

## M2700/M2701 Series SPECIFICATION FOR 5.0x7.0mm CMOS SMT OSCILLATOR

### FEATURES

CMOS Output  
 Low RMS Jitter Performance 12 kHz to 20 MHz  
 (1 ps max, 156.25 MHz)  
 RoHS 6/6 Compliant

### APPLICATIONS

Base station controllers  
 Ethernet  
 Test and Measurement

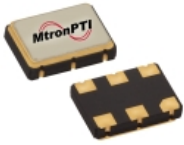
### Ordering Information:

Product Family (Supply Voltage Option)	Temperature Range		Stability		Enable/Disable		Logic Type		Package/Lead Configuration		Frequency MHz
	Code	Value	Code	Value	Code	Value	Code	Value	Code	Value	
<b>M2700</b> (3.3V)	<b>6</b>	-20 °C to +70 °C	<b>3</b>	±100 ppm	<b>T</b>	Enable High (pad 1)	<b>C</b>	CMOS	<b>N</b>	Leadless	XXX.XXXXXX
<b>M2701</b> (2.5V)	<b>2</b>	-40 °C to +85 °C	<b>4</b>	±50 ppm				45/55			
			<b>6</b>	±25 ppm							
			<b>8</b>	±20 ppm							
Example: M270024TCN 100.000000 MHz											
<b>M2700</b>	<b>2</b>		<b>4</b>		<b>T</b>		<b>C</b>		<b>N</b>		<b>100.000000</b>

### Electrical Specifications:

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Frequency of Operation	F <sub>O</sub>	10		250	MHz	
<b>Frequency Stability</b>						
Frequency Stability	ΔF/F	See ordering information				
Aging		-3		+3	ppm	1 <sup>st</sup> year
<b>RF Output</b>						
Output Type		CMOS Compatible				
Output Load		15 pF CMOS load				
Symmetry (duty cycle)		45		55	%	Ref. to 50% V <sub>dd</sub>
Logic Level "0"	V <sub>OL</sub>			10% V <sub>dd</sub>	V	
Logic Level "1"	V <sub>OH</sub>	90% V <sub>dd</sub>			V	
Rise/Fall Time	T <sub>R</sub> /T <sub>F</sub>			5	ns	10% V <sub>dd</sub> to 90% V <sub>dd</sub>
Start-up Time	T <sub>SU</sub>			10	ms	T <sub>ambient</sub> = +25°C
Enable Logic (Pad 1)		70% V <sub>CC</sub> or N/C			V	Output Enabled
Disable Logic (Pad 1)				30% V <sub>CC</sub>	V	Output Disabled to high-Z
<b>Supply Voltage &amp; Power Consumption</b>						
Operating Voltage	V <sub>CC</sub>	3.135	3.300	3.465	V	(M2700)
		2.375	2.500	2.625	V	(M2701)
Supply Current	I <sub>CC</sub>			60	mA	

Revision A  
08/01/16

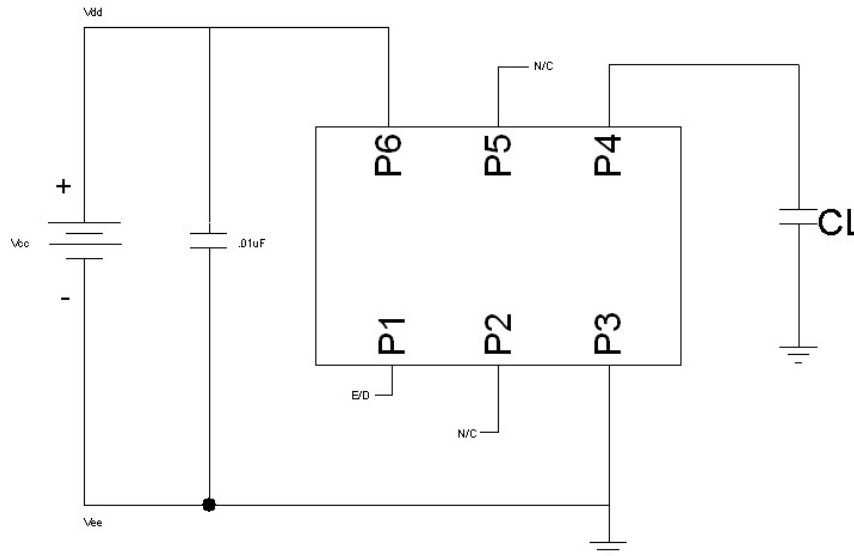


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### Environmental & Packaging Requirements:

Storage Temperature	-55°C to 125°C
Mechanical Shock	Per MIL-STD-202, Method 213, Condition C (100 g's, 6 ms)
Vibration	Per MIL-STD-202, Method 204D, Condition C (10 g's, 55 – 2000 Hz)
Aging	+85°C ±3°C, 720H (No BIAS)
Humidity	+40°C ±2°CX90~95%, 96H (NO BIAS)
Thermal Cycle	Per MIL-STD-883, Method 1010, Condition B (-55 °C to +125 °C, 10 cycles)
Hermeticity	Per MIL-STD-202, Method 112 (1 x 10 <sup>-8</sup> atm cc/s of Helium)
Moisture Sensitivity Level	MSL1
Solderability	Per EIAJ-STD-002, Method 208
Max. Soldering Conditions	See solder profile, Figure 1
Pad Termination	Gold, 1 µm maximum thickness
Package Type	6-pad 5.0 X 7.0 mm leadless ceramic. RoHS compliant.

