

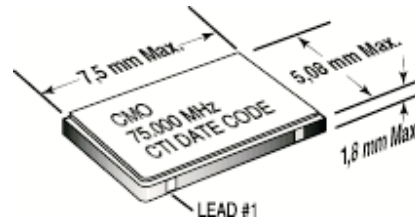
# CMO5 Series

5 x 7 mm, 5.0 Volt, CMOS/TTL, Clock Oscillator



**THIS PRODUCT IS NOT RECOMMENDED FOR NEW DESIGNS.  
PLEASE REFER TO THE M1 PRODUCT SERIES.**

- TTL/CMOS Compatible
- Tri-State Feature for Auto Test Systems
- Tape & Reel Packaging
- $\pm 20$ ppm Available - Please Contact Factory



ELECTRICAL SPECIFICATIONS			
<b>MODEL</b>	<b>CMO5</b>		
<b>Frequency Range (MHz)</b>	1.5 to 156.250		
<b>Frequency Stability (ppm)</b>			
Overall (Typical)	Inclusive of calibration, temperature, voltage, load, shock, vibration, aging		
0°C to 70°C	$\pm 25$		
-40°C to +85°C	$\pm 50$		
<b>Temperature Range (°C)</b>			
Operating	-40°C to +85°C		
Storage	-40°C to +125°C		
<b>Supply Voltage (V)</b>	+5.0 $\pm 10\%$		
<b>Input Current (mA)</b>	1.5MHz to 30MHz	>30MHz to 50MHz	>50MHz to 156.250MHz
	<10	<30	<50
<b>Symmetry (%) TTL/CMOS</b>	45/55		
<b>Transistion Times</b>	1.5MHz to 50MHz	>50MHz to 156.250MHz	
Rise Time (ns)	<5	<3	
Fall Time (ns)	<5	<3	
<b>Load</b>	10TTL/15pF		
<b>"0" Level (V<sub>OL</sub>)</b>	0.5V		
<b>"1" Level (V<sub>OH</sub>)</b>	2.4V/4.5V		
<b>Start up Time (ms)</b>	<10		

PART NUMBERING GUIDE	
<b>CMO5XXXX</b> - Specify Frequency	
→	"C" = CMOS
→	"T" = TTL
→	"Blank" = 0°C to 70°C Operating Temp.
→	"M" = -40°C to 85°C Operating Temp.
→	"A" = $\pm 25$ ppm (-40°C to 85°C Excluding Aging)
→	"B" = $\pm 50$ ppm
→	"C" = $\pm 100$ ppm
→	"D" = $\pm 20$ ppm Excluding Aging (Contact Factory)
→	"Blank" = Fixed Frequency
→	"E" = Tri-State

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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.

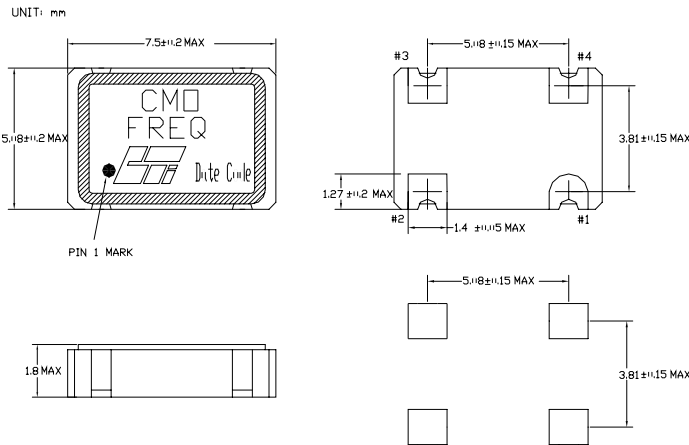
Revision: 03-01-07

# CMO5 Series

## 5 x 7 mm, 5.0 Volt, CMOS/TTL, Clock Oscillator

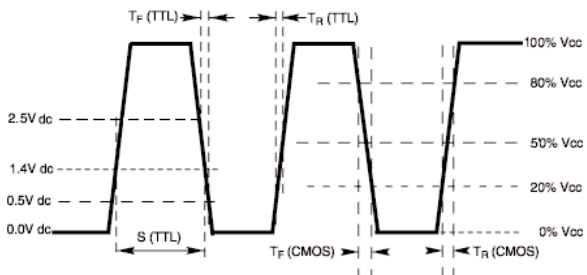


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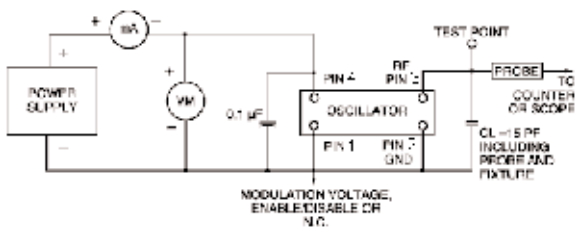


