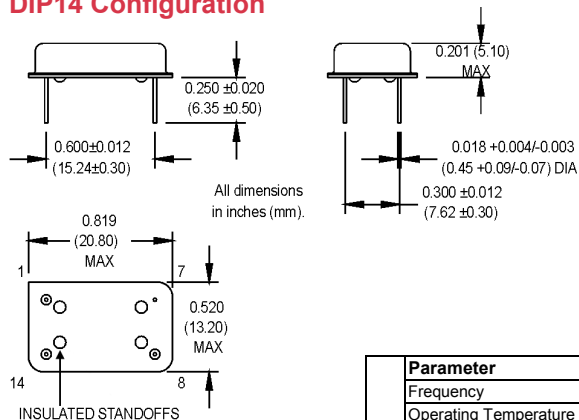


### Ordering Information

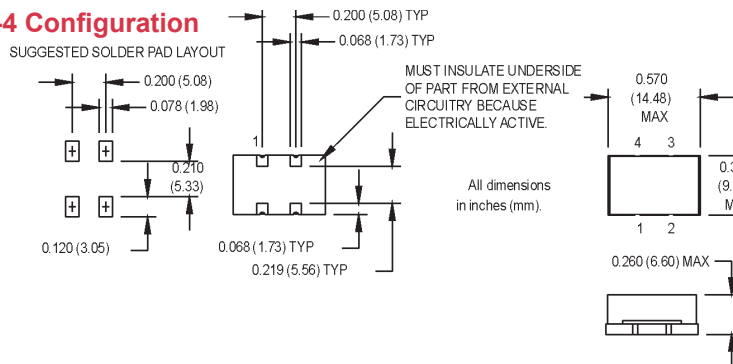
	<b>M4005</b>	<b>4</b>	<b>2</b>	<b>T</b>	<b>D</b>	<b>00.0000</b> MHz
<b>Product Series</b>	M4005 = 3.3 V M4006 = 5.0 V M4007 = 12.0 V					
<b>Temperature Range</b>	2: -40 °C to +85 °C    3: -55 °C to +105 °C 4: -55 °C to +125 °C					
<b>Stability</b>	A: ±250 ppm    2: ±500 ppm					
<b>Output Waveform</b>	T: Sine Wave					
<b>Package/Lead Configurations</b>	D: Dual In-Line Package; Nickel Header (Through Hole) K: FR-4; 4 Pin (Surface Mount)					
<b>Frequency (customer specified)</b>	M4005Sxxx, M4006Sxxx & M4007Sxxx - Custom datasheets.					

- Low Jitter: < 0.2 ps from 12 kHz to 20 MHz
- Ideal for clock smoothing application for OC-48 and OC-192

