



浙江汇隆晶片技术有限公司

Zhejiang Huilong Crystals Technology Co.,Ltd

SPECIFICATION FOR APPROVAL

CUSTOMER

NOMINAL FREQUENCY

50.000000 MHz

HOLDER TYPE

2520

SPEC. NO. (P/N)

HH50000014

CUSTOMER P/N

ISSUE DATE

Jun.5,2020

APPROVED	PREPARED	QA
		
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

號

No.399 Qiutao North Str.,Industrial Area,Economic
Development Zone,Jinhua,Zhejiang,China

TEL: 0086-579-82273331



ISO9001
ISO14001

RoHS Compliant (Pb- Free)





TYPE HH SEAM SEALED X'TAL

ELECTRICAL SPECIFICATIONS

HLC Parts Number : HH50000014

Item	Symbol	Specifications				Notes
		Min	Type	Max	Units	
Nominal frequency	FO	50.000000			MHz	
Mode of Oscillation	OT	Fundamental				
Cutting Mode		AT cut				
Load Capacitance	LC	19			pF	
Frequency Tolerance	FT	± 5			ppm	at 25°C $\pm 3^\circ\text{C}$
Frequency Stability		± 14			ppm	with working temperature Reference to 25°C frequency
Working temperature range	TR	-40~100			°C	
Drive Level	DL	100			μW	
Series Resonant Resistance R	CI/RR	15			Ω	Max.
Insulation Resistance	IR	>500			M Ω	
Shunt Capacitance C0	C0	3			pF	
Aging		3			ppm/yr.	
Storage temperature range		-55 ~ 125			°C	
Unit Weight					g	

Circuit : Measured by SAUNDERS & ASSOCIATES 250B-1
NETWORK ANALYZER

Insulation Resistance : More Than 500 M Ω at DC 100V

Hermetically (1)Fine Leak : Helium Bombing 4kg /cm² for 1 Hours

(2)Gross Leak : Leak Rate Less Than 1*10⁻⁹ Pa. m³/sec
By Heliot 701W1 M/C

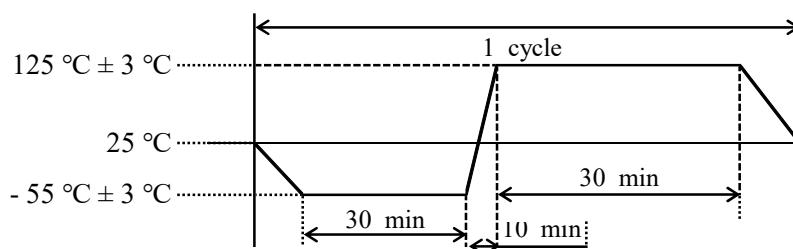
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TYPE HH SEAM SEALED X'TAL

RELIABILITY SPECIFICATIONS

NO.	TEST ITEM	TEST METHODS
1	DROP TEST	Device are dropped from a height of 75 cm onto 2 mm thickness stainless plate executing 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



