



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

SPECIFICATION FOR APPROVAL

CUSTOMER

NOMINAL FREQUENCY

50.000000 MHz

HOLDER TYPE

3225

SPEC. NO. (P/N)

HL50000019

CUSTOMER P/N

ISSUE DATE

Jun.4,2021

APPROVED	PREPARED	QA
		
APPROVED BY CUSTOMER :		AVL Status
Please return one copy with approval to HLC		

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ISO9001
ISO14001



RoHS Compliant (Pb- Free)



TYPE HL SEAM SEALED X'TAL

ELECTRICAL SPECIFICATIONS

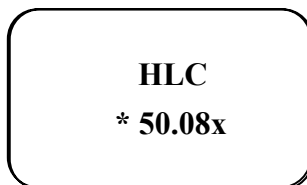
HLC Parts Number : HL50000019

Item	Symbol	Specifications				Notes
		Min	Type	Max	Units	
Nominal frequency	FO	50.000000			MHz	
Mode of Oscillation	OT	Fundamental				
Load Capacitance	LC	18			pF	
Frequency Tolerance	FT	± 10			ppm	at 25°C $\pm 3^{\circ}\text{C}$
Frequency Stability		± 15			ppm	with working temperature Reference to 25°C
Working temperature range	TR	-40~95			°C	
Drive Level	DL	200			μW	
Series Resonant Resistance RR	CI/RR	20			Ω	Max.
Insulation Resistance	IR	>500			M Ω	
Shunt Capacitance C0	C0	3			pF	Max.
Aging		2			ppm/yr.	
Storage temperature range		-55 ~ 125			°C	
Unit Weight					g	



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MARKING



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

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

Jan-15	N	Jan-16	A
Feb-15	P	Feb-16	B
Mar-15	Q	Mar-16	C
Apr-15	R	Apr-16	D
May-15	S	May-16	E
Jun-15	T	Jun-16	F
Jul-15	U	Jul-16	G
Aug-15	V	Aug-16	H
Sep-15	W	Sep-16	J
Oct-15	X	Oct-16	K
Nov-15	Y	Nov-16	L
Dec-15	Z	Dec-16	M

