



Issue	December 21, 2024
Rev.	1.0
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CRYSTAL UNIT SPECIFICATIONS

<p>客户批准 Customer Approval</p> <p>(请批准后回签一份 Please Return A Copy With Approval)</p>

Customer	
Customer P/N	
Product	CRYSTAL OSCILLATOR
Spec	POSC2520/32.768K~125.000M
A-Crystal P/N	AO2 Series

Drawn	Checked	Approved
<i>Caogaobang</i>	<i>Fengying</i>	<i>Tanqlong</i>



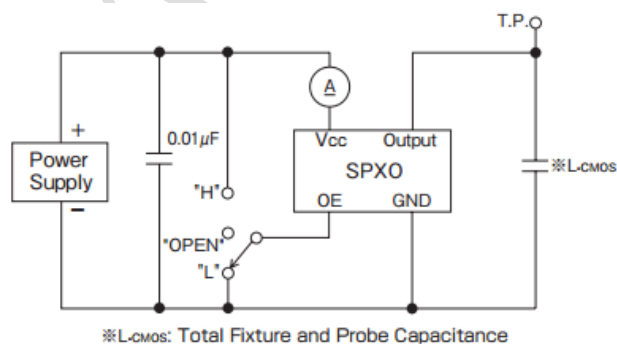
1. ELECTRICAL SPECIFICATIONS

1.1 Hold Type: POSC2520

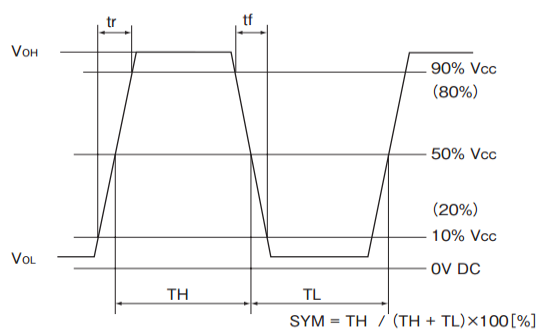
No.	Item	Symb.	Electrical Specification				Remark
			Min.	Type	Max.	Units	
1	Nominal Frequency	F ₀	32.768K	-	125.000	MHz	
2	Frequency Stability		-20 -100	-	+20 +100	ppm	All condition*
3	Operating Temperature Range	T _{OPR}	0 -40	-	+60 +85	°C	
4	Storage Temperature	T _{STG}	-55	-	+125	°C	
5	Power supply Voltage	V _{DD}	1.8	-	5.5	V	
6	Aging Per Year	F _a	-3	-	+3	ppm	First Year
7	Supply current	I _c	-	-	15	mA	
8	Output symmetry	Sym	40	50	60	%	
9	Rise time	T _r	-	-	5	ns	10%~90%V _{DD}
10	Fall time	T _f	-	-	5	ns	90%~10%V _{DD}
11	Output voltage	V _{OH}	90%	-	-	V _{DD}	
		V _{OL}	-	-	10%	V _{DD}	
12	Output load		-	-	15	PF	
13	Start-up Time		-	-	5	mS	
14	Pin 1, tri-state function	pin 1=H or open.....output active at pin 3 pin 1=L.....high impedance at pin 3					
15	Package type	2.5*2.0*0.8					

All condition*: Include 25deg C tolerance, operating temperature range , input voltage change, aging, load change, shock and vibration.

