



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

SPECIFICATION FOR APPROVAL

CUSTOMER _____

NOMINAL FREQUENCY _____ 12.000000 MHz _____

HOLDER TYPE _____ HC-49S-SMD _____

SPEC. NO. (P/N) _____ HB12000X002 _____

CUSTOMER P/N _____

ISSUE DATE _____ May.28,2021 _____

APPROVED	PREPARED	QA
彭达梅	金文波	訾红华
APPROVED BY CUSTOMER :		AVL Status
Please return one copy with approval toHLC		

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

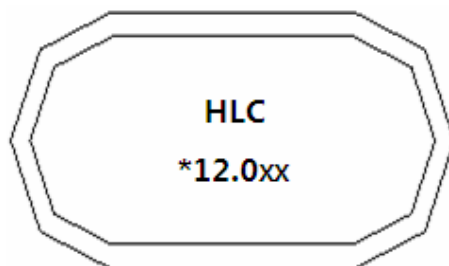
ELECTRICAL SPECIFICATIONS

Item	Symbol	Specifications				Notes
		Min	Type	Max	Units	
Nominal frequency	FO	12.000000			MHz	
Mode of Oscillation	OT	Fundamental				
Load Capacitance	LC	20			pF	
Frequency Tolerance	FT	± 25			ppm	at 25°C $\pm 3^{\circ}\text{C}$
Frequency Stability		± 30			ppm	with working temperature Reference to 25°C
Working temperature range	TR	-40 ~ 85			°C	
Drive Level	DL	100			μW	
Series Resonant Resistance RR	CI/RR	40			Ω	Max.
Shunt Capacitance C0	C0	7			pF	Max.
Aging		± 3			ppm/yr.	
Storage temperature range		-40 ~ 105			°C	
DLD2		5			Ω	Max.



TYPE HL SEAM SEALED X'TAL

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-17	N	Jan-16	A
Feb-17	P	Feb-16	B
Mar-17	Q	Mar-16	C
Apr-17	R	Apr-16	D
May-17	S	May-16	E
Jun-17	T	Jun-16	F
Jul-17	U	Jul-16	G
Aug-17	V	Aug-16	H
Sep-17	W	Sep-16	J
Oct-17	X	Oct-16	K
Nov-17	Y	Nov-16	L
Dec-17	Z	Dec-16	M

