



Issue	December 21, 2024
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	CRYSTAL RESONATORS
Spec	HC-49U/500.0K~200.000M
A-Crystal P/N	AH9 Series

Drawn	Checked	Approved
<i>Caoqiang</i>	<i>Fengying</i>	<i>Tanlong</i>



1. ELECTRICAL SPECIFICATIONS

1.1 Hold Type: HC-49U

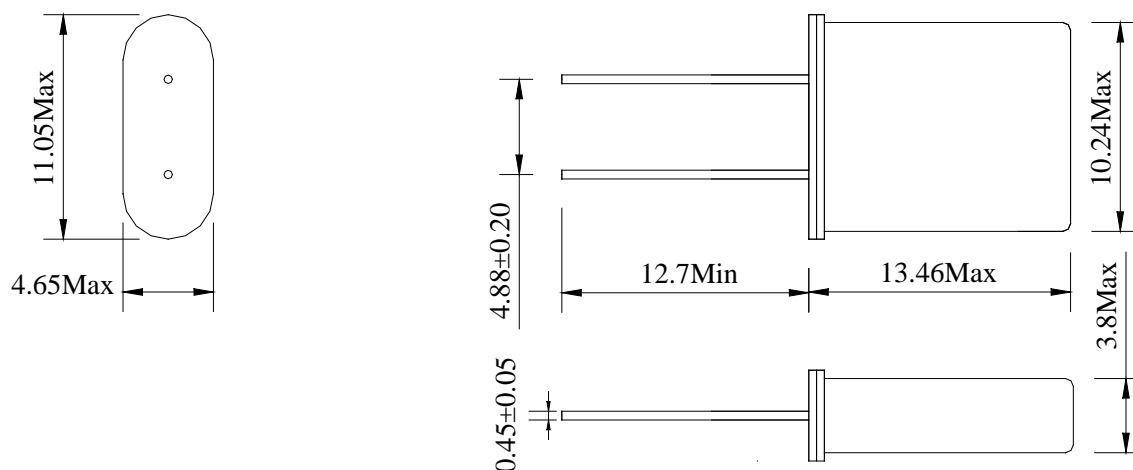
No.	Item	Symb	Electrical Specification				Remark
			Min.	Type	Max.	Units	
1	Nominal Frequency	F0	500.0K		200.00	MHz	
2	Mode of Vibration		■ Fundamental △3rd Overtone △5th Overtone				
3	Frequency Tolerance	$\Delta F/F_0$	±10	±30	±50	ppm	at 25°C±3°C
4	Operating Temperature Range	T _{OPR}	-20 -40	-	+70 +85	°C	
5	Frequency Stability	T _C	±30	-	±50	ppm	
6	Storage Temperature	T _{STG}	-40	-	+85	°C	
7	Load capacitance	CL	6~specify			pF	
8	Equivalent Series Resistance	ESR	Seepage 1			Ω	
9	Drive Level	DL	-	-	100	μW	
10	Insulation Resistance	IR	500	-	-	MΩ	At 100V _{DC}
11	Shunt Capacitance	C ₀	-	-	7	pF	
12	Aging Per Year	F _a	-5	-	+5	ppm	First Year
13	Package type	13.46*11.05*4.65					

Seepage 1

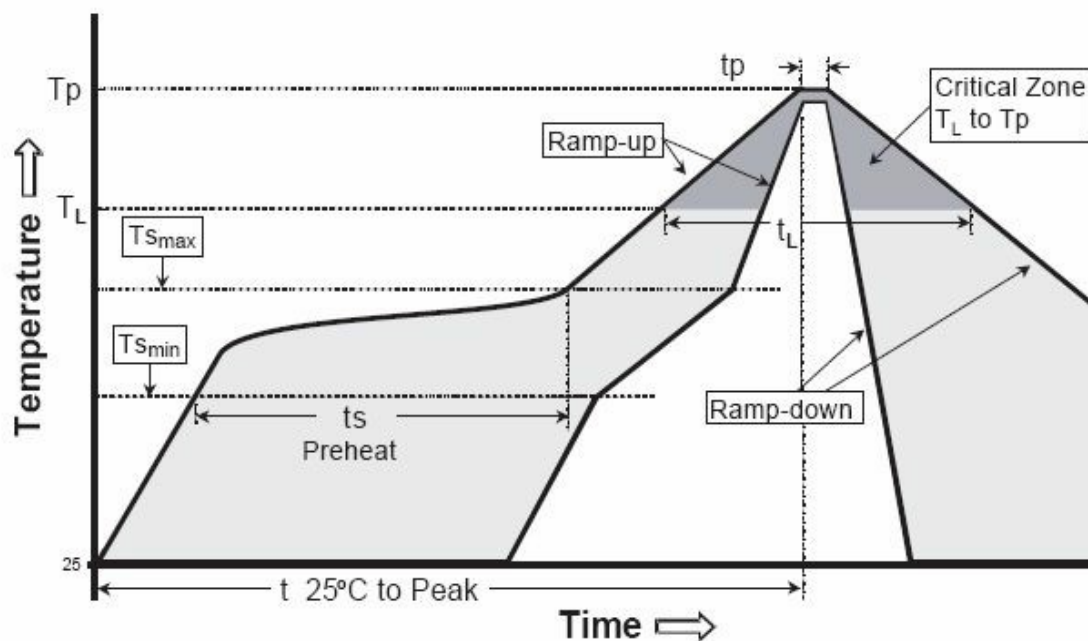
Frequency Range	Mode of Vibration	ESR (Ω) Max
0. 500MHz≤F0<1. 8432MHz	Fund	<3000
1. 8432MHz≤F0<3.000MHz	Fund	<500
3. 100MHz≤F0<4. 900MHz	Fund	<120
5. 000MHz≤F0<12. 000MHz	Fund	<40
12. 10MHz≤F0<40. 000MHz	Fund	<30
20. 100MHz≤F0<100. 000MHz	3rd OT	<40
100. 100MHz≤F0<150. 000MHz	5rd OT	<80
150. 100MHz≤F0≤200. 000MHz	7th OT	<100



