



汇隆电子(金华)有限公司
HUILONG ELECTRONIC (JINHUA) CO.,LTD

SPECIFICATION FOR APPROVAL

CUSTOMER _____

NOMINAL FREQUENCY _____ 13.824000 MHz

HOLDER TYPE _____ HC-49S-SMD

SPEC. NO. (P/N) _____ HB13824B001

CUSTOMER P/N _____

ISSUE DATE _____ Sep.13,2022

APPROVED	PREPARED	QA
彭达梅	金文波	陈全根
APPROVED BY CUSTOMER:		AVL Status
Please return one copy with approval to HLC		

浙江省金华市经济开发区工业园区秋涛北街399号
No.399 Qiutao North Str.,Industrial Area,Economic
Development Zone,Jinhua,Zhejiang,China
TEL: 0086-579-82273331
FAX: 0086-579-82273198
<http://www.cn-hlc.com>



ISO9001
ISO14001



RoHS Compliant (Pb- Free)



TYPE HL SEAM SEALED X'TAL

ELECTRICAL SPECIFICATIONS

Item	Symbol	Specifications				Notes
		Min	Type	Max	Units	
Nominal frequency	FO	13.824000			MHz	
Mode of Oscillation	OT	Fundamental				
Load Capacitance	LC	22			pF	
Frequency Tolerance	FT	± 10			ppm	at 25°C $\pm 3^\circ\text{C}$
Frequency Stability		± 10			ppm	with working temperature Reference to 25°C frequency
Working temperature range	TR	-20 ~ 70			°C	
Drive Level	DL	100			μW	
Series Resonant Resistance RR	CI/RR	20			Ω	Max.
Shunt Capacitance C0	C0	7			pF	Max.
Aging		± 3			ppm/yr.	
Storage temperature range		-55 ~ 125			°C	



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MARKING



HLC: HLC Use Code x: CL Code x: Date Code

CL	Code	CL	Code	CL	Code
0pf	0	7.5pf	H	11.2pf	a
6pf	1	11pf	I	11.4pf	b
8pf	2	8.5pf	J	13.5pf	d
10pf	3	7.1pf	K	20.5pf	e
12pf	5	19pf	L		
15pf	6	12.5pf	M		
16pf	7	27pf	N		
18pf	8	7.3pf	O		
20pf	9	13pf	P		
22pf	A	11.5pf	Q		
25pf	B	7pf	R		
28pf	C	14pf	S		
30pf	D	23pf	T		
32pf	E	11.1pf	U		
9.5pf	F	33pf	V		
9pf	G	10.5pf	W		
		9.2pf	Y		
		50pf	Z		

Jan-21	N	Jan-22	A
Feb-21	P	Feb-22	B
Mar-21	Q	Mar-22	C
Apr-21	R	Apr-22	D
May-21	S	May-22	E
Jun-21	T	Jun-22	F
Jul-21	U	Jul-22	G
Aug-21	V	Aug-22	H
Sep-21	W	Sep-22	J
Oct-21	X	Oct-22	K
Nov-21	Y	Nov-22	L
Dec-21	Z	Dec-22	M

