Dynamic Engineers Inc.
2550 Gray Falls Dr., Suite#128, Houston, TX, 77077 USA
TEL: 1-281-870-8822 EMAIL:Sales@DynamicEng.com

XO7500S-25MHz-B
SMD 7 mm x 5 mm XO

Features and Benefits

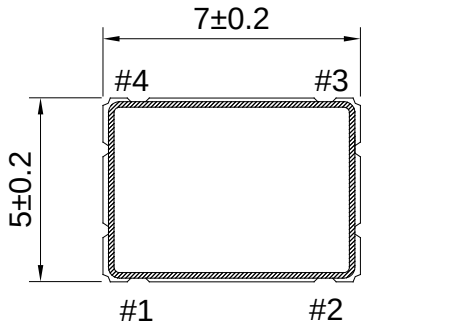
SMD 7mm x 5mm size
-141dBc/Hz @ 1 KHz offset typical
Less than 10mA max.
CMOS output

Typical Applications

Clock reference

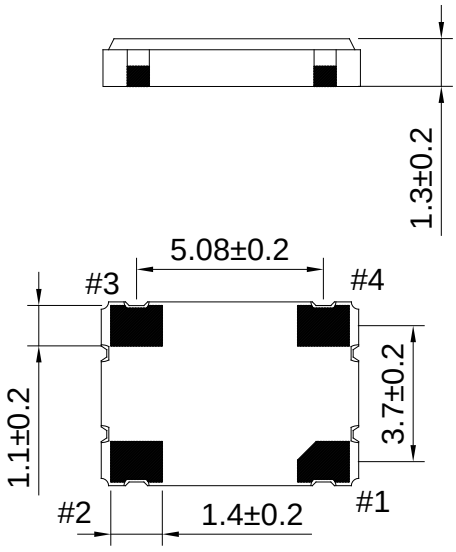
Mechanical Drawing & Pin Connections

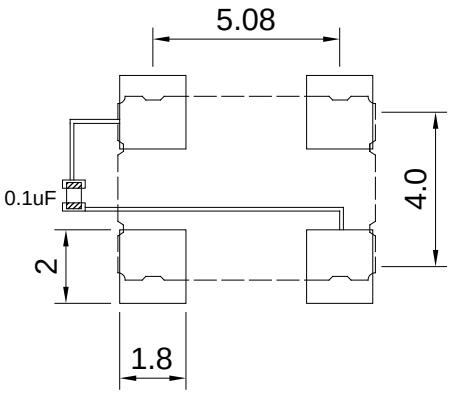
Drawing No: **MD150027-2**



Pad	Function
#1	Tri-State/NC
#2	GND
#3	Output
#4	VDD

Unit : mm
1mm=0.0394inch





To ensure optimal oscillator performance, place a by-pass capacitor of 0.1uF as close to the part as possible between Vdd and GND pads.

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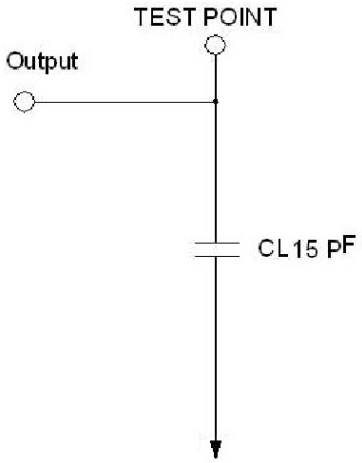
Specifications

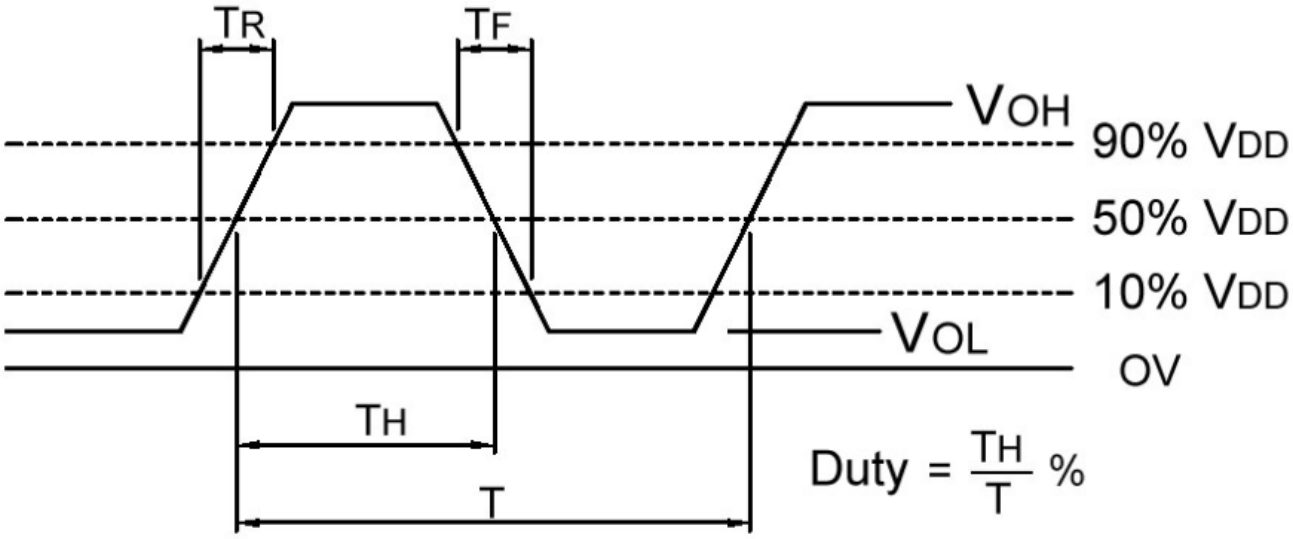
Frequency		Min.	Typ.	Max.	Units	Test Conditions
Nominal Frequency			25.000000		MHz	
Frequency Stability		-25		25	ppm	Frequency stability includes: - frequency tolerance @25°C - frequency stability vs. operating temperature range - voltage variance - load variance -first year aging.
Operating Temperature		-40		+85	°C	The operating temperature range over which the frequency stability is measured
Storage Temperature		-55		+125	°C	
RF Output		**Min.**	**Typ.**	**Max.**	**Units**	**Test Conditions**
Output Waveform			CMOS			
Duty Cycle		45	50	55	%	
Start Time				5	mSec	
Transition Time Rise / Fall Time				5	nSec	
Output Level	Output High (Logic "1")	2.97			V	
	Output Low (Logic "0")			0.33	V	
Output Load				15	pF	
Tri-State	Output Active	2.31 or floating			V	Pin 1 Tri-state
	Output in High-Impedance State			0.99	V	
Power Supply		**Min.**	**Typ.**	**Max.**	**Units**	**Test Conditions**
Supply Voltage		2.97	3.3	3.63	V	
Supply Current				10	mA	At maximum supply voltage
Phase Noise		**Min.**	**Typ.**	**Max.**	**Units**	**Test Conditions**
100Hz offset			-117		dBc/Hz	@26MHz & 3.3V at 25°C
1KHz offset			-141			
10KHz offset			-157			
100KHz offset			-162			
1MHz offset			-162			
Jitter		**Min.**	**Typ.**	**Max.**	**Units**	**Test Conditions**
Period Jitter (Pk-Pk)				40	pSec	
RMS Phase Jitter				1	pSec	12KHz to 20MHz @26MHz at 25°C