### Typical CMOS Test Circuit & Load Circuit Diagrams:





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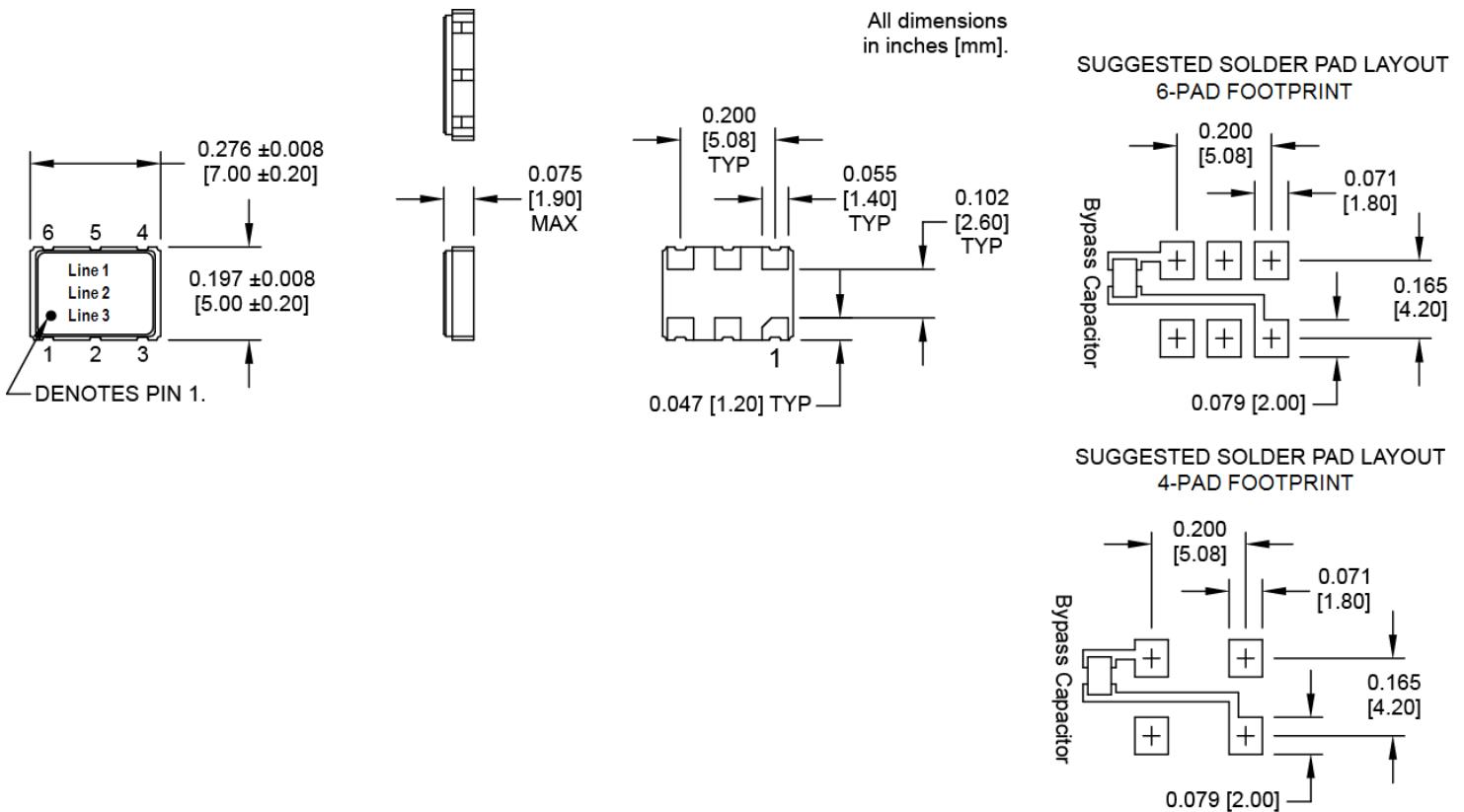
### Marking, Pin Out:

Pad	Function
1	Enable/Disable
2	No Connection
3	Ground
4	Output
5	No Connection
6	+V <sub>CC</sub>