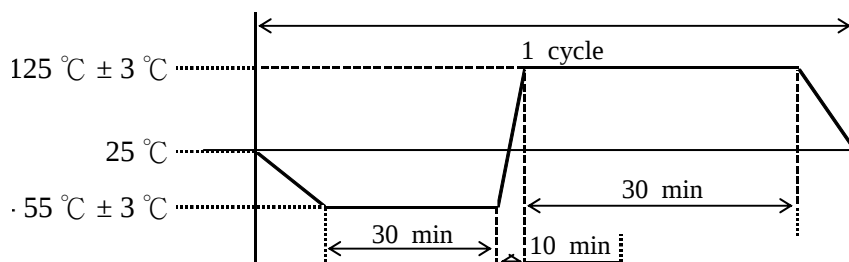
备注：年份印字代码原则按奇偶年两年一个循环



TYPE HL SEAM SEALED X'TAL

RELIABILITY SPECIFICATIONS

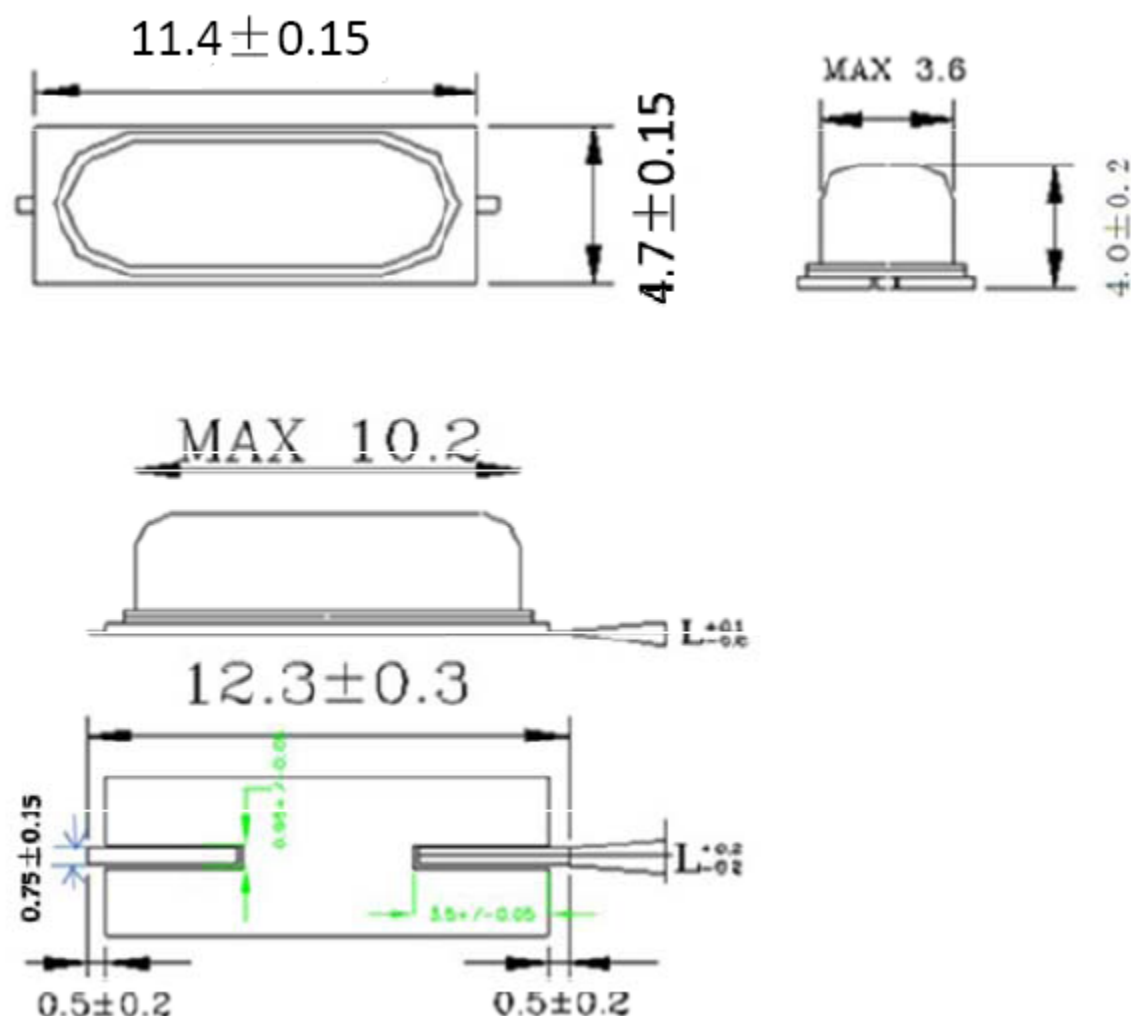
NO.	TEST ITEM	TEST METHODS
1	DROP TEST	Device are dropped from a height of 75 cm onto 3 mm thick wood to perform 3 times of random drops.
2	MECHANICAL SHOCK	Device are shocked to half sine wave (1000 G) three mutually perpendicular axes each 3 times.
3	VIBRATION	Frequency range 10 ~ 2000 Hz Amplitude 1.5 mm Sweep Time 20 minute Test Time 2 hours
4	SOLDERABILITY	MIL - STD - 20E Method 208C Temperature $245^{\circ}\text{C} \pm 5^{\circ}\text{C}$ 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 $260 \pm 5^{\circ}\text{C}$ solder pot, above 180°C is 90 ~ 120 sec.
6	LOW TEMP. STORAGE	Leave at $-55^{\circ}\text{C} \pm 2^{\circ}\text{C}$ for 1000 ± 12 hours
7	HIGH TEMP. STORAGE	Leave at $125^{\circ}\text{C} \pm 2^{\circ}\text{C}$ for 1000 ± 12 hours
8	THERMAL SHOCK	Total 100 cycles of the following temperature cycle



