2525 Shader Road Orlando Florida 32804 USA
Phone: 407-298-2000 Fax: 407-293-2979
Website: www.mtronpti.com AMEX: LGL

Specification for a CMOS 9x14mm 100MHz SMD VCXO
MtronPTI P/N: XO7013-001R

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Nominal Frequency	F_O		100.000000		MHz	
Frequency Stabilities						
Absolute Pull Range (APR)		+/-20			ppm	APR = (Pull range) - (degradations due to temperature+aging+power supply+load+ initial tolerance+shock+ vibration)
Aging (1st Year)				3	ppm	
Aging (after 1st year)				1	ppm/yr	
RF Output						
Output Type			CMOS			
Output Load			15		pF	
Symmetry		45	50	55		@50% Vdd
Rise/Fall time			3		nsec	@ 20% to 80% Vdd
Logic Level "low"				10% Vdd		
Logic Level "High"		90% Vdd				
Frequency Adjustment						
Adjustment Method			External Voltage			
Adjustment Voltage	V_{TUNE}	0	1.65	3.3	V_{DC}	
Tuning Sensitivity			25		ppm/V	
Linearity				5%		
Modulation Bandwidth		10			KHz	
Input Impedance			50		Kohm	
Adjustment Slope			Positive			
Additional Parameters						
Phase Noise			-140		dBc/Hz	1kHz Offset
			-155		dBc/Hz	10kHz Offset
			-164		dBc/Hz	100kHz Offset
			-166		dBc/Hz	1MHz Offset
Integrated Jitter			40		fsec	12 kHz to 20 MHz
Sub-harmonics			None			
Temperature, Supply Voltage & Power Consumption						
Operating Temperature	OTR	-40		+85	°C	Full Specification Compliance
Storage Temperature	STR	-55		+85	°C	
Operating Voltage	V_{dd}	3.0	3.3	3.6	V_{DC}	
Input Current				35	mA	

Mechanical and Environmental Conditions:

Seal	Non-Hermetic and non-washable unit.
RoHS	Full RoHS Compliance
Shock	MIL-STD-883, Method 2002, Condition B
Solderability	MIL-STD-883, Method 2003
Vibration	MIL-STD-883, Method 2007, Condition A
Solvent Resistance	MIL-STD-202, Method 215
Resistance to Soldering Heat	MIL-STD-202, Method 210, Condition I or J
Thermal Shock	MIL-STD-883, Method 1011, Condition A

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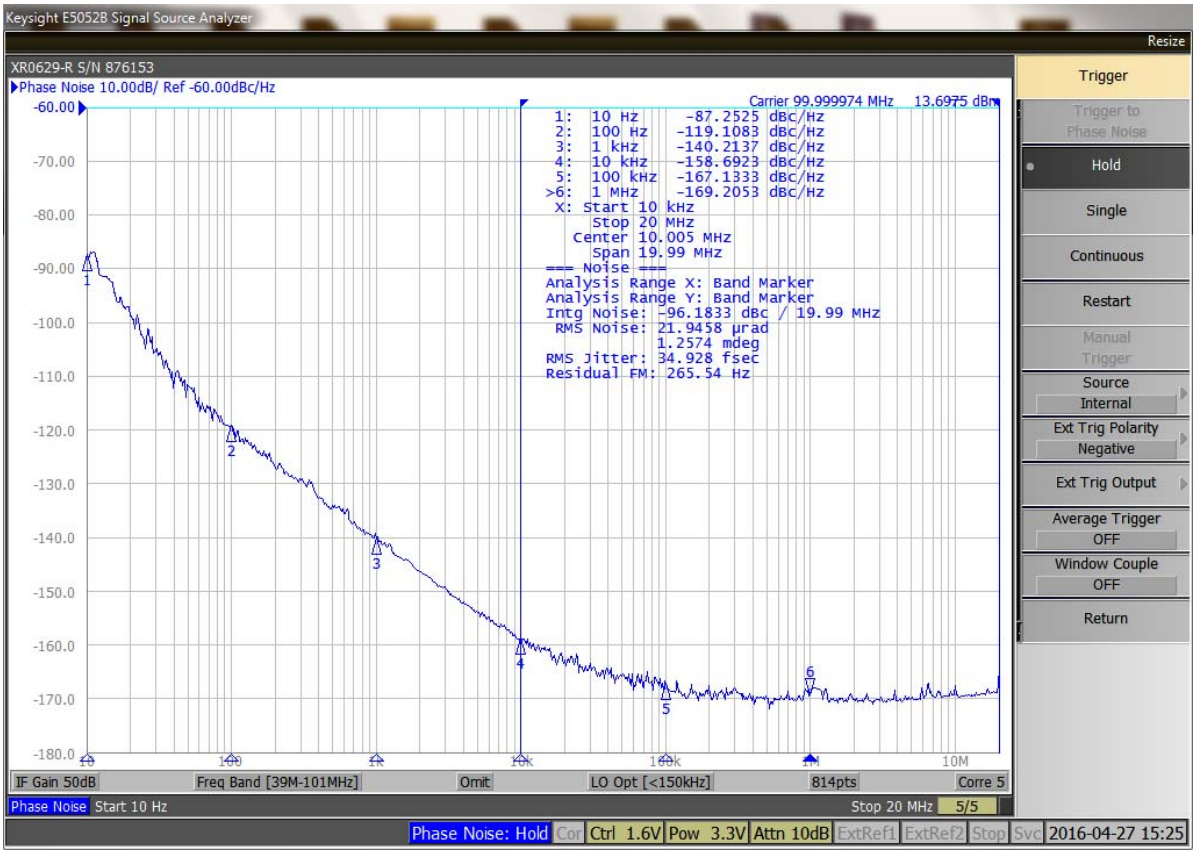
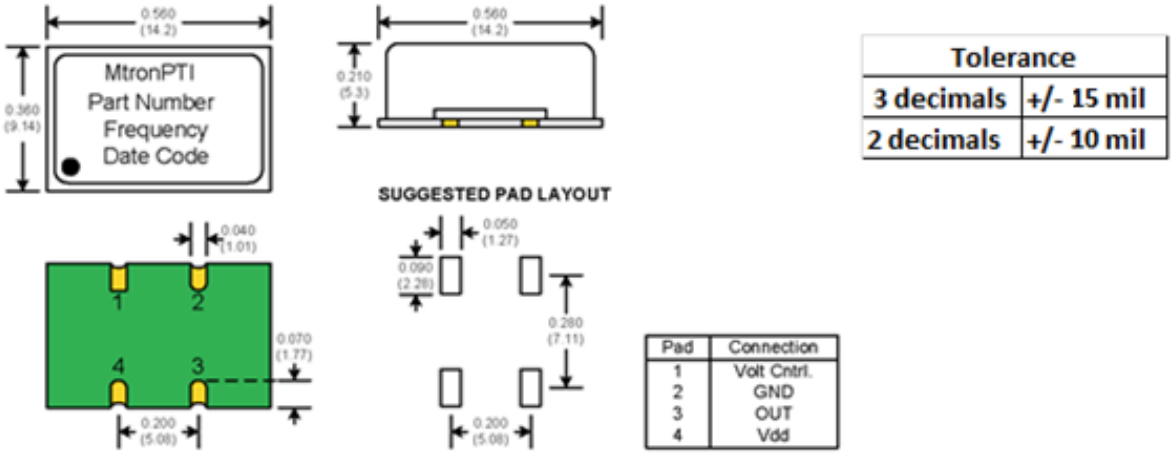
Moisture Resistance	MIL-STD-883, Method 1004

