

SPECIFICATION FOR RoHS 6 COMPLIANT HCMOS SMT OSCILLATOR MtronPTI Part Number M2532S121

I. General & Electrical Specifications:

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Frequency of Operation	F _o		100.000000		MHz	
Frequency Stability						
vs. Temperature	ΔF/F	-50		+50	ppm	Includes initial tolerance @ +25°C, deviation over operating temperature range, shock, vibration, supply voltage and output load change, and 1 year aging.
RF Output						
Output Type		HCMOS/TTL Compatible				
Output Load				15	pF	
Symmetry (duty cycle)	T _{DC}	45	50	55	%	Ref to 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			2	ns	10% to 90% V _{DD} HCMOS load
Tristate Function		70% V _{DD} or N/C			V	Pad 1: Output Enabled
				30% V _{DD}	V	Pad 1: Output Disabled to high-Z
Supply Voltage & Power Consumption						
Operating Voltage	V _{DD}	2.97	3.30	3.63	V	
Operating Current	I _{DD}			30	mA	
Other Parameters						
Phase Jitter			0.11	0.30	ps	Integrated Phase Noise 12 kHz – 20 MHz
Phase Noise			-70		dBc/Hz	10 Hz offset
			-101			100 Hz offset
			-130			1 kHz offset
			-149			10 kHz offset
			-154			100 kHz offset
			-158			1 MHz offset
			-159		10 MHz offset	

II. Environmental & Mechanical Specifications:

Operating Temperature	T _A	-40		+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 10-2000 Hz)					
Hermeticity	Per MIL-STD-202, Method 112 (1 x 10 ⁻⁸ atm cc/s of Helium)					
Max. Soldering Conditions	See solder profile, Figure 1					
Package Type	4-pad 2.5 X 3.2 X 1.1 mm leadless ceramic. RoHS compliant.					

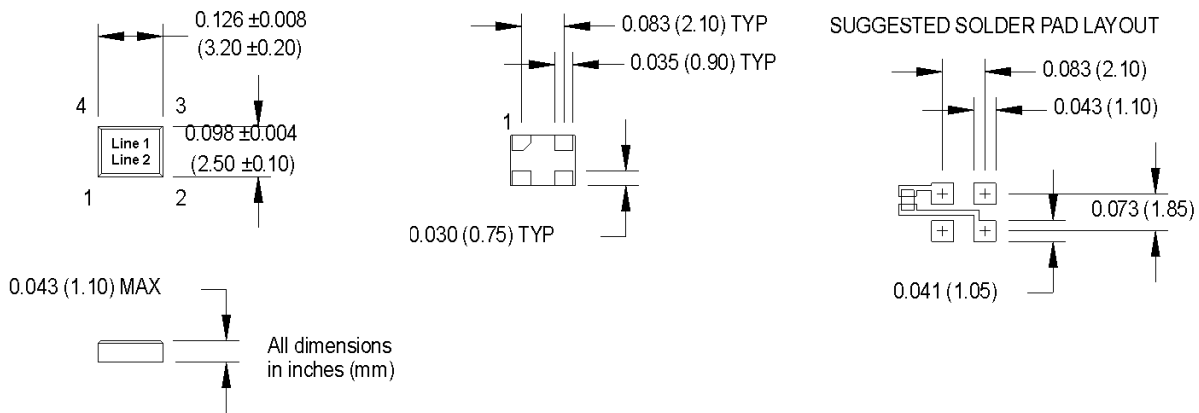
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III. Dimensions, Marking, and Pin Out Information:

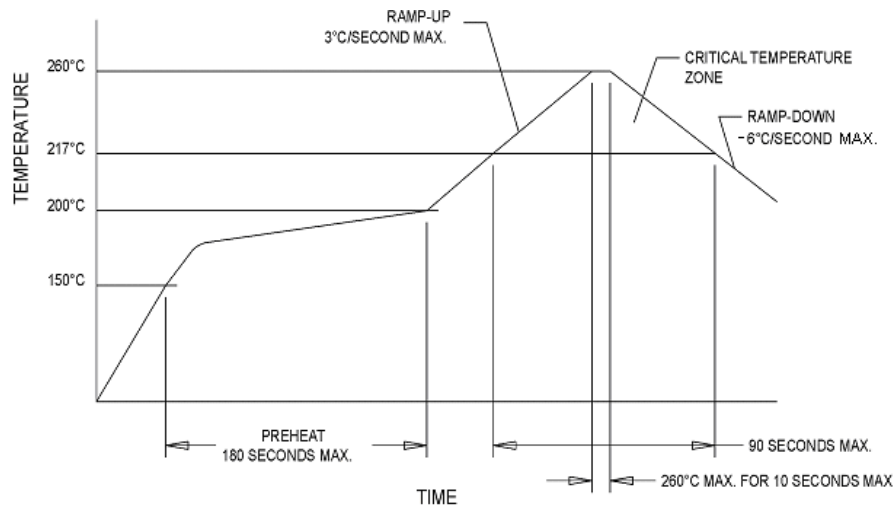
Pad	Function
1	Tristate
2	Ground
3	Output
4	+V _{DD}

