

## SMD SPXO 5.0x3.2mm 2.5 VDC MHz

### FEATURES

- High reliability for low cost
- Low-priced SMD-clock-oscillator
- Frequency stability from  $\pm 20$  to  $\pm 100$  ppm available
- Supply voltage of 1.8, 2.5, 2.8, 3.3 and 5.0 VDC deliverable
- New standard for small low cost oscillators
- Extended temperature range  $-40^{\circ}\text{C}$  to  $+105^{\circ}\text{C}$

Pb-free  
 RoHS-2 2011/65/EU  
 compliant

### GENERAL DATA

SMD-OSCILLATOR SERIES		SXO25-05032	
PACKAGE		Ceramic package 5.0 x 3.2 x 1.2 mm <sup>3</sup>	
FREQUENCY RANGE		1.0 ~ 160.0 MHz	
FREQUENCY STABILITY		-10/+60°C ~ -10/+70°C	$\pm 20 \sim \pm 100$ ppm
		-20/+70°C ~ -40/+85°C	$\pm 25 \sim \pm 100$ ppm
		-40/+105°C	$\pm 50 \sim \pm 100$ ppm
		The frequency stability contains the frequency tolerance at 25°C, the temperature stability, supply voltage change and load change. The aging is $\pm 3$ ppm max. per year.	
OPERATING TEMPERATURE RANGE		-10/+60°C ~ -40/+105°C	
STORAGE TEMPERATURE RANGE		-55/+125°C	
INPUT	VOLTAGE	+2.5 VDC $\pm 10\%$	
	CURRENT	1.0 ~ 4.0 MHz=10 mA max.	
		4.0 ~ 45.0 MHz=30 mA max.	
		45.0 ~ 112.0 MHz=45 mA max.	
		112.0 ~ 160.0 MHz=90 mA max.	
		Lower input currents are available on request. Please indicate the special value when required.	
OUTPUT	SYMMETRY	STANDARD	40/60%
		OPTION	45/55%
	RISE AND FALL TIME	5ns typical /10ns max.	
	"0" LEVEL	0.4 V max.	
	"1" LEVEL	TTL 2.5 VOLT	+2.4 V min.
	"0" LEVEL	10% VDD min.	
	"1" LEVEL	CMOS 2.5 VOLT	90% VDD max.
LOAD	TTL	1 ~ 5 TTL	
	CMOS	15 pF max.	
PIN 1	STANDARD	WITHOUT ENABLE / DISABLE FUNCTION	
	OPTION	WITH ENABLE / DISABLE FUNCTION	
DELIVERY FORM		Tape & Reel / 1.000 pcs. per reel, lower QTY possible	
<b>OTHER PARAMETERS ARE AVAILABLE ON REQUEST / CREATE HERE YOUR SPECIFICATION</b>			

CRYSTALS  
 OSCILLATORS  
 CERAMIC RESONATORS

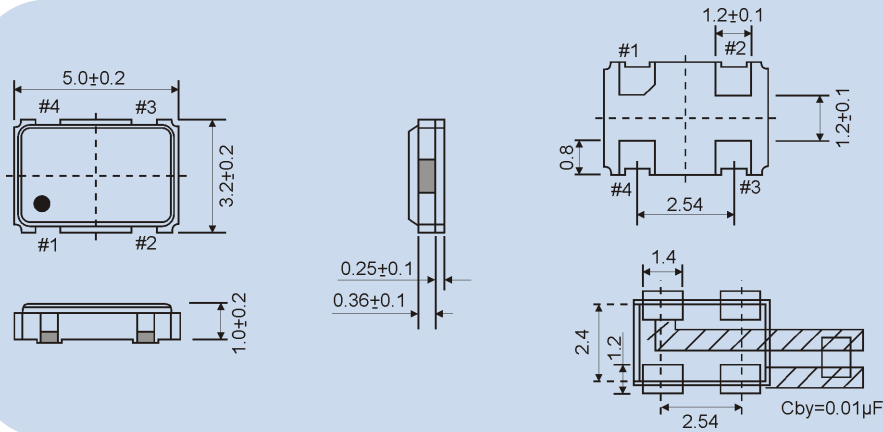


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CERAMIC FILTERS  
 SAW COMPONENTS

