

SPECIFICATION FOR HCMOS COMPATIBLE SMT OSCILLATOR

MtronPTI P/N: M2015S127

Electrical Specifications:

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Frequency of Operation	F _o		20.000000		MHz	
Frequency Stability						
Frequency Stability	ΔF/F	-100		+100	ppm	Includes initial tolerance, deviation over temperature, voltage, load, and 1 st year aging.
Aging		-3		+3	ppm	1 st year
		-2		+2	ppm	Thereafter (per year)
RF Output						
Output Type		HCMOS/TTL Compatible				
Output Load				50	pF	
Symmetry (duty cycle)	T _{DC}	40		60	%	Ref to ½ V _{DD}
Output Logic Levels	V _{OH}	V _{DD} - 0.4			V	I _{OH} = -4mA Max
	V _{OL}			0.4	V	I _{OL} = +4mA Max
Tristate Function		Logic 'High' or floating				Pin 1: Clock signal output
		Logic Low				Pin 1: Output disables to high Z
Rise/Fall Time	T _R /T _F			8	nS	From 2.4 V to 0.4 V
Start-Up Time	T _{STU}			10	mS	
Supply Voltage & Power Consumption						
Operating Voltage	V _{DD}	4.5	5.0	5.5	V	
Operating Current	I _{DD}			35	mA	

Environmental & Mechanical Requirements:

Operating Temperature	T _A	-40		+85	°C	Part must start up and run -55°C, though frequency accuracy requirements do not apply for device temperature below -40°C.
Storage Temperature	T _S	-55		+125	°C	
Mechanical Shock	Per MIL-STD-202, Method 213, Condition A					
Vibration	Per MIL-STD-202, Method 204, Condition B					
Moisture Resistance	Per MIL-STD-202, Method 106					
Altitude	50,000 feet above sea level					
Salt Spray	Per MIL-STD-202, Method 101, Condition B					
Temperature Cycle	Per MIL-STD-202, Method 107, Condition A					
Hermeticity	Per MIL-STD-202, Method 112C, Condition C					
Solderability	Per MIL-STD-202, Method 208D					
Max. Soldering Conditions	See solder profile, Figure 1					
Package Type	9 X 14 mm 4-J lead ceramic. Gold flash leads.					

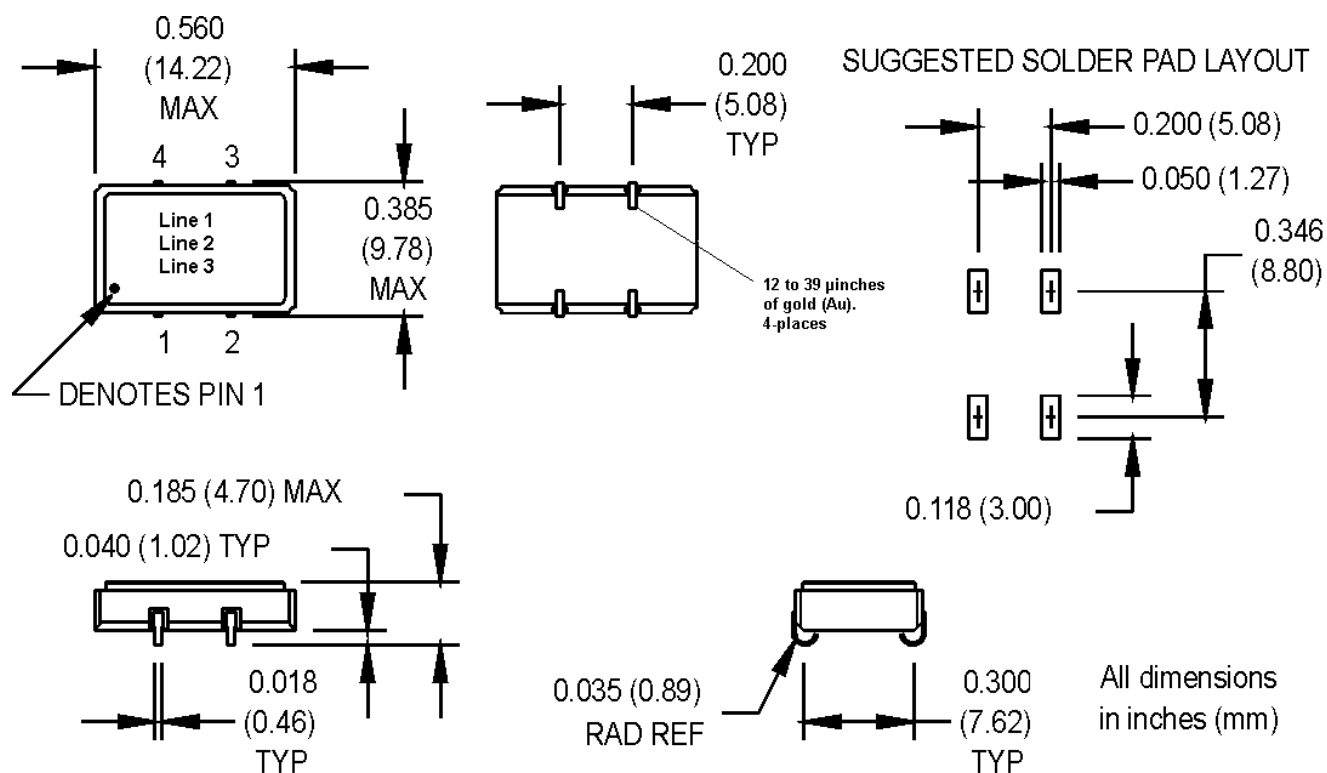
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Dimensions, Marking, and Pin Out Information:

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

Part Marking	
Line 1	M2015S127
Line 2	20M0000
Line 3	M yyww

Legend	
yy	Year
ww	Work week



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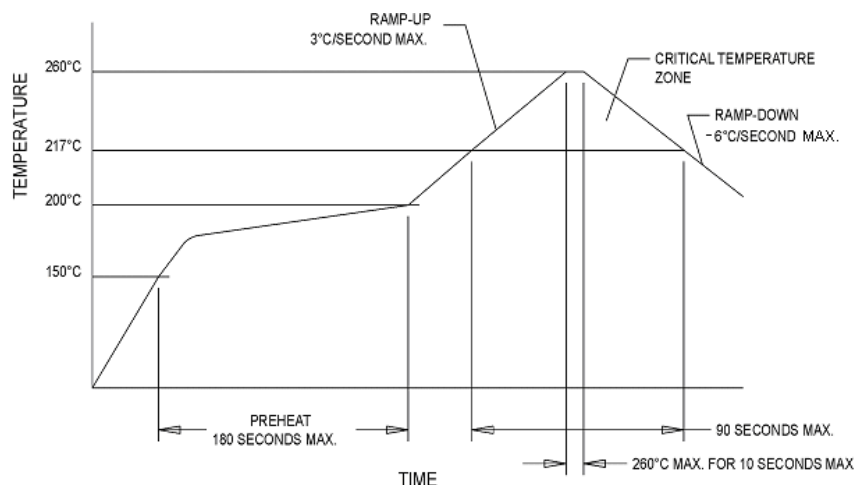


Figure 1

Datasheet Revision Table:

Date	Rev.	Author	Details of Revision
12/04/18	0	MM	Original release (M2907S002 Replacement)
02/26/19	A	MM	Added part must startup @ -55C.