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TYPE HH SEAM SEALED X'TAL

HLC

* 50.0xx

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		

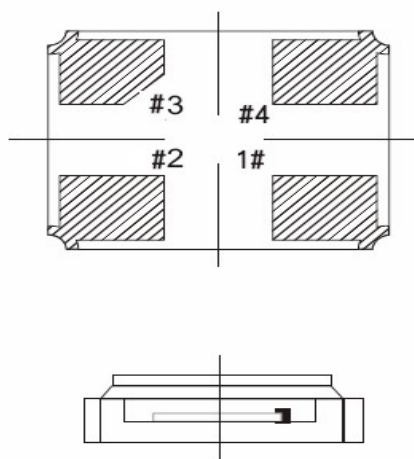
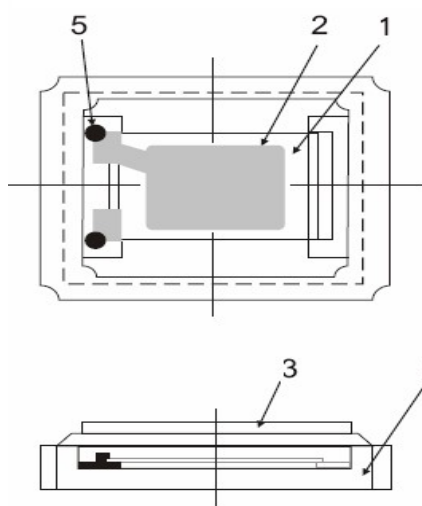
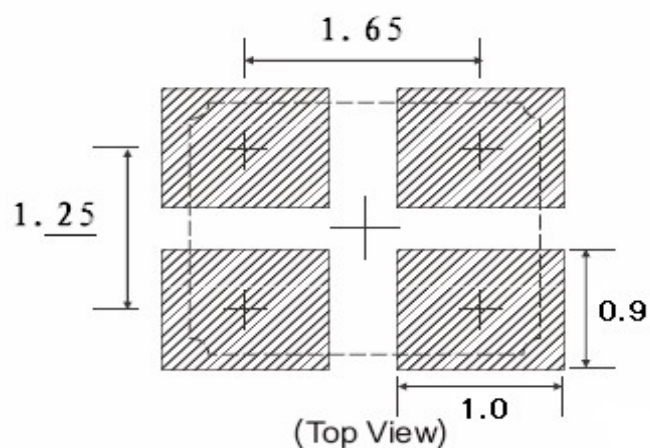
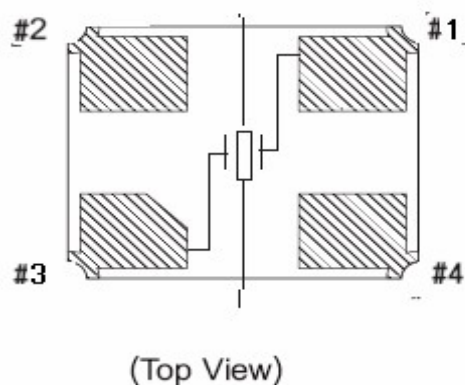
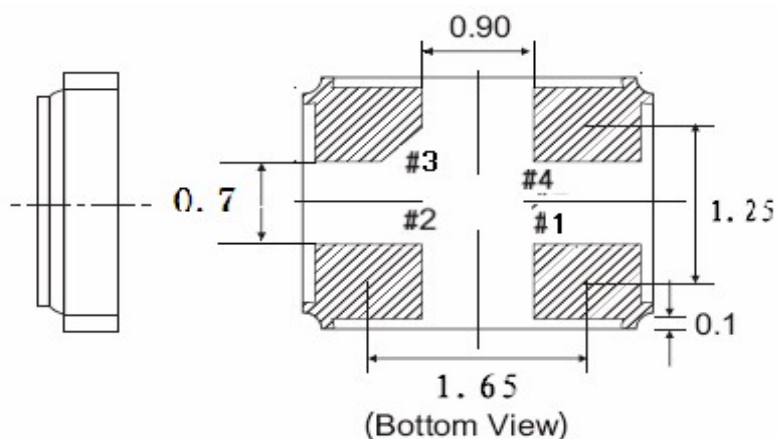
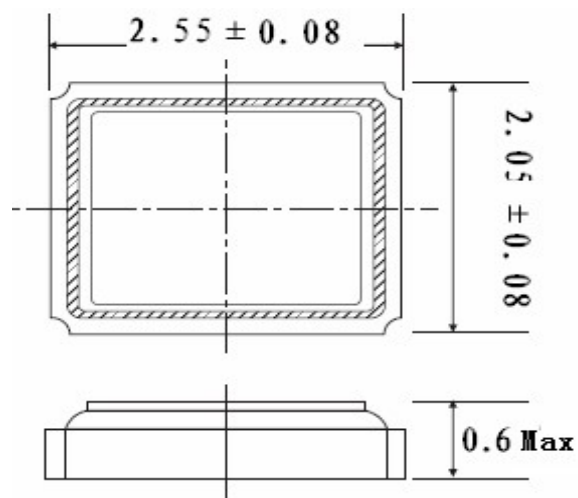
Jan-17	N	Jan-18	A
Feb-17	P	Feb-18	B
Mar-17	Q	Mar-18	C
Apr-17	R	Apr-18	D
May-17	S	May-18	E
Jun-17	T	Jun-18	F
Jul-17	U	Jul-18	G
Aug-17	V	Aug-18	H
Sep-17	W	Sep-18	J
Oct-17	X	Oct-18	K
Nov-17	Y	Nov-18	L
Dec-17	Z	Dec-18	M