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## OUTLINE DRAWING

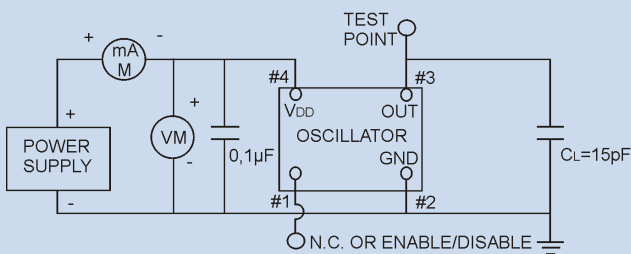


PIN	FUNCTION
#1	N.C. OR ENABLE / DISABLE
#2	GROUND
#3	OUTPUT
#4	VDD

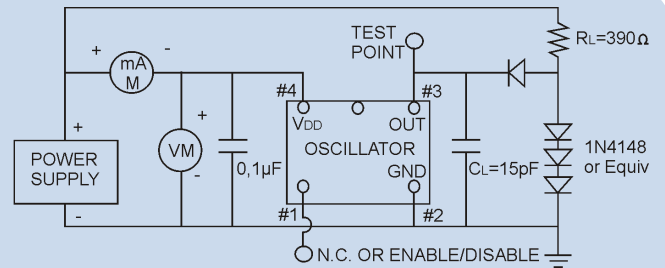
Unit:mm

## TEST CIRCUIT FOR CMOS

## TEST CIRCUIT FOR TTL



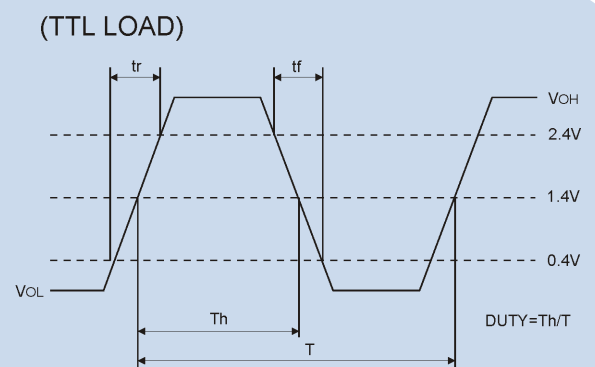
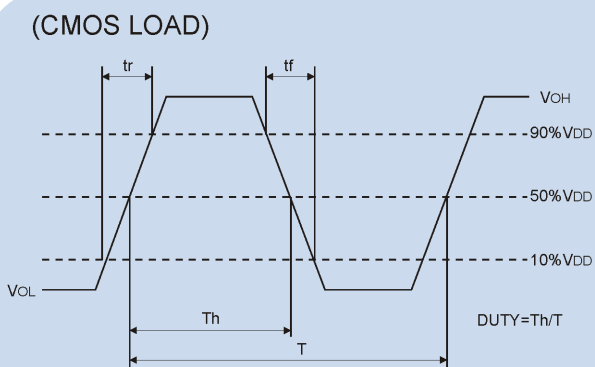
NOTE: CL includes probe and fixture capacitance



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## OUTPUT WAVE FORM CMOS

## OUTPUT WAVE FORM TTL LOAD



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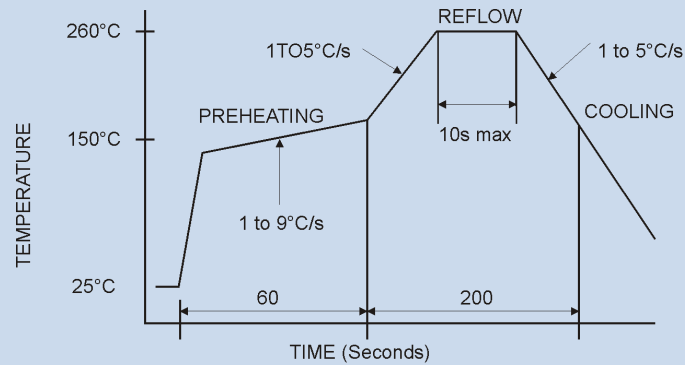


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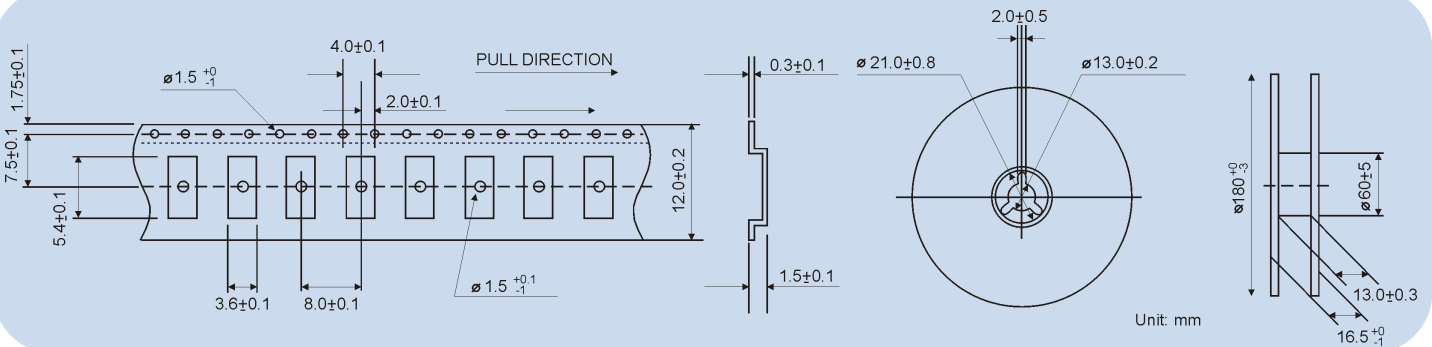
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## REFLOW SOLDER PROFILE



Oscillators can be soldered according to the norm JEDEC J-STD-020C.

## REEL SPECIFICATION



## PIN1 ENABLE/DISABLE

	PIN #1 (E/D CONTROL)	PIN #3 (OUTPUT)
ENABLE / DISABLE FUNCTION	OPEN	ACTIVE
	HIGH "1" (VIH >70%VDC)	ACTIVE
	LOW "0" (VIL <30%VDC)	HIGH IMPEDANCE
	OUTPUT DISABLE TIME	150 ns max.
	OUTPUT ENABLE TIME	10 ms max.

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## ORDERING INFORMATION

Series & Voltage	Symmetry	PIN1	Frequency Stability	Temperature Range Options	Frequency	Delivery Form
SX025-05032	B*=40/60% or S=45/55%	B*= NO E/D or E = E/D	B*= 100ppm or O=20~50ppm	B*= 0+70°C N=-10+60°C M=-20+70°C W=-40+85°C Y=-40+105°C	27.000 MHz	T

**Example: SXO25-05032-S-E-50-W-27.000MHz-T**  
 PLEASE INDICATE YOUR REQUIRED PARAMETERS

\*B=BLANK, S=SPECIAL, E=ENABLE/DISABLE, O=OPTION, T=TAPE AND REEL

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