

# Crystal Oscillator

## YSO120TK Wide Voltage

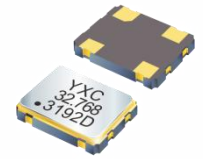


### Applications

- RTC Camera

### Features

- Frequency range: 32.768KHz.
- Ultra Small SMD seam sealed crystal oscillator units.
- Package Size: 1.6\*1.2, 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	Symbol	Specifications
Frequency Range (额定频率范围)	f <sub>o</sub>	32.768KHz
Supply Voltage (电源电压)	V <sub>cc</sub>	1.8V~3.3V
Output Type (输出方式)	-	CMOS
Frequency Tolerance (频率偏差) (at 25°C)	f <sub>tol</sub>	±10ppm, ±20ppm, or specify
Output Load (输出负载)	L <sub>cmos</sub>	15pF
Operating Temperature (工作温度)	T <sub>use</sub>	-40~+85°C, or specify
Storage Temperature (储存温度)	T <sub>stg</sub>	-55~+125°C
Frequency Versus Temperature Characteristics (频率-温度特性)	f <sub>tem</sub>	± 20ppm, ± 30ppm, ± 50ppm, or specify
Duty Cycle (占空比)	SYM	45~55%
Start-up Time (启动时间)	t <sub>str</sub>	3ms Max.
Phase Jitter [12 kHz ~ 20 MHz] (相位抖动)	tpj	0.7ps max
Frequency Aging (老化) (at 25°C)	f <sub>age</sub>	±3ppm/year Max.

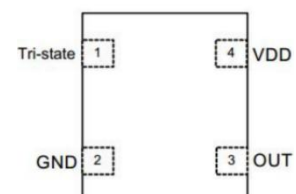
## Current Consumption (消耗电流)

Supply Voltage (V)	32.768KHZ	
	7050/5032/3225	2520/2016/1612
1.8V	0.2mA max	
2.5V	0.3mA max	
3.3V	0.5mA max	0.4mA max

## Pin Dimension (脚位尺寸)

Pin	#1	#2	#3	#4
FUNCTION	Tri-state	GND	OUTPUT	VDD

### Pin Assignments



\*The picture on the right is only for PIN function description.

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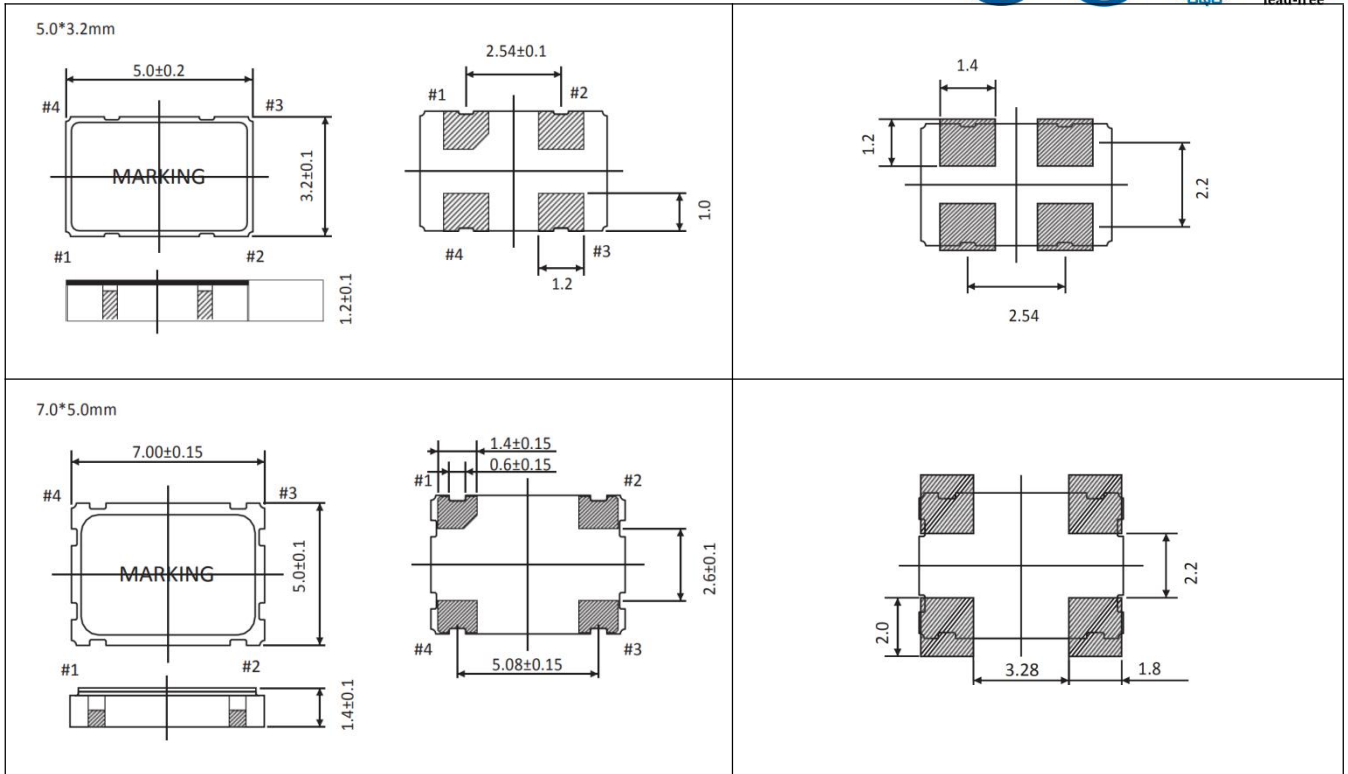
### Dimensions and Recommended land pattern (外观尺寸及推荐焊盘)

Package Size - Dimensions(Unit:mm)	Recommended Land Pattern(Unit:mm)
<p>1.6*1.2mm</p>	
<p>2.0*1.6mm</p>	
<p>2.5*2.0mm</p>	
<p>3.2*2.5mm</p>	

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**Notes:**

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

### Test Circuit (测试电路)