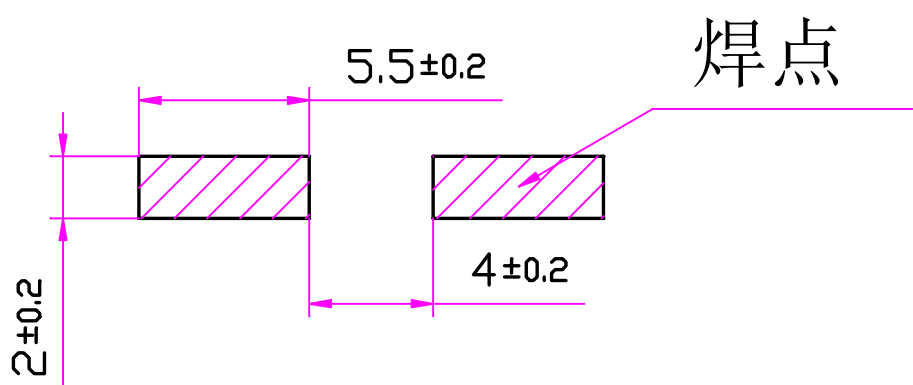


TYPE HL SEAM SEALED X'TAL

DIMENSIONS



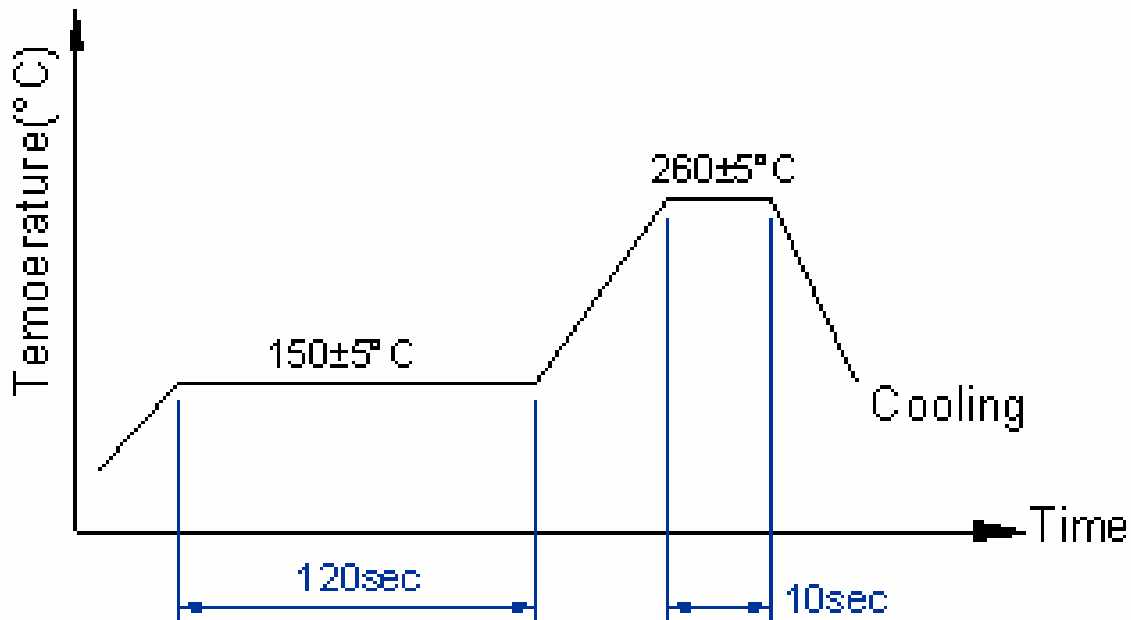
推荐焊点设计尺寸（单位：MM）





TYPE HL SEAM SEALED X'TAL

SUGGESTED IR REFLOW PROFILE