Representative Phase Noise Plot:



Outline Marking and Pin-out:



Tolerance	
3 decimals	+/- 15 mil
2 decimals	+/- 10 mil

Pad	Connection
1	Volt Cntrl.
2	GND
3	OUT
4	Vdd

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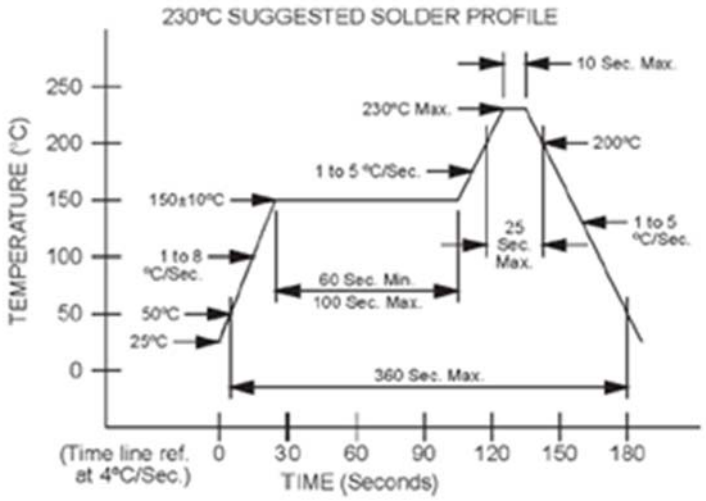
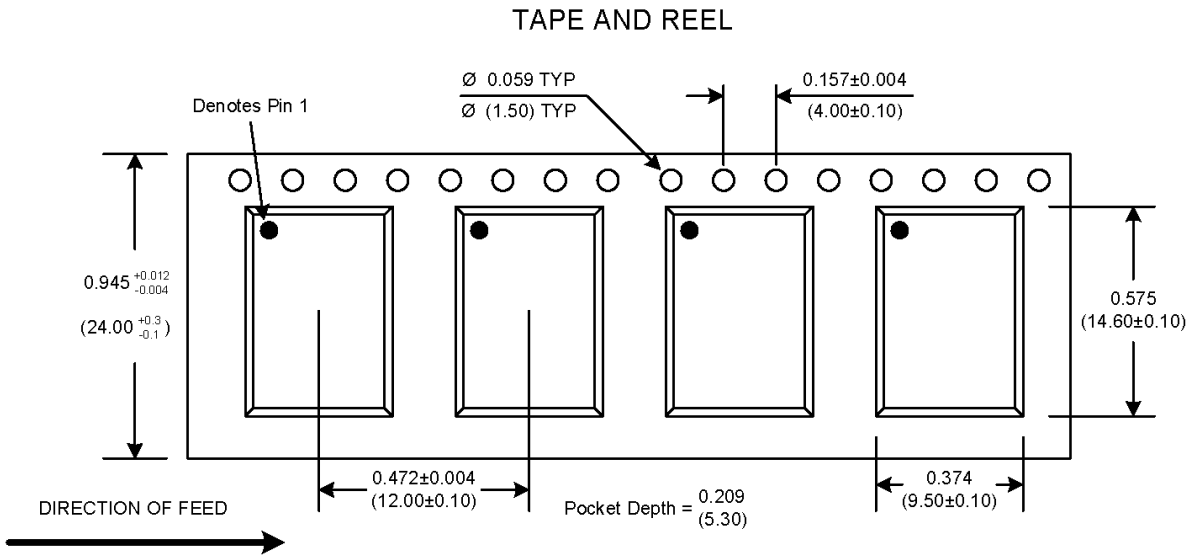
Recommended Reflow Profile:



Tape and Reel:



Data Sheet Revision Table:

Date	Rev.	Orig.	Details of Revision
05-04-16	A	DPD	Original Draft.