

SPECIFICATION FOR SMT VCXO MtronPTI P/N M3100S105

I. Electrical Specifications:

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Frequency of Operation	F ₀		90.000000		MHz	
Output						
Output Type		HCMOS				
Output Load				15	pF	
Symmetry (duty cycle)	T _{DC}	45		55	%	½ V _{DD}
Logic "1" Level	V _{OH}	90% V _{DD}			V	HCMOS load
Logic "0" Level	V _{OL}			10% V _{DD}	V	HCMOS load
Rise/Fall Time	T _R /T _F			3	ns	From 10% to 90% V _{DD}
Start-up Time	T _{SU}			10	ms	T _{AMB} = +25°C
Frequency Adjustment						
Absolute Pull Range		± 30			ppm	Referenced to nominal frequency, including deviation over temperature, aging, shock, vibration, supply voltage
Control Voltage	V _C	0.3	1.65	3.0	V	Pad 1
Modulation Bandwidth	f _m	10			kHz	- 3 dB
Temperature and Supply						
Operating Voltage	V _S	+3.135	+3.3	+3.465	V _{DC}	
Operating Current	I _S			90	mA	

II. Environmental & Packaging Requirements:

Operating Temperature	T _A	-40		+110	°C	
Storage Temperature	T _S	-55		+125	°C	
Mechanical Shock	Mil-Std-883, Method 2002, Condition B, 1,500g					
Vibration	Per MIL-STD-202, Method 201 & 204 (10 g's from 10-2000 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)					
Solderability	Per EIAJ-STD-002					
Max. Soldering Conditions	See solder profile, Figure 1.					
Package Type	5x7 6-pad leadless ceramic. RoHS compliant.					
Application	COTS – Can be used for military programs					

III. Test/Screen Requirements:

Product Testing	All lots will be screened to MIL-PRF-55310 Level B requirements. See Appendix A.
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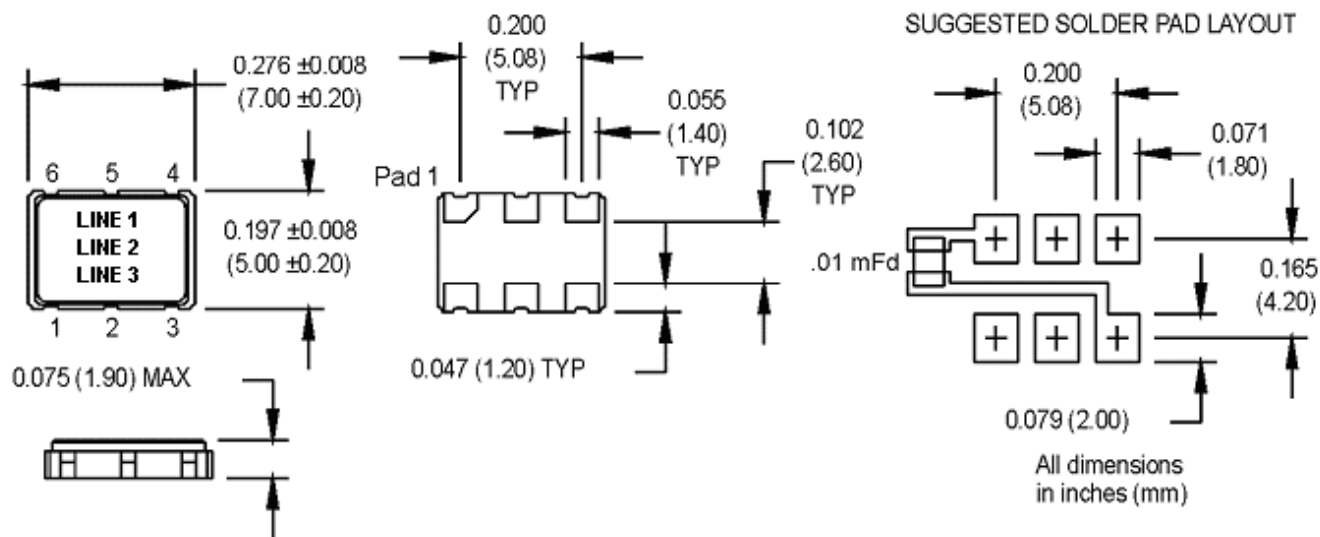
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IV. Mechanical, Marking, and Pin-Out Information:

Pad	Function
1	Control Voltage
2	N/C
3	Ground
4	Output
5	N/C
6	+V _{cc}

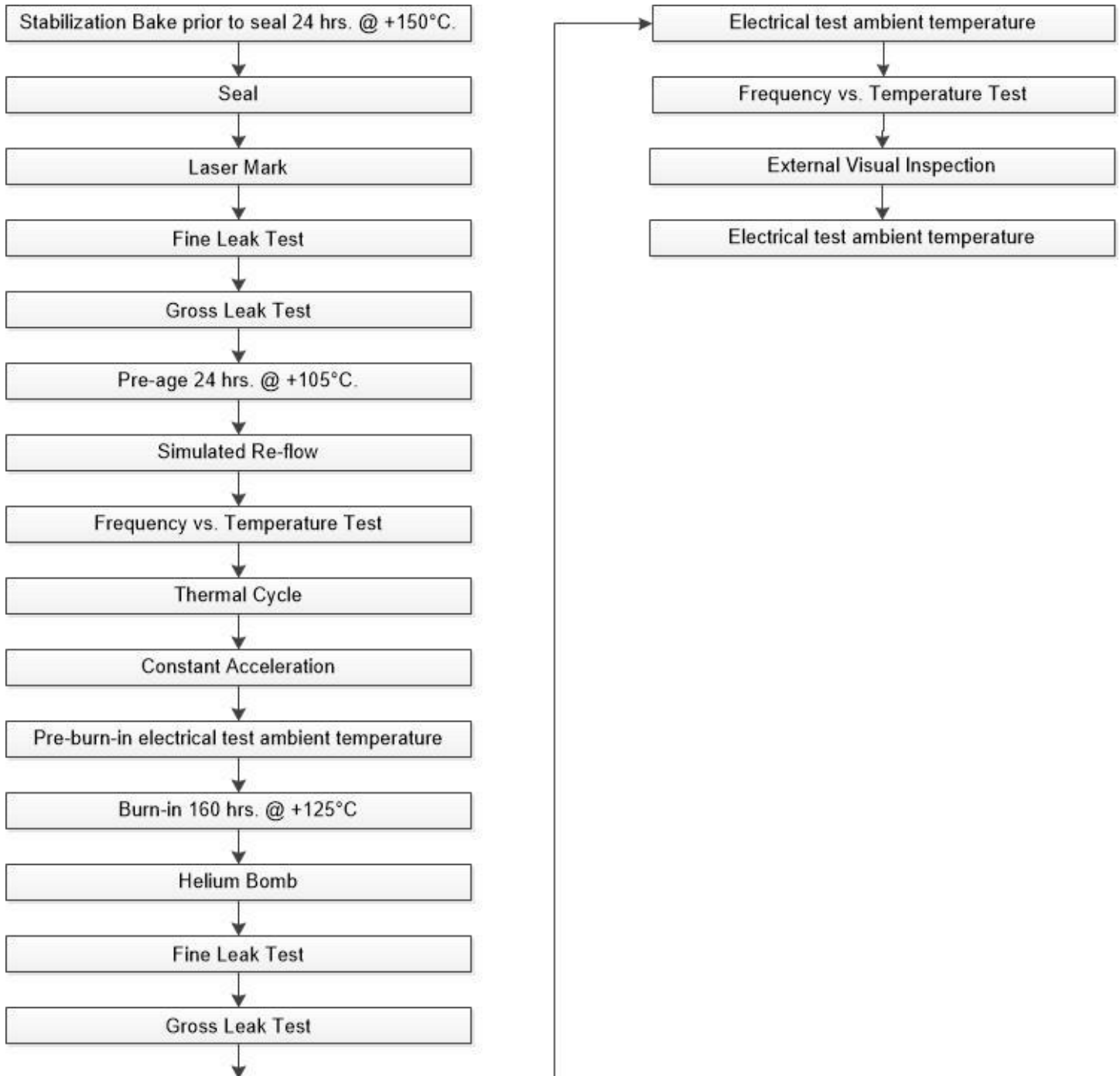
Part Marking	
Line 1	M3100S105
Line 2	90M0000
Line 3	MPTI (yyww)

Legend	
yy	Year
ww	Work Week

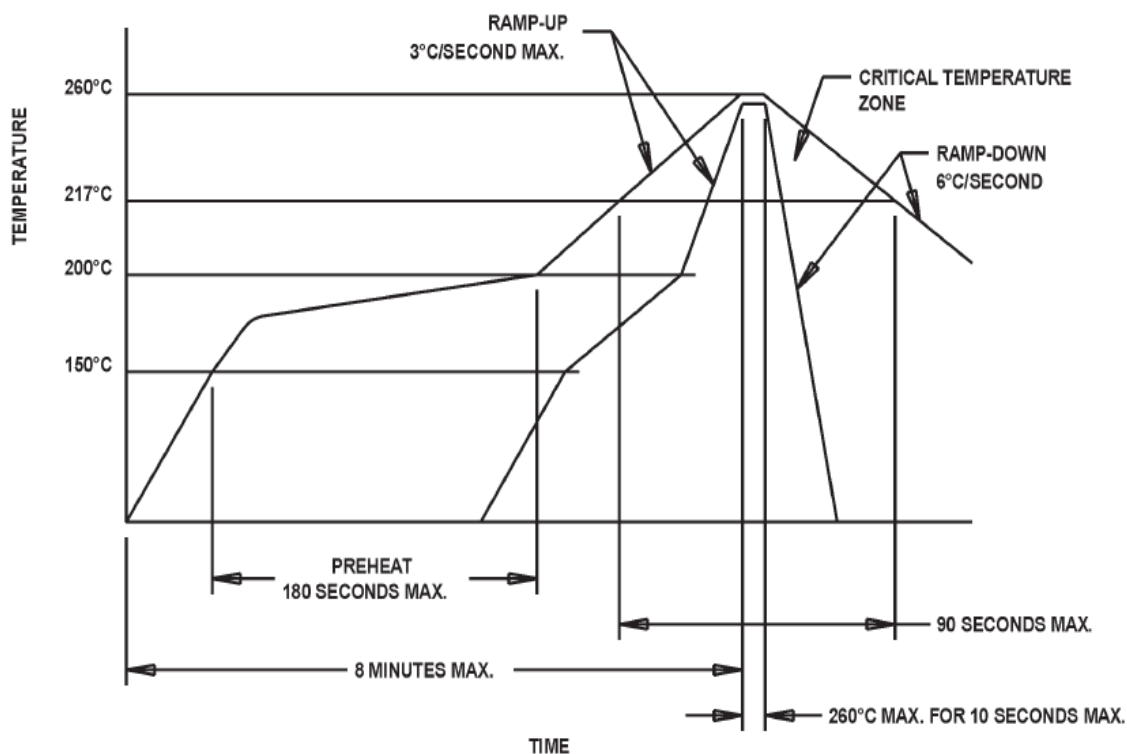


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V. APPENDIX A



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DATA SHEET REVISION TABLE:

Date	Rev.	Author	Details of Revision
09/14/18	0	MM	Original release.
11/14/18	A	MM	Datasheet update