

# Temperature Compensated Crystal Oscillator

## YSO510TP TCXO

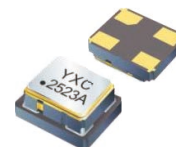


### Applications

- Networking
- Industrial

### 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
- Package Size : 2.0\*1.6, 2.5\*2.0, 3.2\*2.5, 5.0\*3.2, 7.0\*5.0mm



## Specifications (规格参数)

Item/Type	Clipped Sine Wave or CMOS					
Package Size 封装尺寸	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 额定频率范围	26 ~ 52MHz	13 ~ 52MHz	13 ~ 52MHz	6.4 ~ 52MHz	6.4 ~ 52MHz	
Supply Voltage 电源电压	1.8V, 2.5V, 3V, 3.3V					
Operating Temperature Range 工作温度	$-30 \sim +85^{\circ}\text{C}$ , or specify					
Storage Temperature Range 储存温度	$-40^{\circ}\text{C}$ to $+85^{\circ}\text{C}$					
Output Type 输出方式	Clipped Sine wave or CMOS					
Current Consumption (max.) 消耗电流	10~15MHz: 1.5mA ; 15.1~26MHz: 2mA ; 26.1~52MHz: 3.5mA					
Duty Cycle 占空比	45~55%					
Output Voltage Level (peak to peak) 峰峰值	0.8 Vp-p ( min.) (CMOS)					
Start-up Time 启动时间	2.0msec( typ.), 5.0msec( max.) ( reach 90% amplitude and at $+25^{\circ}\text{C} \pm 2^{\circ}\text{C}$ )					
Initial Calibration Tolerance 初始校准公差	$\pm 2.0$ ppm ( max.) at $+25^{\circ}\text{C} \pm 2^{\circ}\text{C}$ ( at the shipment )					
Output Load 输出负载	10K $\Omega$ // 10pF $\pm 10\%$ or 15pF					
Frequency Stability 频率偏差	vs Aging at Ta = $+25^{\circ}\text{C}$	$\pm 1.0$ 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	$\pm 0.28$ ppm / $\pm 0.5$ ppm / $\pm 1.5$ ppm / $\pm 2.5$ ppm				
Phase Noise [ dBc / Hz ; ( typ.) ] 相位噪声	Offset	10 Hz	100 Hz	1 KHz	10 KHz	10 KHz
	13.0 MHz	-80 (max)	-115	-135	-148	-148(min)

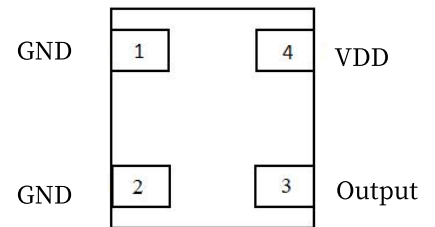
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## Pin Dimension (脚位尺寸)

Pin	#1	#2	#3	#4
Function	Ground	Ground	Output	Supply Voltage

## Pin Assignments



Top View

## Dimensions and Recommended Land Pattern (外观尺寸及推荐焊盘)

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>

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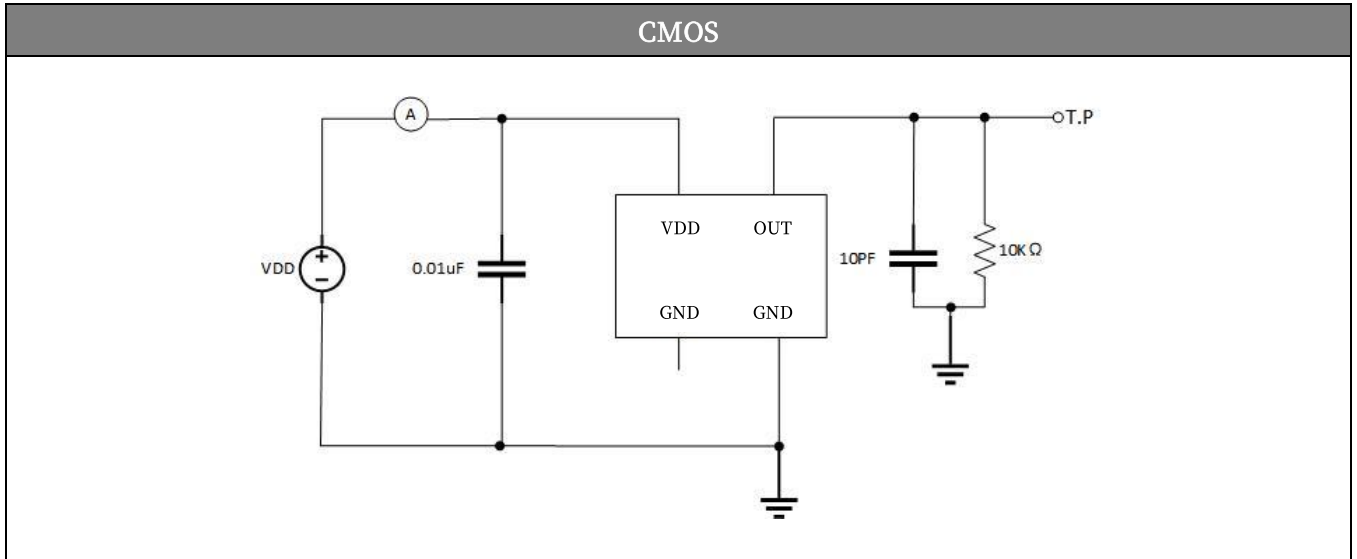


<p>3.2*2.5mm</p>	
<p>5.0*3.2mm</p>	
<p>7.0*5.0mm</p>	
<p>Notes:</p> <p>1.A capacitor of value 0.01uf~0.1uf or higher between Vdd and GND is required.</p>	

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## Test Circuit (测试电路)



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