### DIP14 Configuration



### FR-4 Configuration



### Pin Connections

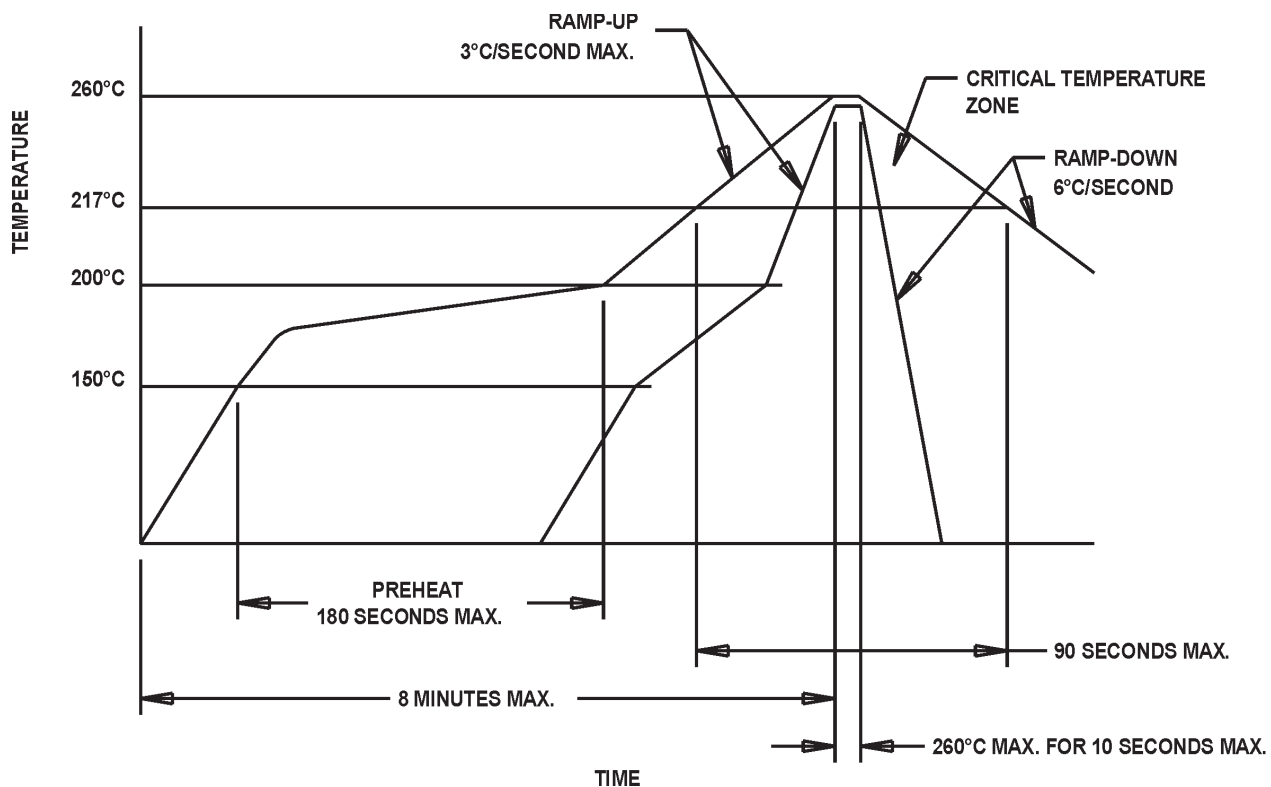
PIN	FUNCTION
1	N/C
2	GND
3	RF Output
4	+V <sub>DD</sub>

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions/Notes
Frequency	F <sub>O</sub>		1090		MHz	Contact factory for other frequency options.
Operating Temperature	T <sub>A</sub>	(See Ordering Information)				
Storage Temperature	T <sub>STG</sub>	-55		+125	°C	
<b>Frequency Stabilities</b>						
Stability vs Temperature	ΔF <sub>T</sub> /F	(See Ordering Information)				
<b>Supply Voltage &amp; Current</b>						
Supply Voltage	V <sub>DD</sub>	11.4	12.0	12.6	V	(See Ordering Information)
		4.75	5.0	5.25	V	(See Ordering Information)
		3.135	3.3	3.465	V	(See Ordering Information)
Supply Current	I <sub>DD</sub>		30	40	mA	
<b>RF Output</b>						
Output Load				50	Ω	
Output Type		Sine Wave				
Output Power		10	12	14	dBm	
<b>Other Parameters</b>						
Startup Time			2	10	ms	
G-sensitivity			0.9		ppb/g	
2nd Harmonic				-35	dBc	
Phase Jitter	Φ <sub>J</sub>		0.18	0.20	ps RMS	12 kHz to 80 MHz
			0.12	0.15	ps RMS	50 kHz to 80 MHz
Phase Noise (Typical @ 1090 MHz)			-110		dBc/Hz	@ 1 kHz Offset
			-138		dBc/Hz	@ 10 kHz Offset
			-150		dBc/Hz	@ 100 kHz Offset
			-160		dBc/Hz	@ 1 MHz Offset
<b>Environmental</b>						
Shock	MIL-STD-202, Method 213, Condition C (100 g)					
Vibration	MIL-STD-202, Methods 201 & 204 (10 g from 10 Hz to 2000 Hz)					
Solderability	EIAJ-STD-002					
Package	9.0 mm x 14.0 mm, SMT and DIP (RoHS Compliant)					
Max Soldering Conditions	See solder profile					

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# MtronPTI Lead Free Solder Profile



*Note: Lead free solder profile applies to FR-4 configuration only.  
DIP14 configuration maximum wave solder condition is +260 °C for 10 seconds.*