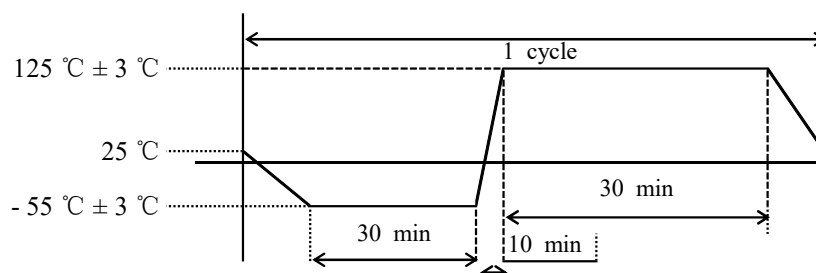
备注：年份印字代码原则按奇偶年两年一个循环



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RELIABILITY SPECIFICATIONS

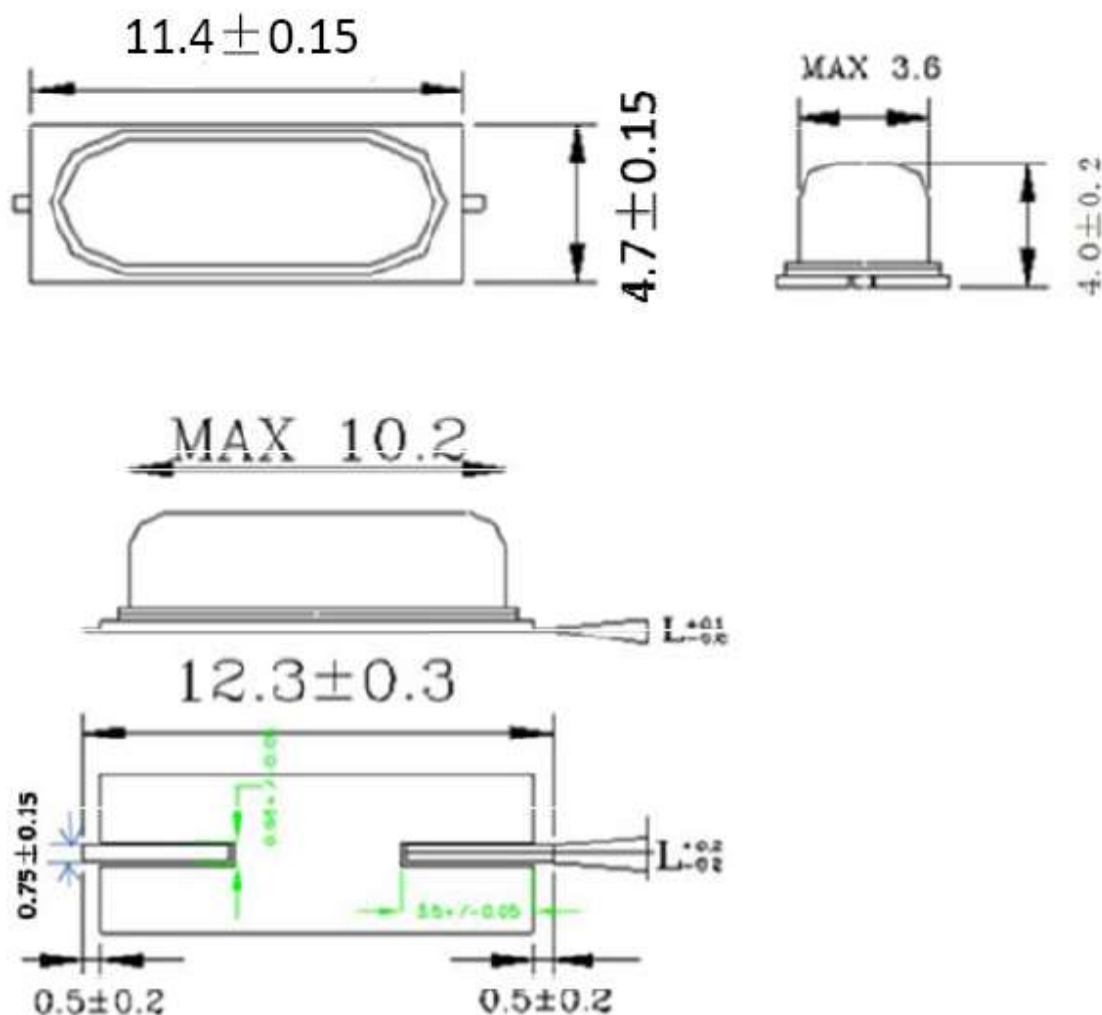
NO.	TEST ITEM	TEST METHODS
1	DROP TEST	Device are dropped from a height of 75 cm onto 3 mm thick wood to perform 3 times of random drops.
2	MECHANICAL SHOCK	Device are shocked to half sine wave (1000 G) three mutually perpendicular axes each 3 times.
3	VIBRATION	Frequency range 10 ~ 2000 Hz Amplitude 1.5 mm Sweep Time 20 minute Test Time 2 hours
4	SOLDERABILITY	MIL - STD - 20E Method 208C Temperature 245°C±5°C Material H63A (Silver 2 ~ 3 %) Immersion depth 0.5 mm minimum Immersion time 3 ± 0.5 seconds Flux Rosin resin methyl alcohol solvent (1 : 4)
5	RESISTANCE TO SOLDERING HEAT	MIL - SLD -202, Method 210, Condition I or J 10 sec immersion into 260 ± 5°C solder pot, above 180°C is 90 ~ 120 sec.
6	LOW TEMP. STORAGE	Leave at - 55 °C ± 2°C for 1000 ± 12 hours
7	HIGH TEMP. STORAGE	Leave at 125 °C ± 2°C for 1000 ± 12 hours
8	THERMAL SHOCK	Total 100 cycles of the following temperature cycle