Environmental Conditions	Reference Standard	Test Condition
Thermal Shock	MIL-STD-883 1010 Condition B; JESD22-A104 Condition B	-55°C, +125°C, 10 mins soak time, with total 200 cycles
Mechanical Shock	MIL-STD-883 2002 Condition B; JESD22-B104 Condition B	1500G, half-sine, 0.5ms, each axis for 3times.
Vibration Test	MIL-STD-883 2007 Condition A, JESD22-B103 Condition 1	10-2000Hz, 1.52mm, 20g, each axis for 4 hrs

Test Circuit (CMOS Load)



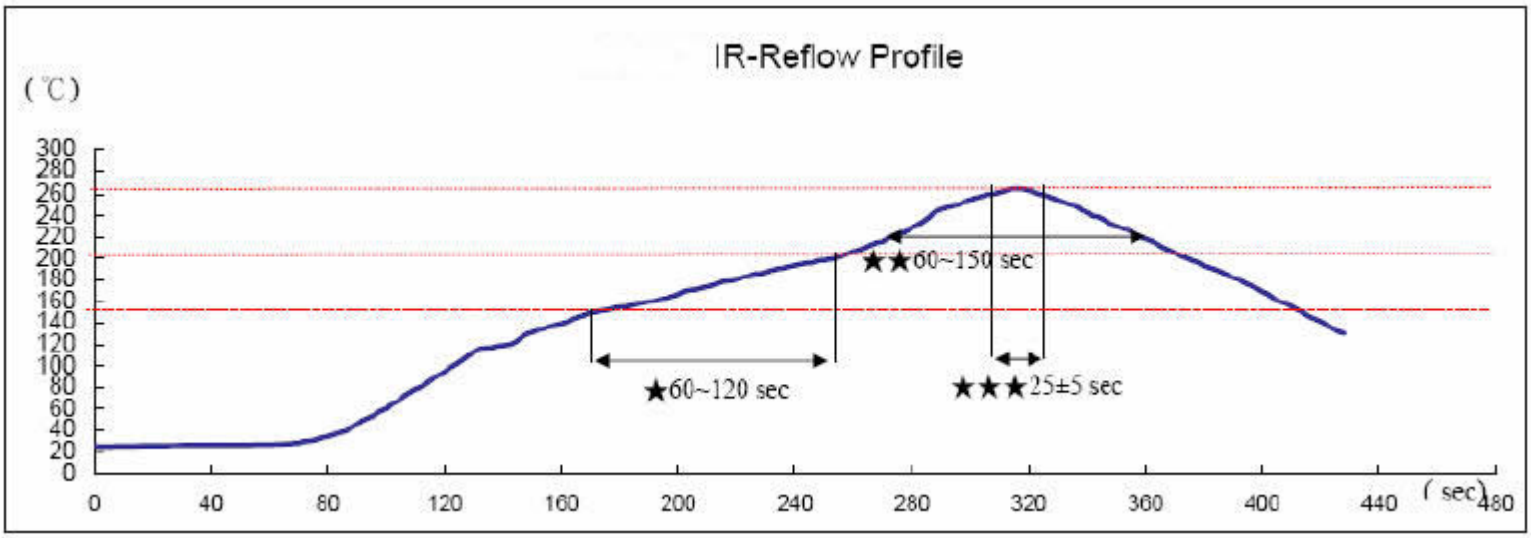
Output Waveform (CMOS Load)



Recommended IR Reflow Profile

- IR reflow profile of ceramic SMD products for Pb free process

Reference Standard: JEDEC-STD 020



Test Conditions: Pre-heating: 150°C to 200°C, 60~120 secs

Heating: 217°C, 60~150 secs

Peak temperature: 260±5°C, 25±5 sec.