备注：年份印字代码原则按奇偶年两年一个循环

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DIMENSIONS

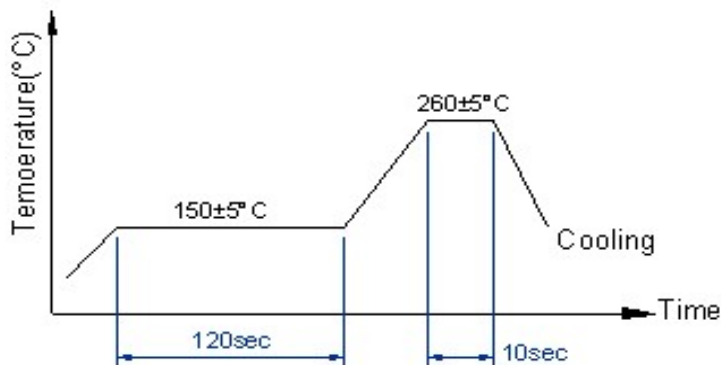


1	Quartz Blank
2	Electrode
3	Lid
4	Base
5	Conductive adhesive

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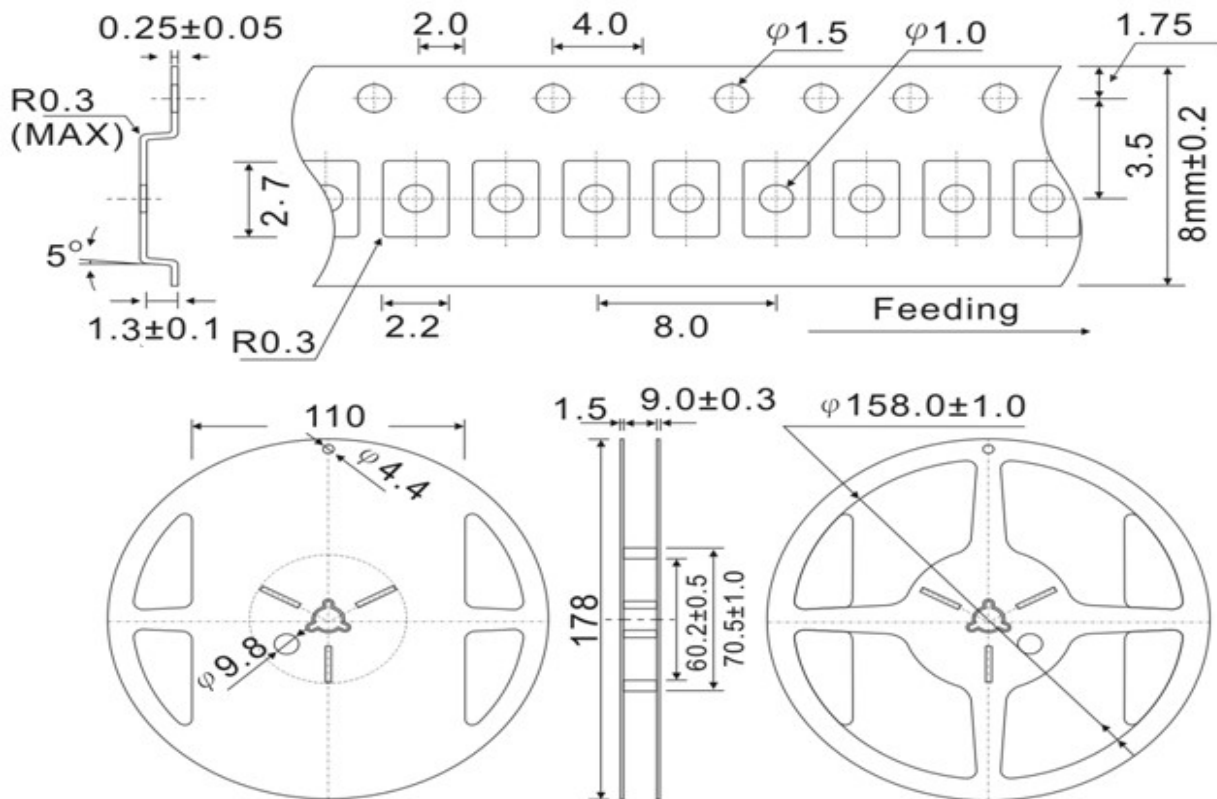
TYPE HH SEAM SEALED X'TAL

