SPECIFICATION FOR 3.2x2.5mm 3.3V LVDS SMT OSCILLATOR
MtronPTI P/N: M2065S005

Electrical Specifications:

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Frequency of Operation	F_O		100.000000		MHz	
Frequency Stability						
Frequency Stability	ΔF/F	-50		+50	ppm	Including calibration tolerance at +25C, deviation over operating temperature range, supply voltage, reflow soldering, and 1 year aging at +50 °C
RF Output						
Output Type		LVDS Compatible				
Output Load		100 ohms between the two outputs			Ω	
Symmetry (duty cycle)	V_{OH}	45		55	%	@ 50% of waveform
Differential Output Voltage	V_{DIFF}	247	330	454	mV	peak-to-peak differential output voltage
Output Offset Voltage	V_{OS}	1.125	1.250	1.375	V	
Offset Voltage Error				0.050	V	
Logic Level “1”			1.430	1.600	V	
Logic Level “0”		0.900	1.100		V	
Rise/Fall Time	T_R/T_F			0.50	nS	From 20% to 80% of differential waveform
Start-up Time	T_{SU}		5	10	mS	$T_{ambient}$ = +25°C
Enable Logic (Pad 1)		70% V_{CC} or N/C			V	Output Enabled
Disable Logic (Pad 1)				30% V_{CC}	V	Output Disabled to high-Z
Output Disable Time				200	ns	
Supply Voltage & Power Consumption						
Operating Voltage	V_{CC}	3.135	3.300	3.465	V	
Operating Current	I_{CC}			35	mA	
Other Parameters						
Phase Jitter	Φ_J		0.15	0.35	ps	Integrated phase noise, 12 kHz – 20 MHz
Phase Noise			-77		dBc/Hz	10 Hz offset
			-114			100 Hz offset
			-136			1 kHz offset
			-148			10 kHz offset
			-155			100 kHz offset
			-155			1 MHz offset
			-155			10 MHz offset

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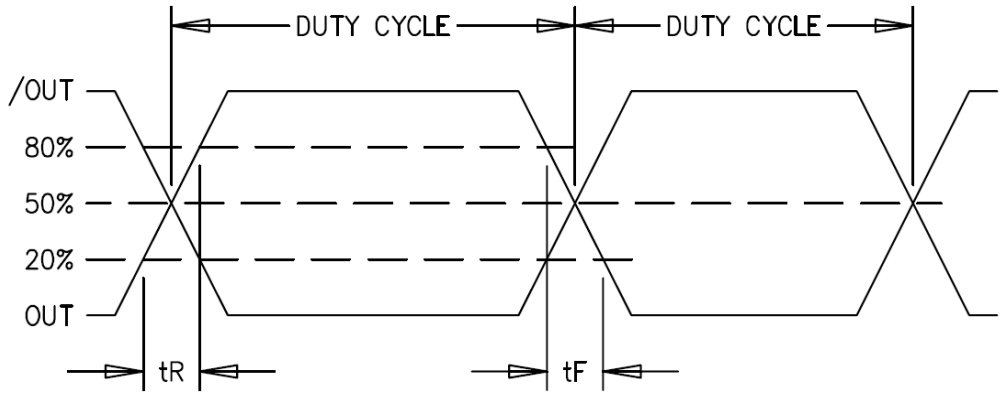
Environmental & Packaging Requirements:

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)					
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	2.50mm (typ.) x 3.20mm (typ.) x 1.10mm (max) 6-pad leadless ceramic. RoHS compliant.					

Output Waveform:



Marking and Pin Out:

Pad	Function
1	Enable Control
2	No Connection
3	Ground
4	Output 1 (Q)
5	Output 2 (Q-bar)
6	$+V_{DD}$

Part Marking	
Line 1	100M000
Line 2	M yy ww vv

Legend	
yy	Year
ww	Work Week
vv	Factory code

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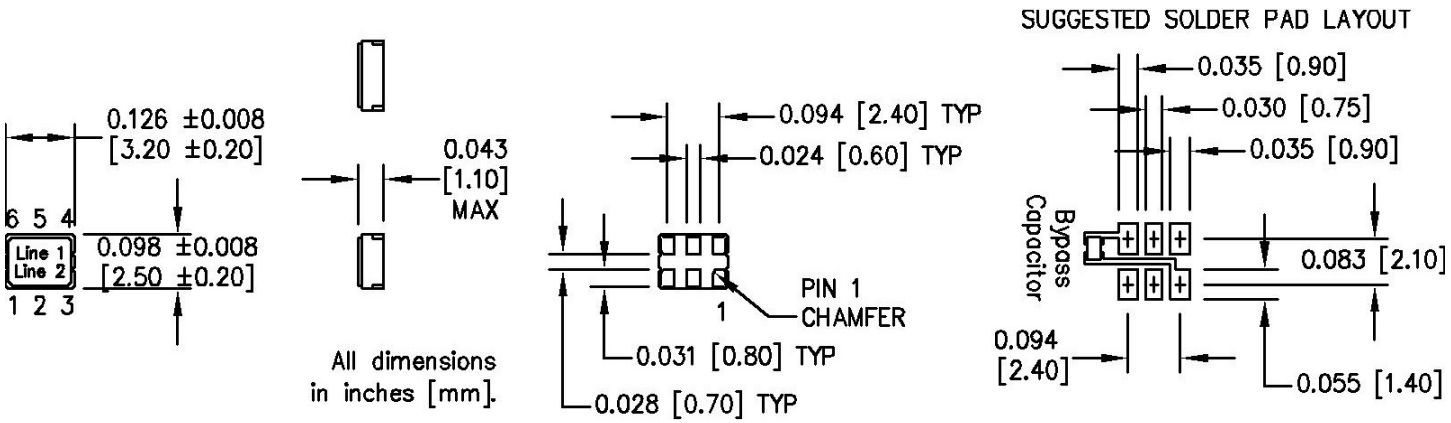
Dimensions:



Soldering Conditions:

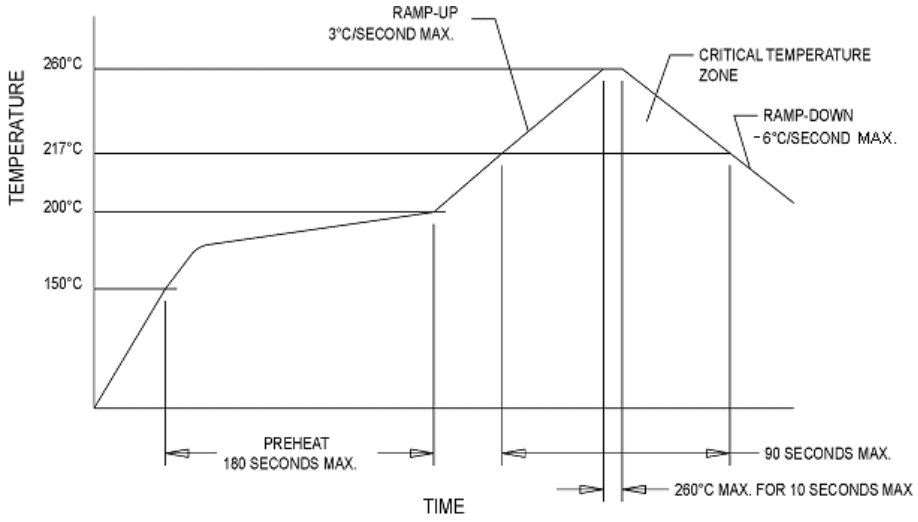


Figure 1

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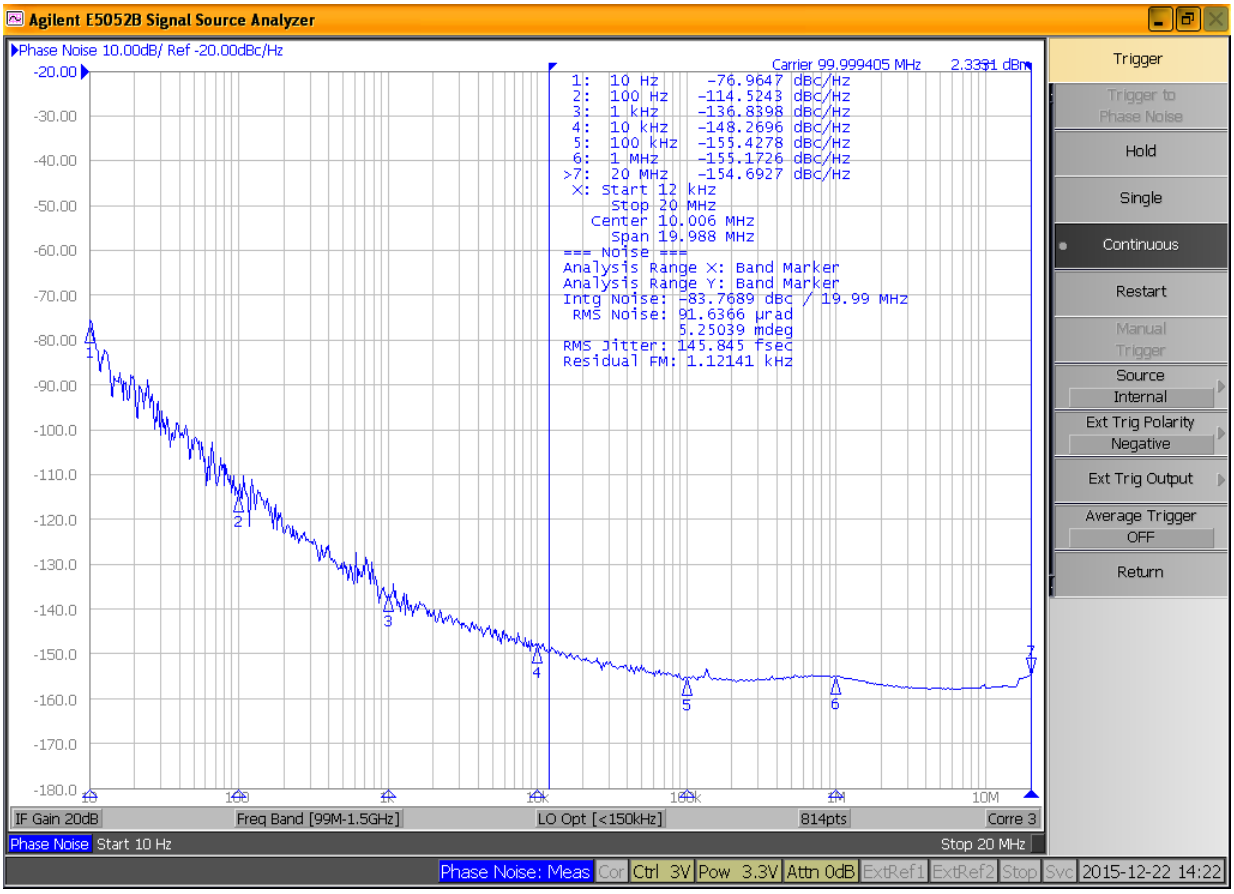
Typical Phase Noise Graph:



Datasheet Revision Table:

Date	Rev.	Author	Details of Revision
04/19/17	0	DCO	Original release.
06/16/17	A	DCO	Added typical phase noise graph; revised typical phase noise numbers in table on page 1 to match phase noise graph; revised frequency marking to 3 decimal places.