

SPECIFICATION FOR RoHS 6 COMPLIANT SMT VCTCXO

MtronPTI P/N: M6030S072

Electrical Specifications:

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Frequency	F _O		24.000000		MHz	
Frequency Tolerance		-2		+2	ppm	@ +25°C
Frequency Stability						
vs. Temperature		-1.5		+1.5	ppm	Over operating Temp
vs. load		-0.2		+0.2	ppm	±10%
vs. Supply		-0.1		+0.1	ppm	±5%
vs. Aging		-1.0		+1.0	ppm	Per year @ 25°C
RF Output						
Output Type		HCMOS				
Output Load		15pF				
Output Level		90%V _{DD}				Output High, logic "1"
				10%V _{DD}		Output low, logic "0"
Duty		45%		55%		
Frequency Adjustment						
Tuning Voltage Range	V _C	0.5		2.50	V	
Tuning Range		±5		±12	ppm	
Start-Up Time				2	ms	
Additional Specifications						
SSB Phase Noise (Under Static Conditions) @19.2MHz			-115		dBc/Hz	@ 100Hz Offset
			-135		dBc/Hz	@ 1kHz Offset
			-148		dBc/Hz	@ 100kHz Offset
Supply Voltage & Power Consumption						
Operating Voltage	V _{DD}	3.135	3.300	3.465	V	
Operating Current	I _{DD}			6	mA	

Environmental Conditions:

Operating Temperature	T _A	-30		+85	°C	
Storage Temperature	T _S	-55		+125	°C	
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 20-2000 Hz)					
Thermal Cycle	Per MIL-STD-883, Method 1010, B (-55°C to 125°C, 15 min. dwell, 10 cycles)					
Hermeticity	Per MIL-STD-202, Method 112 (1 x 10 ⁻⁸ atm cc/s of Helium) (Crystal Only)					
Solderability	Per EIAJ-STD-002					
Reflow Soldering Conditions	See solder profile, Figure 1					

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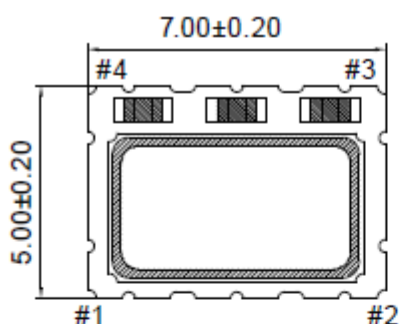
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Dimensions, Marking and Pin-Out Information:

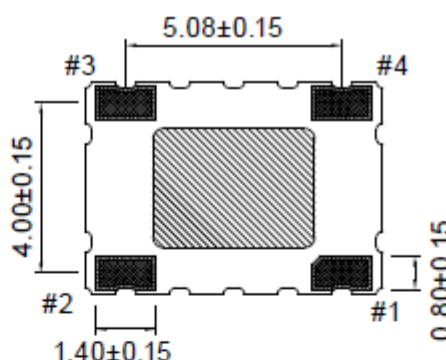
Part Marking	
Line 1	24M000
Line 2	·M ywwvv

Legend	
·	Pin 1 indicator
y	Last digit of year
ww	Work week
vv	Factory code

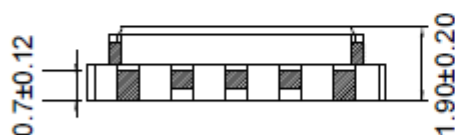
Pad	Function
1	Tuning Voltage
2	Ground
3	Output
4	+V _{DD}



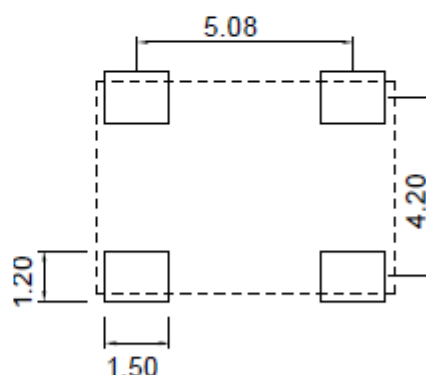
TOP



BOTTOM



SIDE VIEW



SUGGESTED LAND PATTERN

Note: A capacitor of value $0.1 \mu\text{F}$ between +V_{dd} and ground should be placed as close as possible to this device.

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Soldering Conditions:

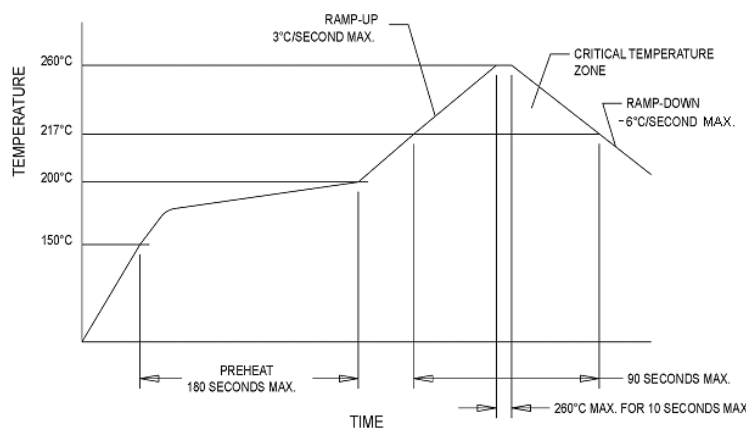
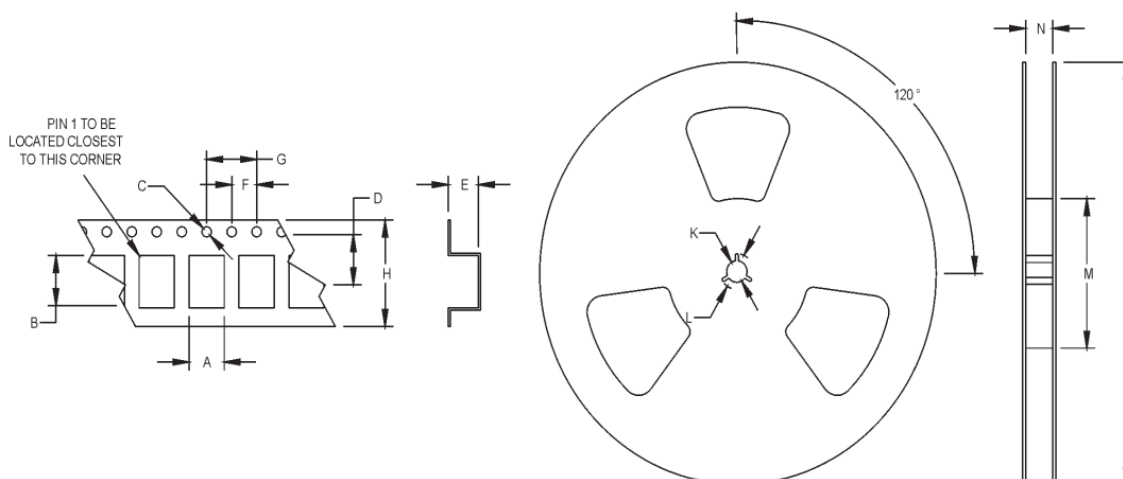


Figure 1

Tape and Reel Specifications:

All units in mm



Tape and Reel Specifications												
A	B	C	D	E	F	G	H	J	K	L	M	N
5.4	7.4	1.5	7.5	2.1	4	8	16	180	13.5	24.8	80	16.5

Data Sheet Revision Table

Date	Rev.	Orig.	Details of Revision
04/10/19	0	BRR	Original release.