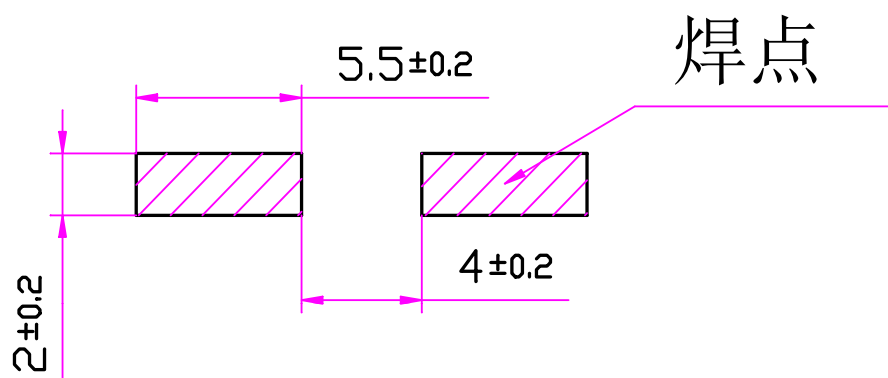


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DIMENSIONS



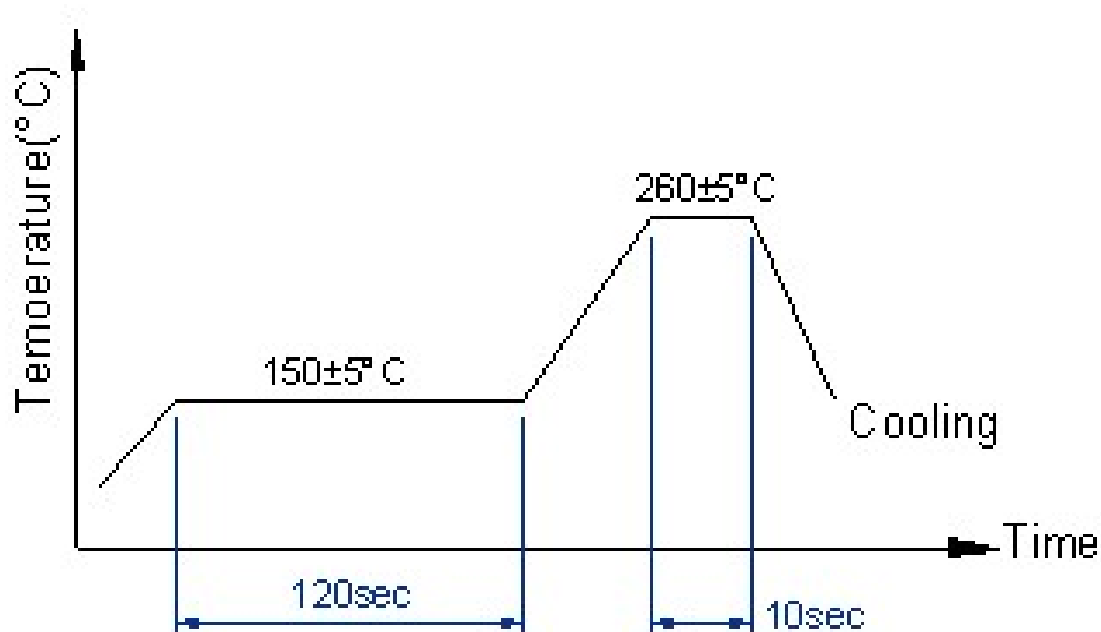
推荐焊点设计尺寸（单位：MM）





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SUGGESTED IR REFLOW PROFILE



Total Time: 200 Sec.Max

