

# Temperature Compensated Crystal Oscillator



## YSO510TP TCXO



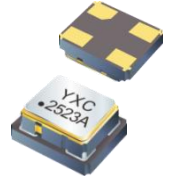
### Applications

- High-Precision  
Intelligent electronic  
Devices

### Features

- Frequency stability as tight as  $\pm 1.0$  ppm  
over  $-40^{\circ}\text{C}$  to  $85^{\circ}\text{C}$   
- Ultra Small SMD seam sealed crystal  
oscillator units.

- Package Size : 2.0\*1.6, 2.5\*2.0,  
3.2\*2.5, 5.0\*3.2, 7.0\*5.0mm  
- High Precision Characteristic covering  
Up to wide Frequency Range.



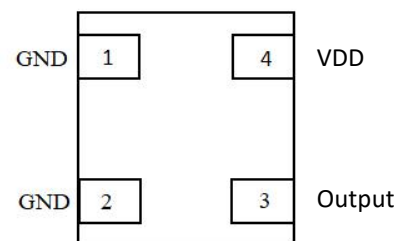
## Specifications

Item/Type	Clipped Sine wave or CMOS					
Package Size	2.0 x 1.6	2.5 x 2.0	3.2 x 2.5	5.0 x 3.2	7.0 x 5.0	
Frequency Range	26~52MHz	13~52MHz	13~52MHz	6.4~52MHz	6.4~52MHz	
Supply Voltage	1.8V, 2.5V, 3V, 3.3V					
Operating Temperature Range	$-30\sim+85^{\circ}\text{C}$ , or specify					
Storage Temperature Range	$-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$					
Current Consumption. (max.)	10~15MHz : 1.5mA ; 15.1~26MHz : 2mA ; 26.1~52MHz : 3.5mA					
Output Voltage Level (peak to peak)	0.8 V <sub>p-p</sub> ( min.)					
Start-up Time	2.0msec.( typ.), 5.0msec.( max.) ( reach 90% amplitude and at $+25^{\circ}\text{C} \pm 2^{\circ}\text{C}$ )					
Output Load	10K $\Omega$ // 10pF $\pm 10\%$					
Frequency Stability	vs Aging at Ta = +25°C	$\pm 1.0$ ppm / year ( max.)				
	vs Voltage Change	$\pm 0.2$ ppm ( max. ) , for a $\pm 5\%$ input voltage change .				
	vs Load Change	$\pm 0.2$ ppm ( max. ) , for a $\pm 10\%$ load condition change .				
	vs Reflow	$\pm 2.5$ ppm ( max. )				
	vs Temperature Change	$\pm 0.28\text{ppm} / \pm 0.5\text{ppm} / \pm 1.5\text{ppm} / \pm 2.5\text{ppm}$				
Phase Noise [ dBc / Hz ; ( typ. ) ]	Offset	10 Hz	100 Hz	1 KHz	10 KHz	10 KHz
	13.0 MHz	-80 (max)	-115	-135	-148	-148(min)

## Pin Dimension

Pin	#1	#2	#3	#4
FUNCTION	GND	GND	Output	VDD

Pin Assignments



Top View

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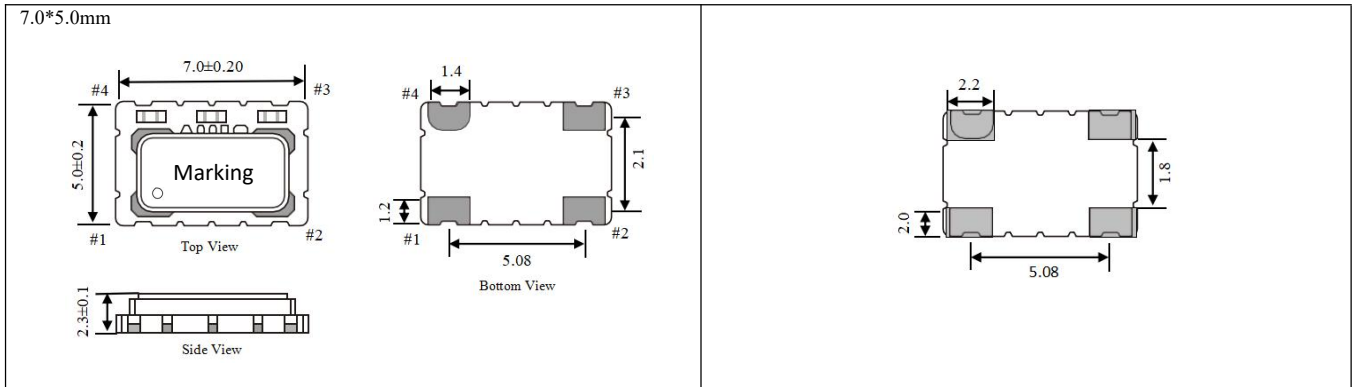


### Dimensions and Recommended land pattern

Package Size – Dimensions (Unit: mm)	Recommended Land Pattern (Unit: mm)
<p><b>2.0*1.6mm</b></p>	
<p><b>2.5*2.0mm</b></p>	<p>Pad Connections : Pad 2、Pad 5 : N.C</p>
<p><b>3.2*2.5mm</b></p>	
<p><b>5.0*3.2mm</b></p>	

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**Notes:**

1. A capacitor of value 0.01uF~0.1uF or higher between Vdd and GND is required.

### Test Circuit

