

Crystal Oscillator

YSO120TK



Applications

- RTC

Features

- Frequency: 32.768KHz
- Ultra Small SMD Seam Sealed Crystal Oscillator
- 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
Nominal Frequency 标称频率	f_0	32.768KHz
Supply Voltage 电源电压	VDD	1.8V ~ 3.3V
Output Type 输出方式	-	CMOS
Frequency Tolerance over Operating Temperature Range 频率频差(at 25°C)	f_{tol}	$\pm 10\text{ppm}$, $\pm 20\text{ppm}$, or specify
Output Load 输出负载	L_{cmos}	15pF
Operating Temperature 工作温度	T_{use}	$-40\sim+85^\circ\text{C}$, or specify
Storage Temperature 储存温度	T_{stg}	$-55\sim+125^\circ\text{C}$
Frequency Versus Temperature Characteristics 频率-温度特性	f_{tem}	$\pm 20\text{ppm}$, $\pm 30\text{ppm}$, $\pm 50\text{ppm}$, or specify
Output Voltage 输出电压	Voh	90%VDD Min
	Vol	10%VDD Max
Duty Cycle 占空比	SYM	45~55%
Start-up Time 启动时间	t_{str}	3ms Max
Phase Jitter [12 kHz ~ 20 MHz] 相位抖动	tpj	0.7ps Max
Frequency Aging 老化(at 25°C)	f_{age}	$\pm 3\text{ppm/year}$ Max
Tri-State	Enable (High Voltage or Floating)	70% of VDD Min
	Disable (Low Voltage or GND)	30% of VDD Max

Current Consumption (消耗电流)

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

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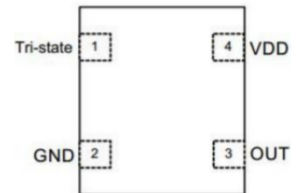


Pin Dimension (脚位尺寸)

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

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

Pin Assignments



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

Dimensions (Unit: mm)	Recommended Land Pattern (Unit: mm)
1.6*1.2 Top View Side View Bottom View	Recommended soldering Pattern
2.0*1.6 Top View Side View Bottom View	Recommended soldering Pattern
2.5*2.0 Top View Side View Bottom View	Recommended soldering Pattern

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3.2*2.5 Top View Bottom View Side View	Recommended soldering Pattern
5.0*3.2 Top View Bottom View Side View	Recommended soldering Pattern
7.0*5.0 Top View Bottom View Side View	Recommended soldering Pattern
Notes: 1. A capacitor value-0.01uF~0.1uF or higher between Vdd and GND is required.	

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Test Circuit (测试电路)