SUGGESTED IR REFLOW PROFILE



Total Time: 200 Sec.Max
Solder melting point : 185°C

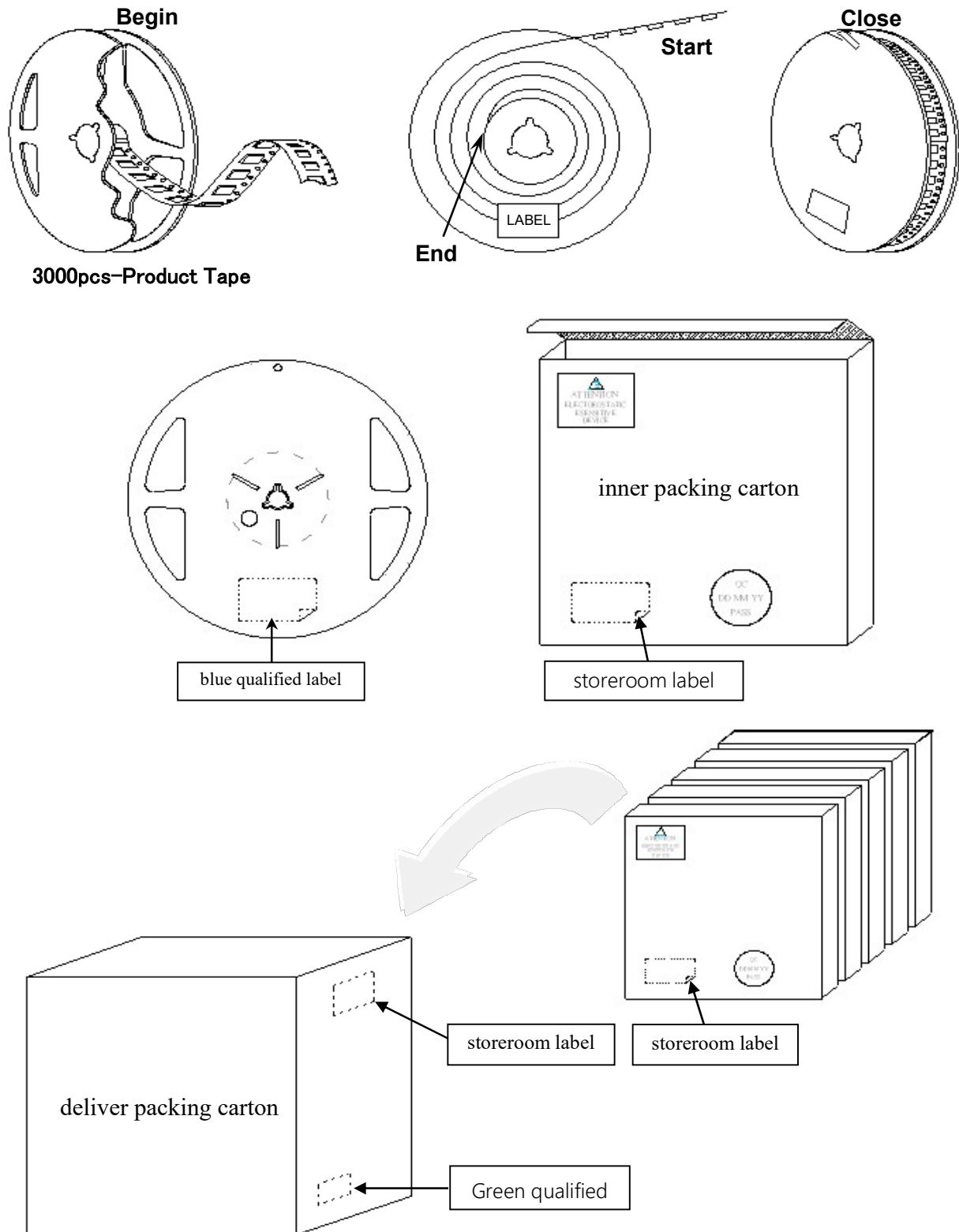
PACKING



1. 230mm minimum leader which consist of carrier and/or tape followed by a minimum of 160mm of empty carrier tape sealed with cover tape.
2. 160mm minimum trailer of empty carrier tape sealed with cover tape.

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PACKING



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