Part Marking	
Line 1	100M000
Line 2	M y ww v

Legend	
y	Year
ww	Work week
v	Factory code

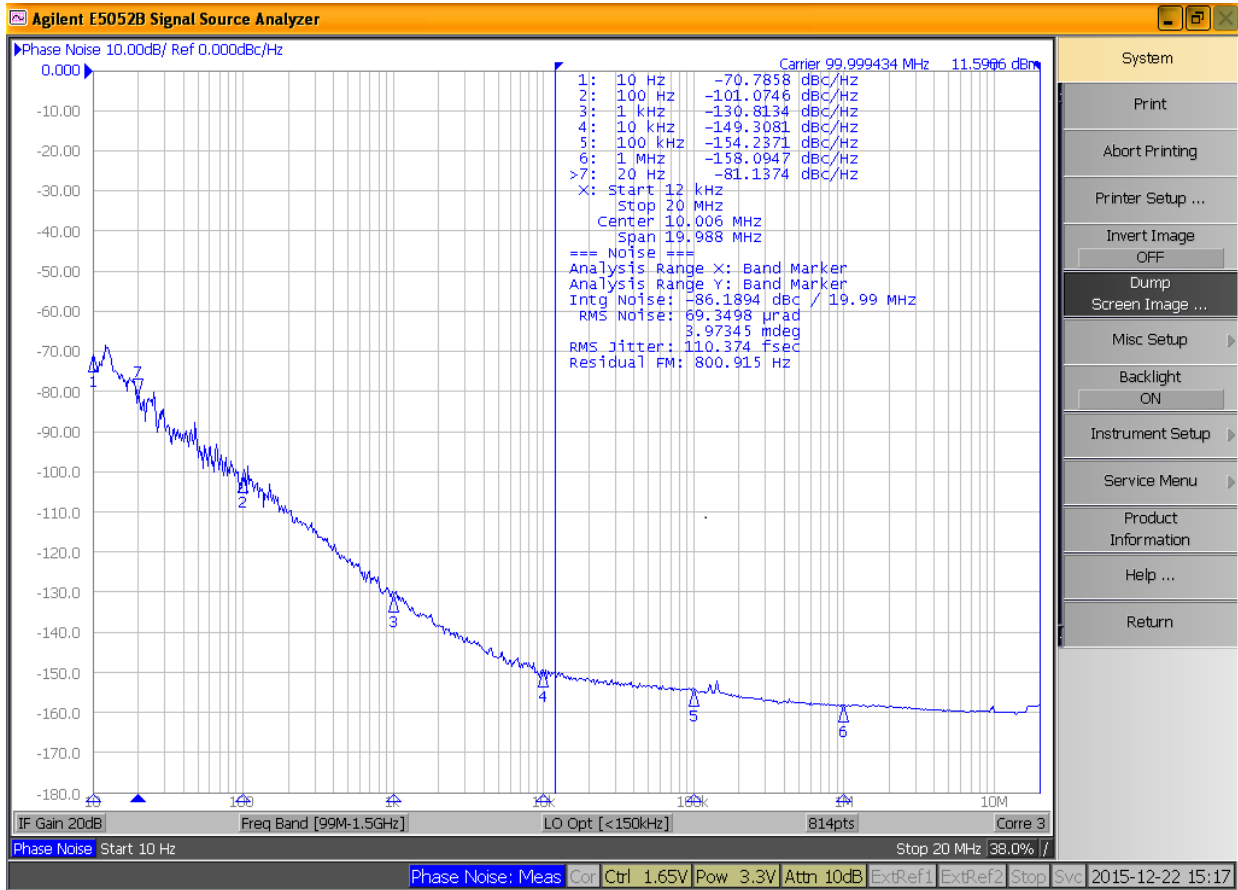


IV. Reflow Soldering Profile:



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V. Typical Phase Noise Graph:



VI. Datasheet Revision Table:

Date	Rev.	Author	Details of Revision
04/19/17	0	DCO	Original release
06/16/17	A	DCO	Added phase jitter spec, typical phase noise, and typical phase noise graph. Revised frequency marking to 3 decimal places.