PIN	FUNCTION
1	N/C / Tri-State
2	Ground
3	Output
4	+ V <sub>CC</sub>

### OUTPUT WAVEFORM



### TEST CIRCUIT DIAGRAM



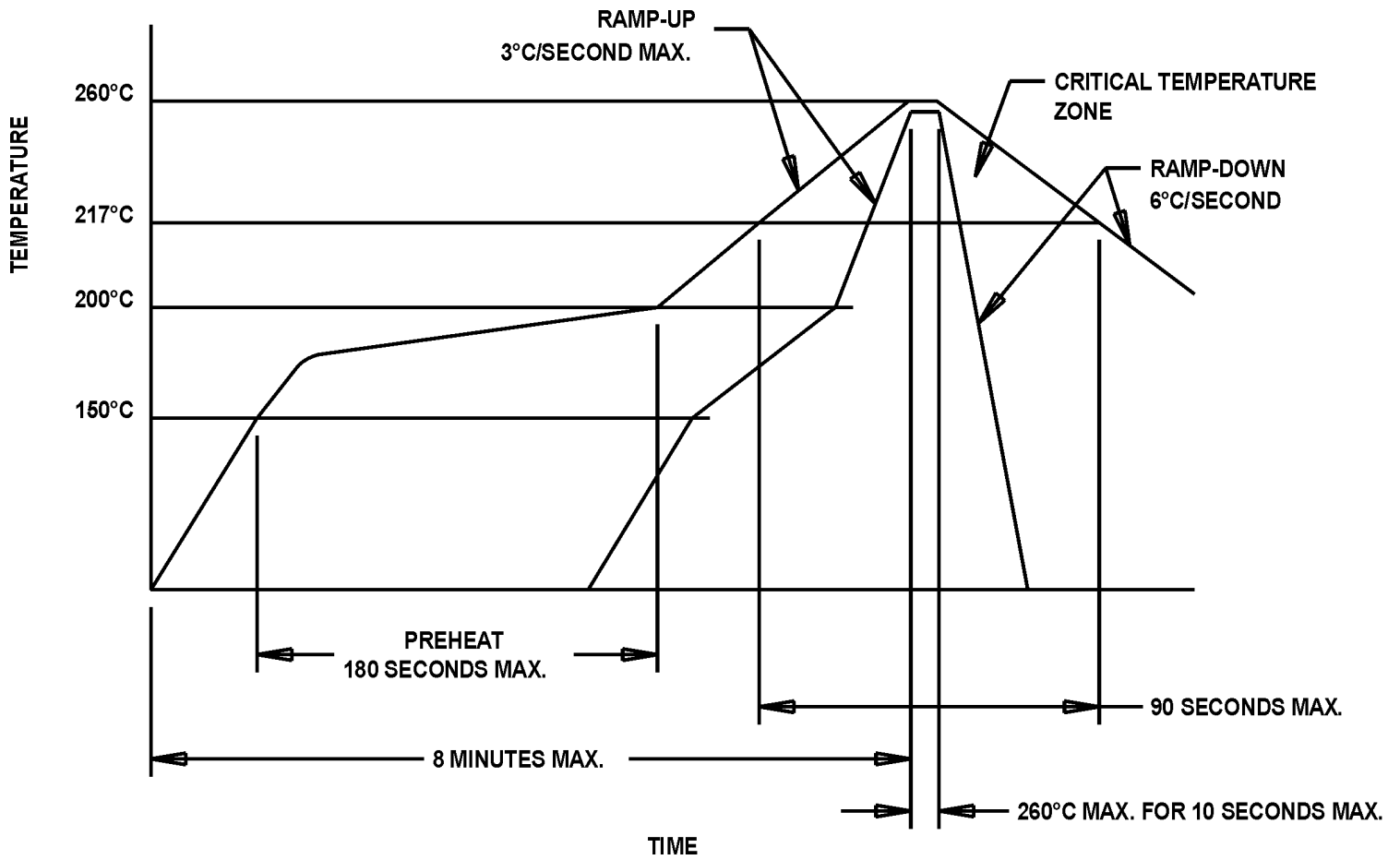
### MECHANICAL AND ENVIRONMENTAL SPECIFICATIONS

TEST METHODS	REFERENCE PROCEDURES	DESCRIPTION
Temperature Cycle	MIL-STD-833, Mtd 1010, Cond. B	-55°C to +125°C; Air-to-Air; 100 cycles; 10 min. dwell
Mechanical Shock	MIL-STD-883, Mtd 2002, Cond. B	1500 g's
Vibration	MIL-STD 883, Mtd 2007, Cond. B	20-2000 Hz; 0.06 inch; 15g's; 3 planes
Humidity Steady State	MIL-STD-202, Mtd 103	40°C; 90%-95% R.H.; 56 days
Thermal Shock	MIL-STD-883, Mtd 1011.7 Cond. B	100°C to 0°C; Water-to-Water; 15 cycles
Electrostatic Discharge	MIL-STD-883, Mtd 3015 Class II	2 KV to 4 KV Threshold
Solderability	MIL-STD-883, Mtd 2022.2	Solder dip; Meniscograph Criteria
Hermeticity	MIL-STD-883, Mtd 1014.8, Cond. A1	Mass spectro. 2 x 10 <sup>-8</sup> atmos. CC/sec He
Resistance to Soldering	MIL-STD-202, Mtd 210D, Cond. J	235°C; 30 seconds
Lead Integrity	MIL-STD-883, Mtd 2004.5, Cond. A, B1	Lead tension & bend stress
Marking Permanence	MIL-STD-883, Mtd 2015.8	Resistance to solvents
Life Test	MIL-STD-883, Mtd 1005.6	125°C. powered. 1000 hours minimum

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# MtronPTI Lead Free Solder Profile



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