

Temperature Compensated Crystal Oscillator

YSO510TP TCXO

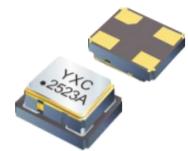


Applications

- Networking
- Industrial

Features

- Frequency Stability as Tight as ± 1.0 ppm
- Over -40°C to 85°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 ~ +85°C, or specify					
Storage Temperature Range 储存温度	-40°C to +85°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.) (Clipped Sine wave)					
Start-up Time 启动时间	2.0msec(typ.), 5.0msec(max.) (reach 90% amplitude and at +25°C $\pm 2^\circ\text{C}$)					
Initial Calibration Tolerance 初始校准公差	± 2.0 ppm (max.) at +25°C $\pm 2^\circ\text{C}$ (at the shipment)					
Output Load 输出负载	10KΩ // 10pF $\pm 10\%$ or 15pF					
Frequency Stability 频率偏差	vs Aging at Ta = +25°C		± 1.0 ppm / year (max.)			
	vs Voltage Change		± 0.2 ppm (max.) , for a $\pm 5\%$ input voltage change			
	vs Load Change		± 0.2 ppm (max.) , for a $\pm 10\%$ load condition change			
	vs Reflow		± 2.5 ppm (max.)			
	vs Temperature Change		± 0.28 ppm / ± 0.5 ppm / ± 1.5 ppm / ± 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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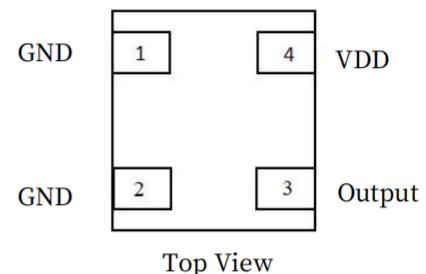


Pin Dimension (脚位尺寸)

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

Notice: This diagram is for reference only.

Pin Assignments



Top View

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

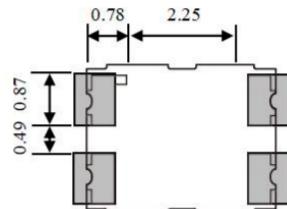
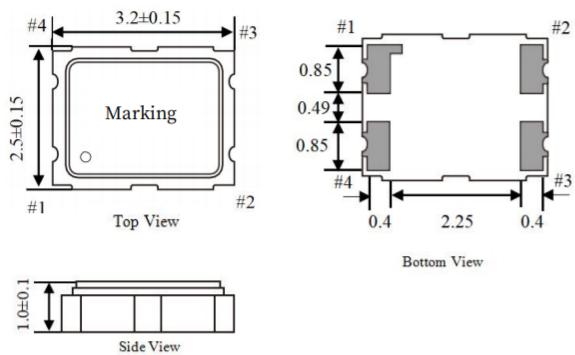
Dimensions (Unit: mm)		Recommended Land Pattern (Unit: mm)	
2.0*1.6mm	<p>Marking</p> <p>Top View: #1 2.0±0.15, #2 1.60±0.15, #3 2.0±0.15, #4 0.8 Max.</p> <p>Side View: 0.8 Max.</p>	<p>Bottom View: #1 1.51, #2 1.18, #3 1.20, #4 0.40.</p>	<p>Land Pattern: 1.51 width, 0.44 gap, 0.80 height, 0.40 center gap.</p>
2.5*2.0mm	<p>Marking</p> <p>Top View: #1 2.0±0.15, #2 2.5±0.15, #3 2.0±0.15, #4 0.95±0.1, #5 0.305, #6 0.305.</p> <p>Side View: 0.95±0.1.</p>	<p>Bottom View: #1 0.305, #2 0.15, #3 0.607, #4 0.607, #5 0.65, #6 0.50, 0.50, 0.35.</p>	<p>Land Pattern: 2.5 width, 0.43 height, 0.825 height, 0.650 height, 0.825 height, 1.80 width, 0.50, 0.50, 0.70, 0.55, 0.55, 0.50.</p> <p>Pad Connections: Pad 2, Pad 5 : N.C</p>

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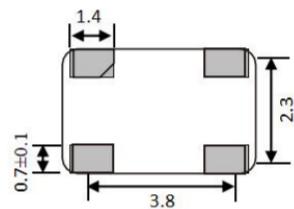
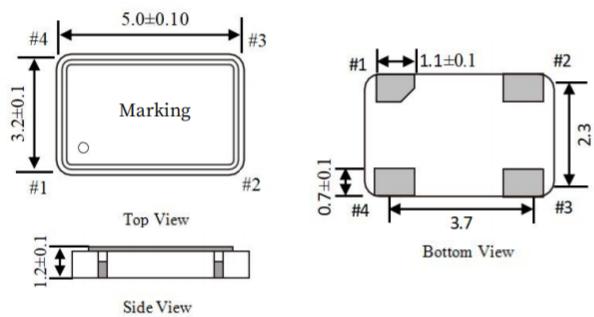
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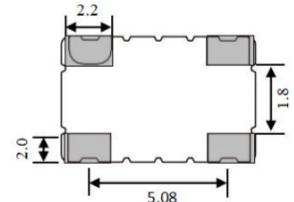
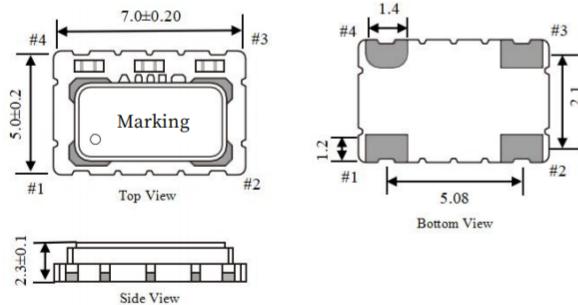
3.2*2.5mm



5.0*3.2mm



7.0*5.0mm



Notes:

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

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Test Circuit (测试电路)

