

SPECIFICATION FOR 14- PIN DIP COMPATIBLE OSCILLATOR MtronPTI P/N M2014S143

Electrical Specifications:

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Frequency of Operation	F_o		50.000000		MHz	
Frequency Stability						
Frequency Stability	$\Delta F/F$	-50		+50	ppm	
RF Output						
Output Type		HCMOS/TTL Compatible				
Output Load				50	pF	
Symmetry (duty cycle)	T_{DC}	45		55	%	Ref to $\frac{1}{2} V_{DD}$
Logic "1" Level	V_{OH}	90% V_{DD}			V	HCMOS load
		$V_{dd} - 0.5$			V	For TTL load
Logic "0" Level	V_{OL}			10% V_{DD}	V	HCMOS load
				0.5	V	For TTL load.
Rise/Fall Time	T_R/T_F			10	nS	From 10% to 90% V_{DD}
Start-Up Time				10	mS	
Supply Voltage & Power Consumption						
Operating Voltage	V_{DD}	4.5	5.0	5.5	V	
Operating Current	I_{DD}			45	mA	
Other Parameters						
Period Jitter	P_J			50	pS	Pk-Pk
				5		RMS
Phase Jitter	Φ_J			1.0		RMS, 12KHz to 20MHz

Environmental Conditions:

Operating Temperature	T_A	-20		+70	°C	
Storage Temperature	T_S	-55		+125	°C	
Shock	1,500g's, 0.5mS duration, $\frac{1}{2}$ Sinewave, 3 shocks each direction along 3 mutually perpendicular planes (18 total shocks).					
Vibration (Sinusoidal)	0.06 inches double amplitude, 10 to 55 Hz and 20g's, 55 to 2,000 Hz, 3 cycles each in 3 mutually perpendicular planes (9 times total)					
Temperature Cycle	400 cycles from -55°C to $+125^\circ\text{C}$, 10 minute dwell at each temperature, 1 minute transfer time between temperatures.					
Humidity	85% R.H. @ $+85^\circ\text{C}$ for 250 hrs.					
Hermeticity	Per MIL-STD-202, Method 112 (1×10^{-8} atm cc/s of Helium)					
Solderability	Per EIAJ-STD-002					
High Temperature Operating Bias	2,000 hours at $+125^\circ\text{C}$, maximum bias, disregarding frequency shift.					
Frequency Aging	1,000 hours at $+85^\circ\text{C}$, full bias, less than ± 5 ppm shift.					
Max. Wave Soldering Conditions	$+260^\circ\text{C}$ for 10 secs.					
Moisture Sensitivity Level	Level 1 per JEDEC J-STD-020					
Package Type	14-Pin DIP compatible resistance weld. RoHS compliant.					

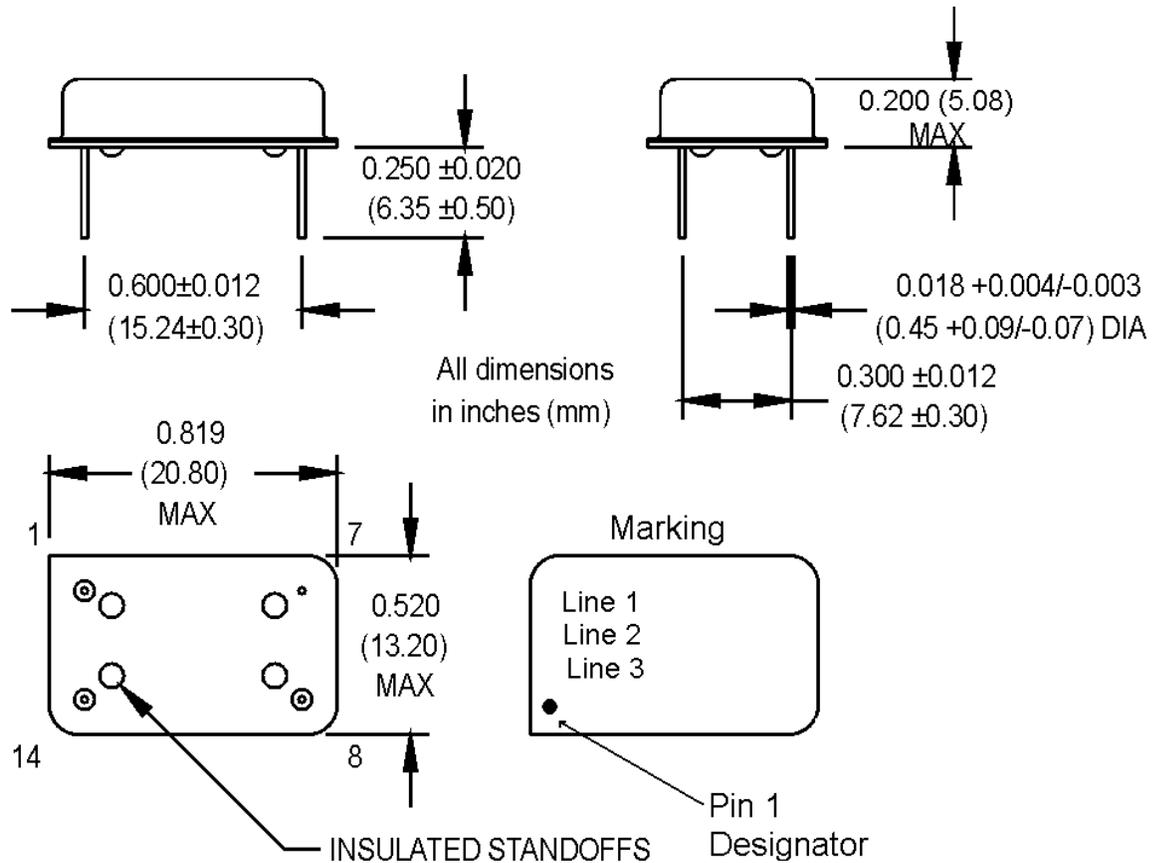
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Dimensions, Marking, and Pin Out Information:

Pad	Function
1	N/C
7	Ground / Case
8	Output
14	+V _{DD}

Part Marking	
Line 1	M2014S153
Line 2	50.000000 MHz
Line 3	M yywwvv

Legend	
yy	Year
ww	Work Week
vv	Factory Code



Datasheet Revision Table:

Date	Rev.	Author	Details of Revision
9/9/13	0	MM	Original release.
10/29/13	A	MM	Updated current specification