1.2 Test Circuit



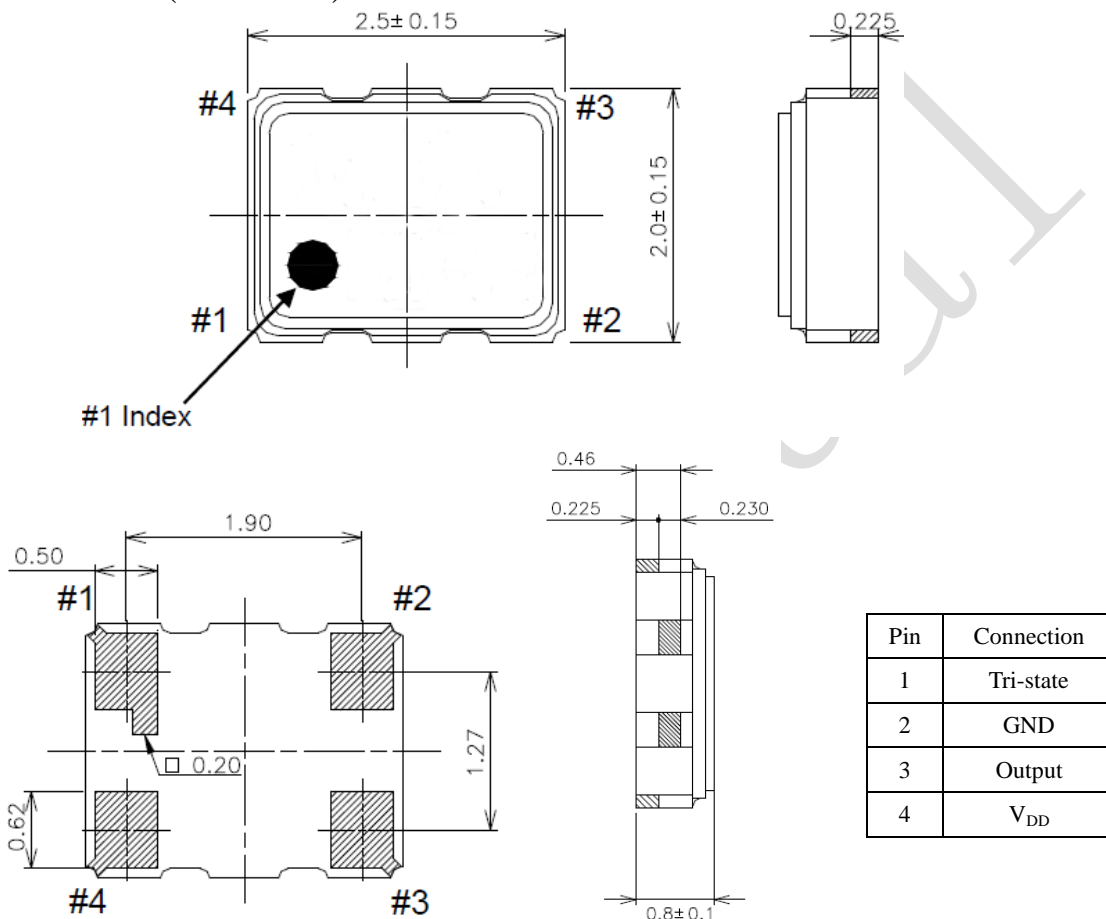
1.3 Output Waveform





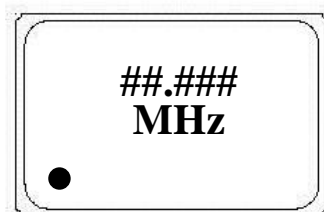
2. PRODUCT SIZE

2.1 Dimension (Unit: mm)



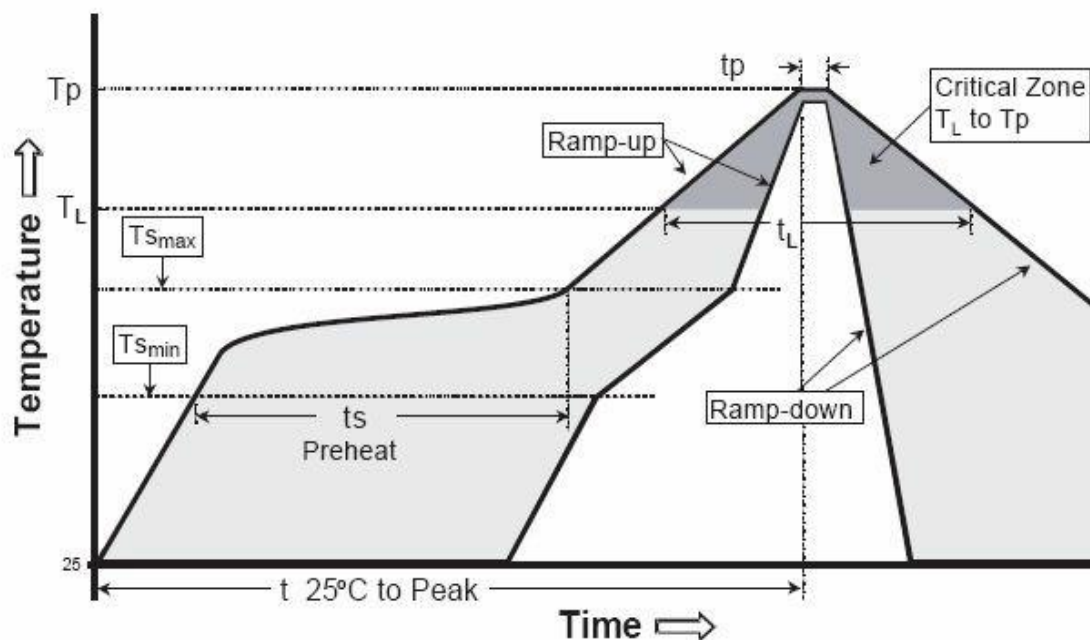
Note: 0.01uF bypass capacitor should be placed between VDD (pin 4) and GND (pin 20) to minimize power supply line noise.

