



**ZHEJIANG A-CRYSTAL**  
ELECTRONIC TECHNOLOGY CO., LTD.



Issue	June 13, 2023
Rev.	1.0
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## CRYSTAL UNIT SPECIFICATIONS

客户批准 Customer Approval

(请批准后回签一份 Please Return A Copy With Approval)

Customer	
Customer P/N	
Product	<b>CRYSTAL RESONATORS</b>
Spec	<b>PSX215/32.768KHz</b>
A-Crystal P/N	<b>AS2 Series</b>

Drawn	Checked	Approved
<i>caogaobang</i>	<i>tanglong</i>	<i>huangweilong</i>



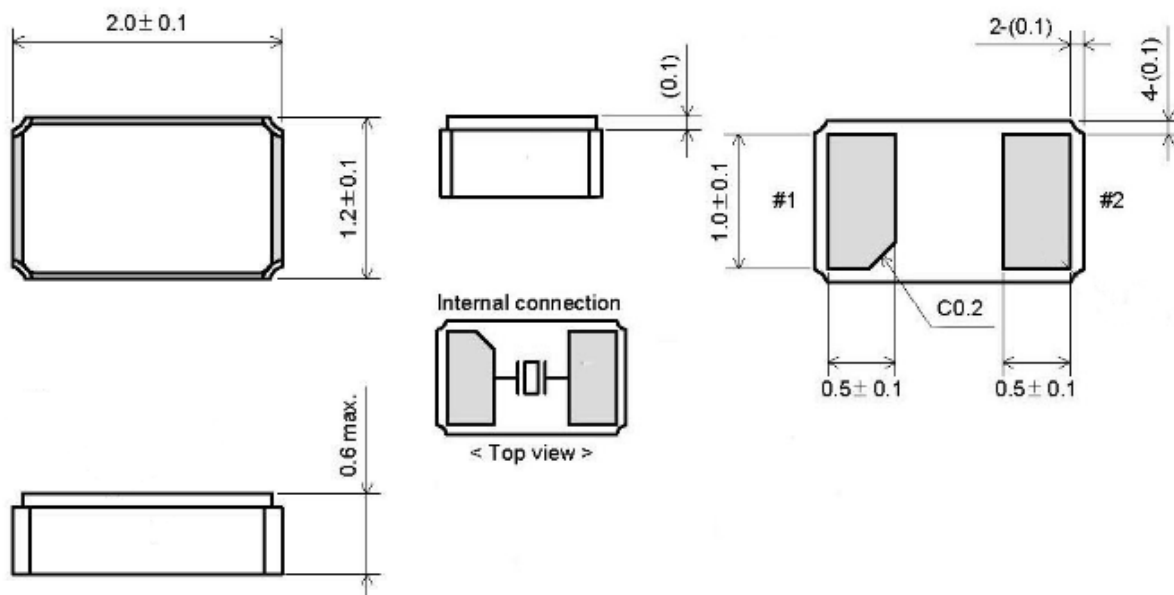
## 1. ELECTRICAL SPECIFICATIONS

### 1.1 Hold Type: PSX-215

Parameter	Symb	Electrical Specification				Condition
		Min	Type	Max	Units	
Frequency Range	F <sub>0</sub>		32.768		KHz	
Frequency Tolerance	$\Delta f/f_0$	$\pm 5$	$\pm 20$	$\pm 50$	PPM	REF TO 25°C
Temperature Coefficient	K	$(-0.03 \pm 0.01) * 10^{-6}$			ppm/(°C) <sup>2</sup>	
Turnover Temperature	T <sub>TO</sub>	20	25	30	°C	
Operating Temperature Range	T <sub>OP</sub>	-20 -40		+70 +85	°C	
Storage Temperature Range	T <sub>ST</sub>	-55		125	°C	
Quality Factor	Q	10,000			Typ	
Series Resistance	R <sub>1</sub>		70		K Ω	REF TO 25°C
Shunt Capacitance	C <sub>0</sub>		1.3		Typ	7PF or less
Load Capacitance	C <sub>L</sub>	4		12.5	PF	
Insulator Resistance	IR	500			M Ω	DC100V ± 15V
Drive Level	DL		0.1	0.5	μ W	
Capacitance ratio	R		450		TYP	
Aging Rate	$\Delta/f$	$\pm 5$		$\pm 5$	PPM	at 25°C ± 3°C
Moist are Sensitivity Level	MSL		1			J-STD-033
Package type	2.0*1.2*0.6					