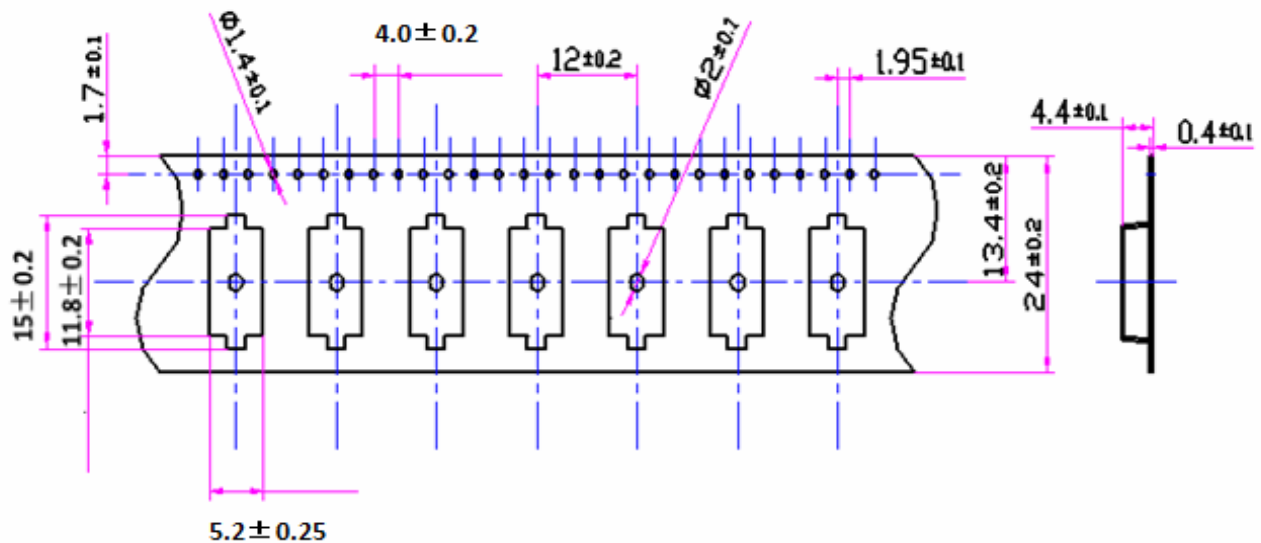
Total Time : 200 Sec.Max

Solder melting point : 185°C

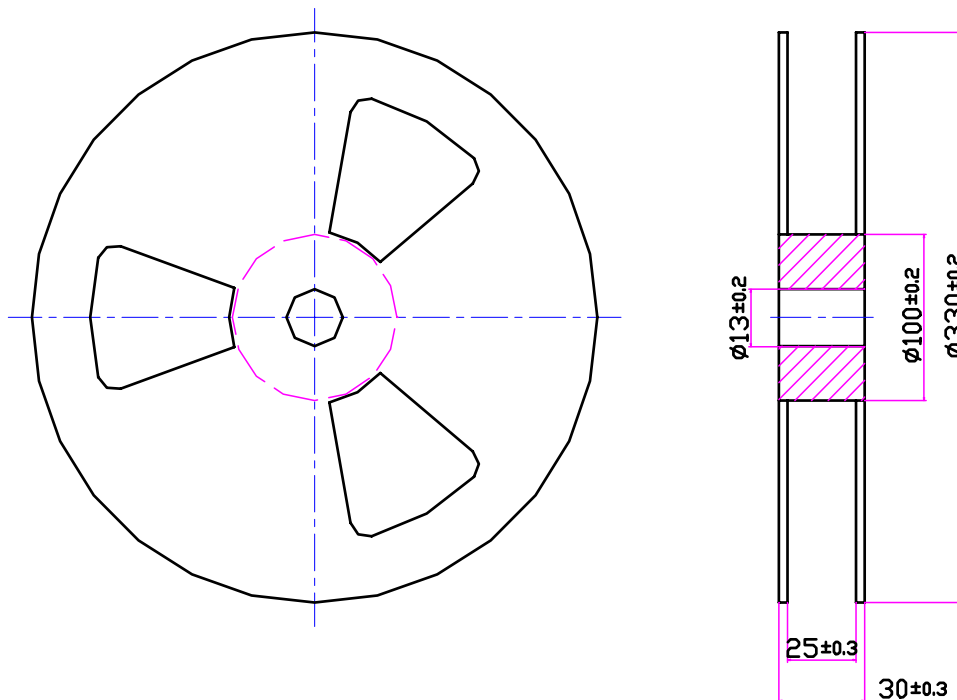


TYPE HL SEAM SEALED X'TAL

Taping



Reel



HUILONG ELECTRONIC (JINHUA) CO.,LTD

H0-R-4-014