Part Marking	
Line 1	[part designation]
Line 2	FFFMMMM
Line 3	M yy ww vv

Legend	
M	MtronPTI
F	Frequency
yy	Year
ww	Work Week
vv	Factory code

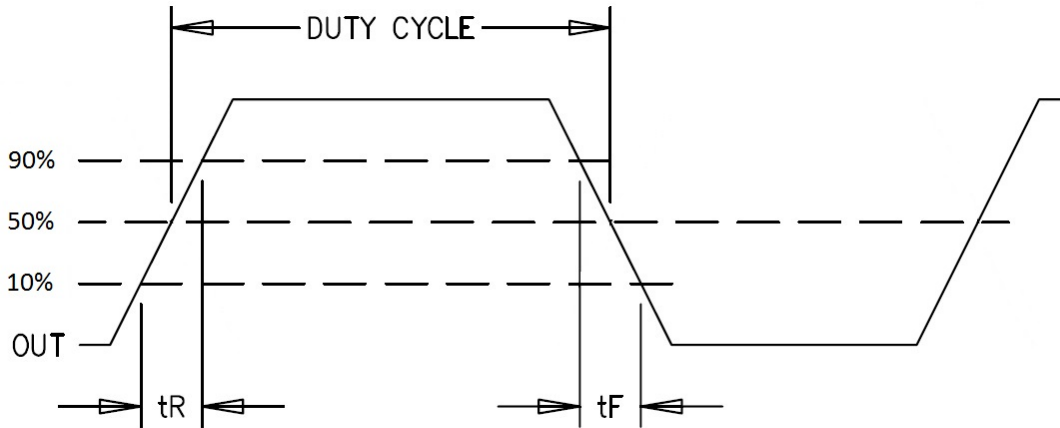
### Dimensions:



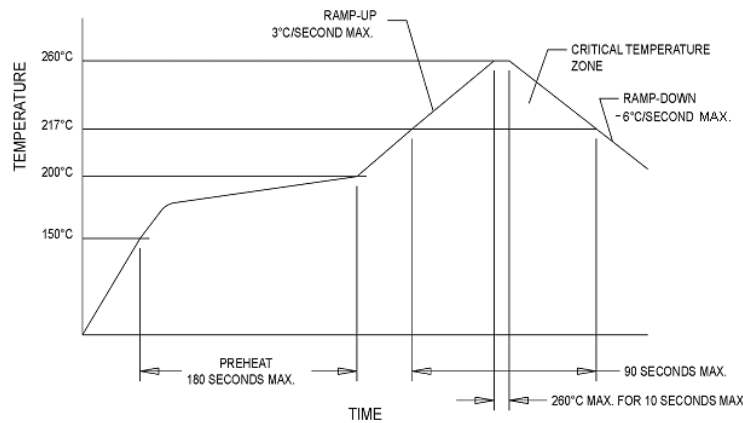


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### Output Waveform:



### Soldering Conditions:



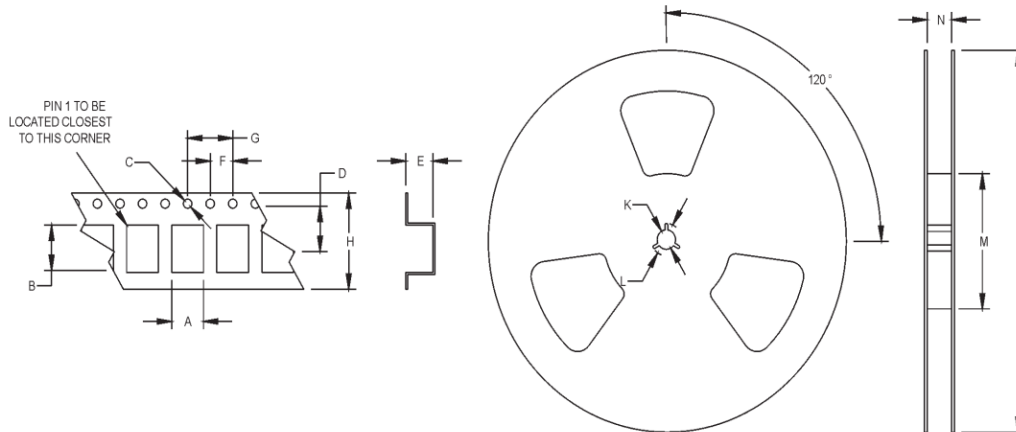
**Figure 1**



## M2700/M2701 Series SPECIFICATION FOR 5.0x7.0mm CMOS SMT OSCILLATOR

### Tape and Reel Specifications:

All units in mm



Tape and Reel Specifications											
A	B	C	D	E	F	G	H	J	K	L	M
5.32	7.28	1.5	7.5	2.2	4	8	16	178	13.5	24.8	80