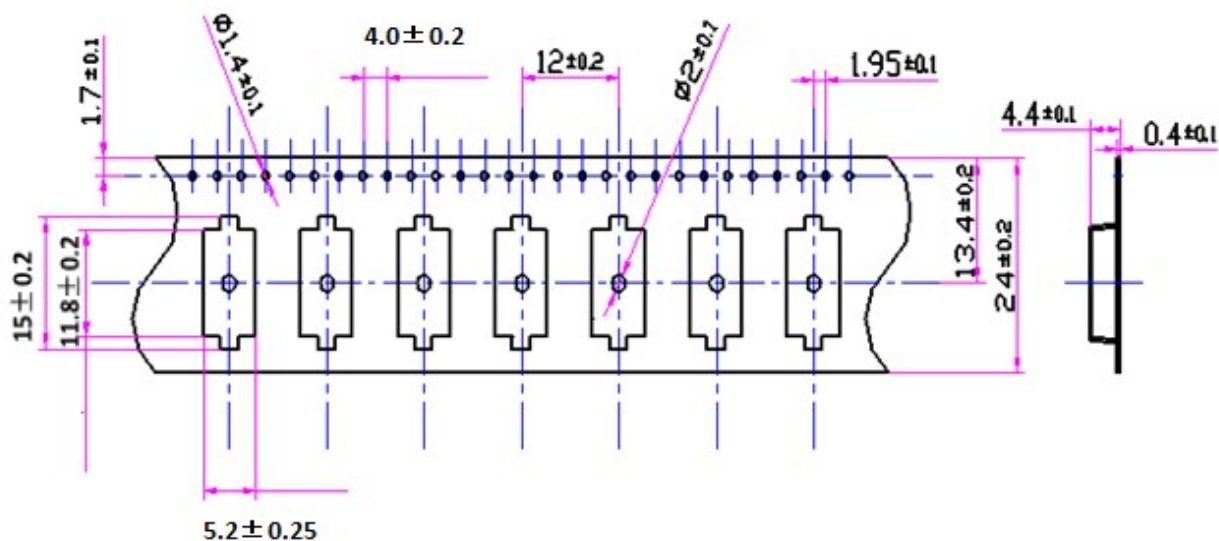
Solder melting point : 185°C

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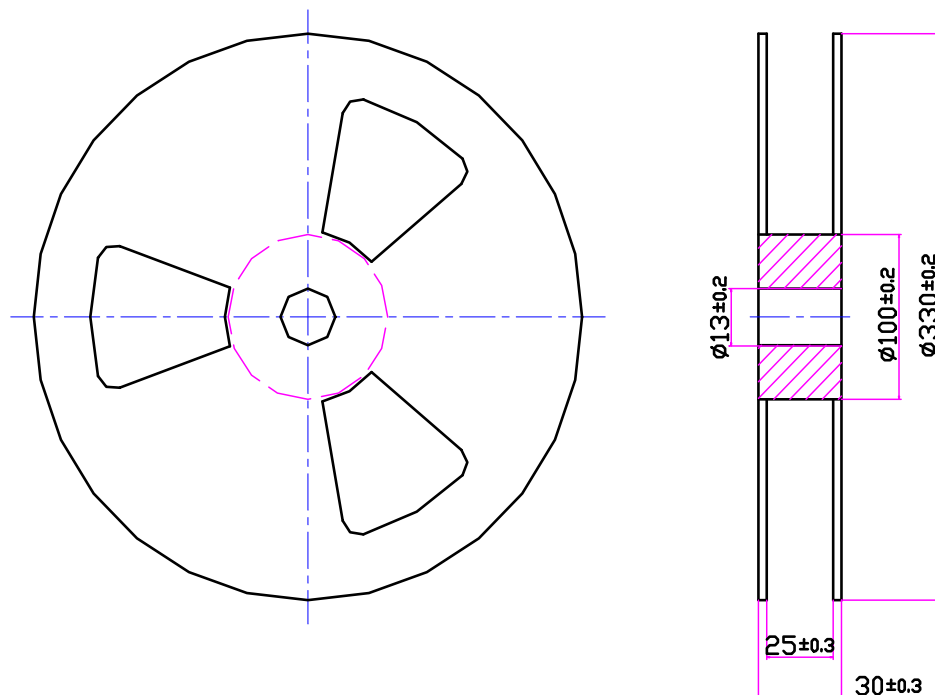


TYPE HL SEAM SEALED X'TAL

Taping



Reel



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