**1.2 Dimension** (Unit: mm)



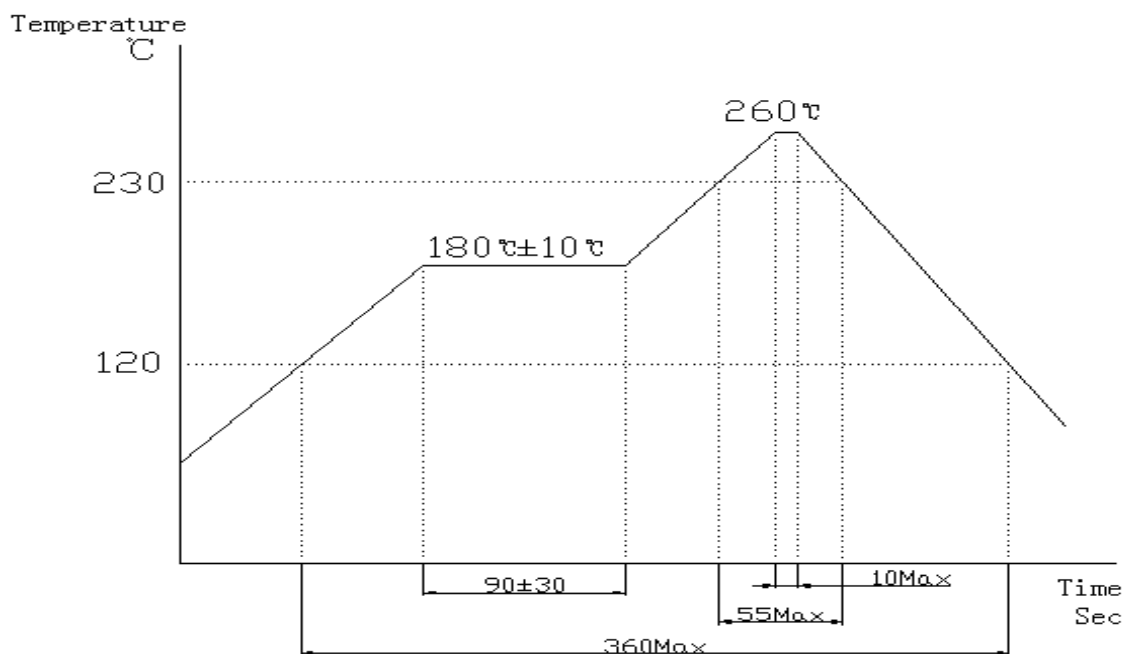
**1.3 Marking**



**A:** 32.768  
**M:** Shop code  
**####:** Lot No

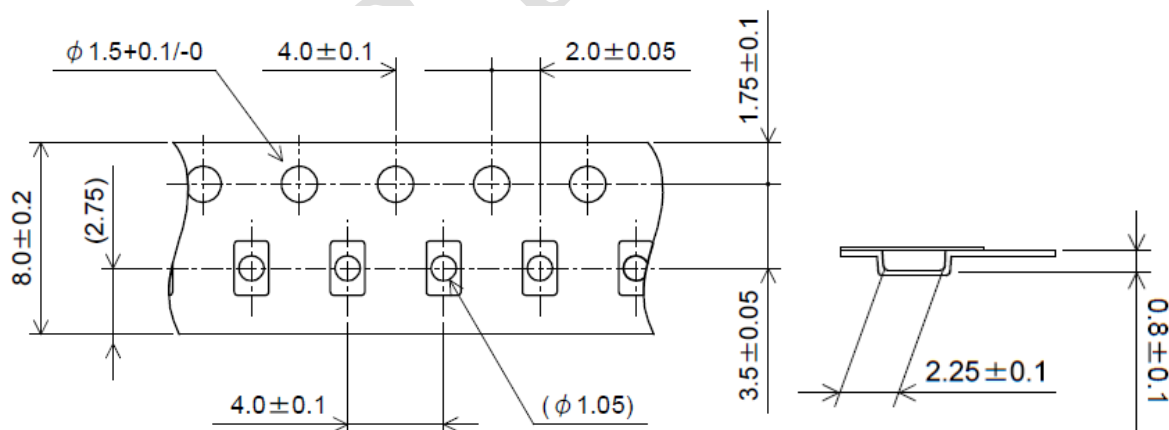


### 1.4 Reflow solder



## 2. Packing

### 2.1 Packing Method Sketch Map (Unit: mm)

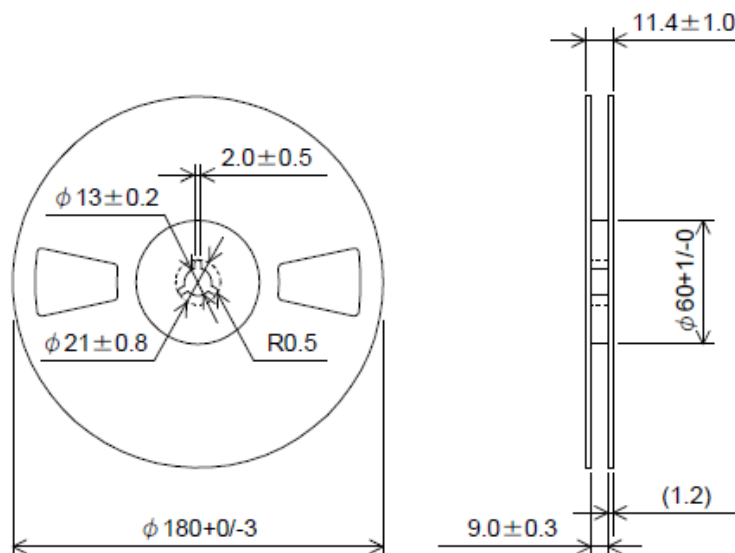




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## 2.2 Reel Dimensions (Unit: mm)



Pieces per reel: 3000/reel

## 3. Products Code

### 3.1 SMD Tuning Fork Crystal Resonators/KHz

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	S2 (PSX215)	32.768K	A = 12.5PF	A=10PPM	T = 温度系数	A = 0~50	Special
			B = 10PF	B=20PPM		B = -10~60	
			C = 9PF	C=30PPM		C = -10~70	
			D = 8PF	D=50PPM		D = -20~70	
			E = 7PF			E = -30~85	
			F = 6PF			F = -40~85	
						G = -40~105	
						H = -40~125	