2.2 Marking





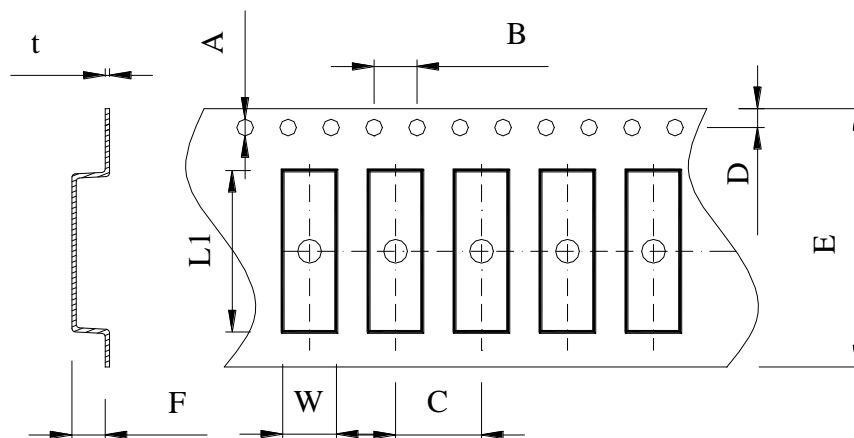
3. REFLOW PROFILES



$T_s = 200^\circ C / 60 \sim 180 \text{sec}$, $T_L = 217^\circ C / 60 \sim 150 \text{sec}$, $T_p = 260^\circ C / 20 \sim 40 \text{sec}$

4. PACKING

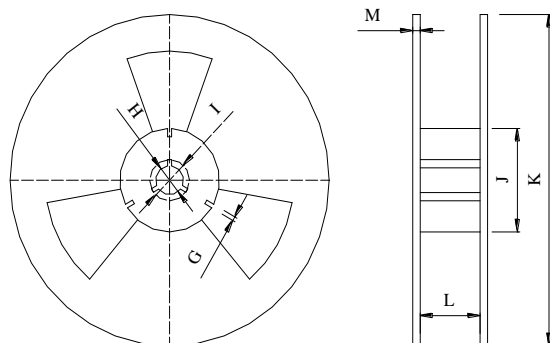
4.1 Packing Method Sketch Map (Unit: mm)



A	B	C	D	E	F	L1	W	t
1.50±0.1	4.0±0.1	4.0±0.1	1.75±0.1	8.0±0.2	1.15±0.1	2.7±0.1	2.25±0.1	0.25±0.05



4.2 Reel Dimensions (Unit: mm)



G	H	I	J	K	L	M
2.0 ±0.5	13.0 ±0.5	21.0±0.5	φ60 +1/-0	φ180 +0/-3	9.0 ±0.3	1.2 ±0.3

*3000pcs/Reel

5. Products Code

5.1 SMD CRYSTAL OSCILLATORS

公司代码 浙江一晶	产品型号 (2位)	工作频率 (全频点位数)	负载电容 (1位字母)	调整频差 (1位字母)	温度频差 (1位字母)	工作温度 (1位字母)	其它
A-crystal Logo	Package	Nominal Frequency	Load Capacitance	Frequency Tolerating	Freq Temp Characteristics	Operating Temperature Range	Others
A	O2 (POSC2520)	4M=04000	Y=5.0V	01=5PPM	A=10PPM	1=0~50	Special
		12.000M=12000	A=3.3V	02=10PPM	B=15PPM	2=-10~60	
		32.768K=32768	M=3.0V	03=20PPM	C=20PPM	3=-10~70	
			C=2.5V	04=30PPM	D=25PPM	4=-20~70	
			D=1.8V	05=40PPM	E=30PPM	5=-30~85	
			B=2.8V	06=50PPM	F=50PPM	6=-40~85	
				07=100PPM	G=100PPM	7=-40~105	
				0A=15PPM		8=-40~125	
				0B=25PPM			