1.2 Dimension (Unit: mm)



1.3 The soldering requirements



$T_s = 180^\circ\text{C} / 70 \sim 100\text{sec}$, $T_L = 240^\circ\text{C} / 20 \sim 50\text{sec}$, $T_p = 250^\circ\text{C} / 7 \sim 8\text{sec}$



2. PACKING

2.1 Section of package

Package is made of corrugated paper with thickness of 0.8cm. Package has 10 inner boxes, each box has 10 bag

2.1.1 Quantity of package

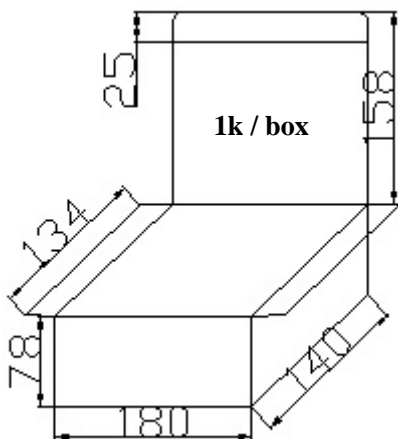
Each bag 100 pieces of Crystal Resonators

Per inner box 10 bag (0.2k/bag)

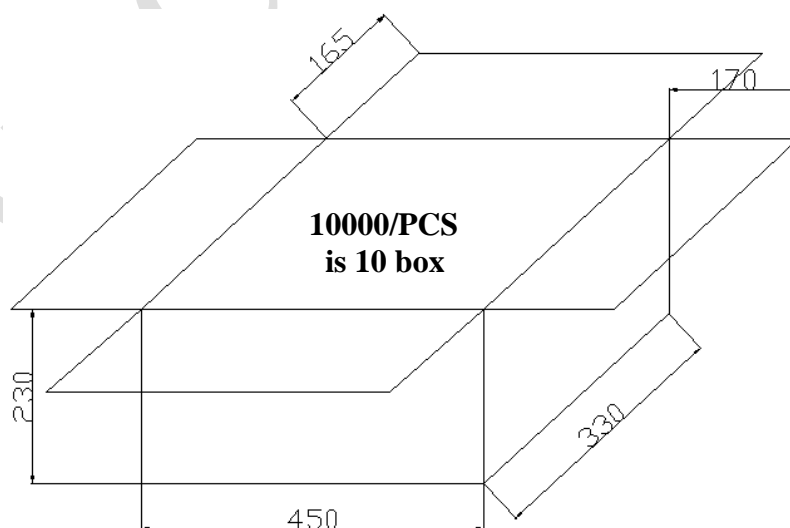
Per package 10 inner boxes & 10 inner boxes

(10000 pieces of Crystal Resonators)

2.1.2 Inner Box Dimensions (Unit: mm)



2.1.3 Dimensions and Mark (Unit: mm)





ZHEJIANG A-CRYSTAL
ELECTRONIC TECHNOLOGY CO., LTD.



3. Products Code

3.1 DIP Crystal Resonators/MHz

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 Temperture Range	Others
A	H9 (HC-49U)	8.000M	A = 12.5PF	01=5PPM	A=10PPM	1=0~50	Special
		12.000M	B = 10PF	02=10PPM	B=15PPM	2=-10~60	
			C = 9PF	03=20PPM	C=20PPM	3=-10~70	
			D = 8PF	04=30PPM	D=25PPM	4=-20~70	
			E = 7PF	05=40PPM	E=30PPM	5=-30~85	
			F = 6PF	06=50PPM	F=50PPM	6=-40~85	
			G = 16PF	07=100PPM	G=100PPM	7=-40~105	
			H = 18PF			8=-40~125	
			J = 20PF				
			K = 22PF				
			L = 30PF				