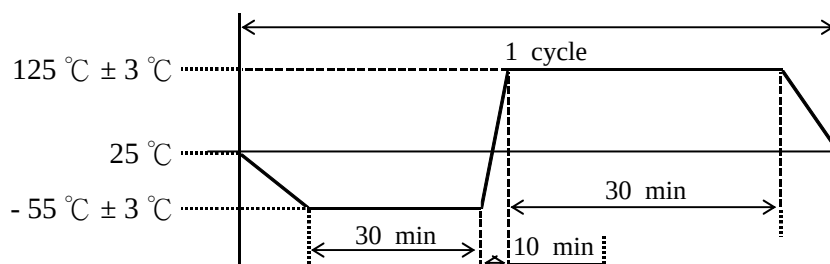
备注：年份印字代码原则按奇偶年两年一个循环



TYPE HL SEAM SEALED X'TAL

RELIABILITY SPECIFICATIONS

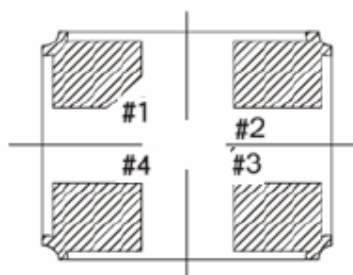
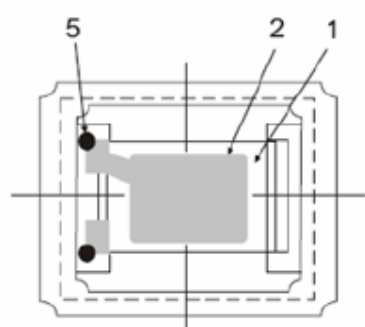
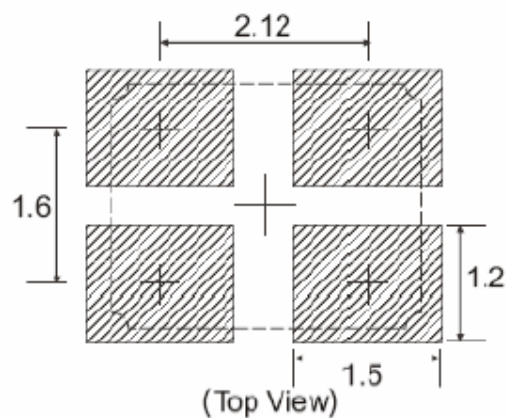
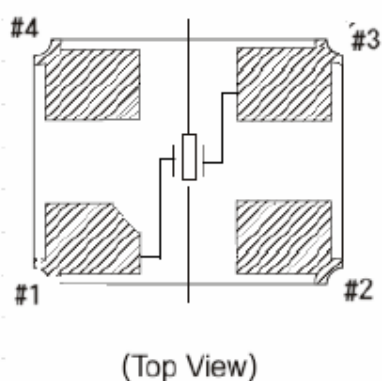
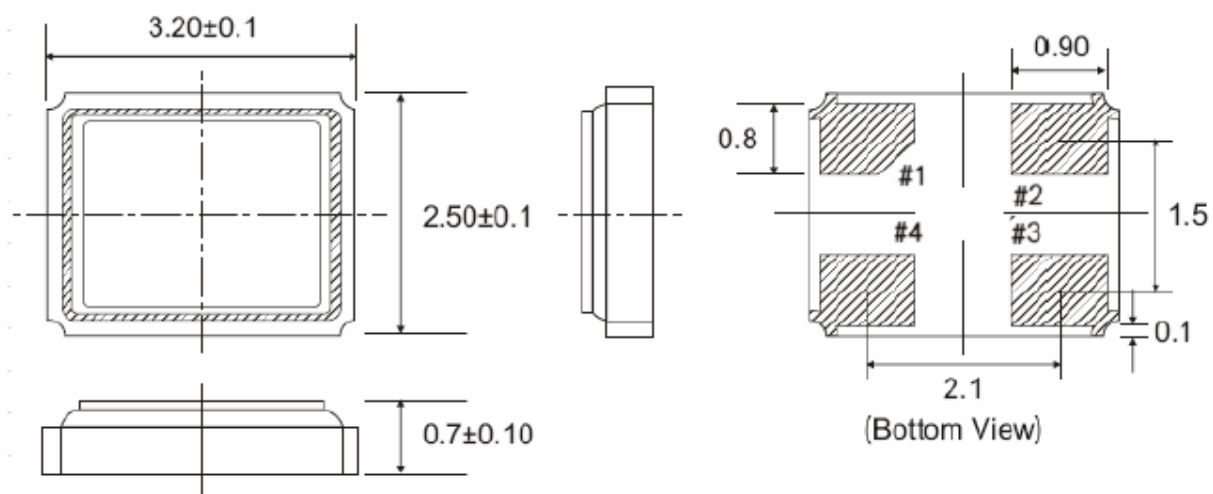
NO.	TEST ITEM	TEST METHODS
1	DROP TEST	Device are dropped from a height of 150 cm onto 2 mm thickness stainless plate executing 3 times of random drops.
2	MECHANICAL SHOCK	Device are shocked to half sine wave (1000 G) three mutually perpendicular axes each 3 times.
3	VIBRATION	Frequency range 10 ~ 2000 Hz Amplitude 1.5 mm Sweep Time 20 minute Test Time 2 hours
4	SOLDERABILITY	MIL - STD - 20E Method 208C Temperature 245°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



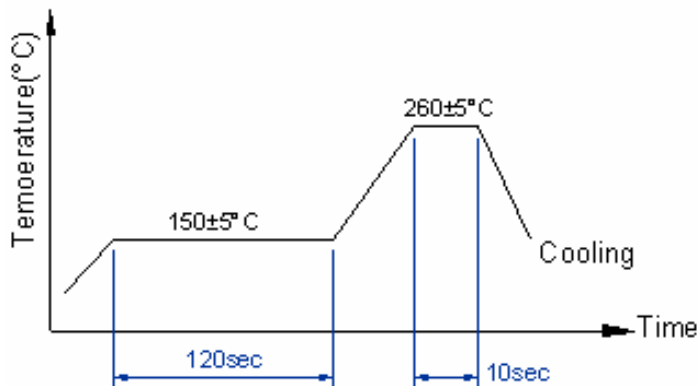
1	Quartz Blank
2	Electrode
3	Lid
4	Base
5	Conductive adhesive





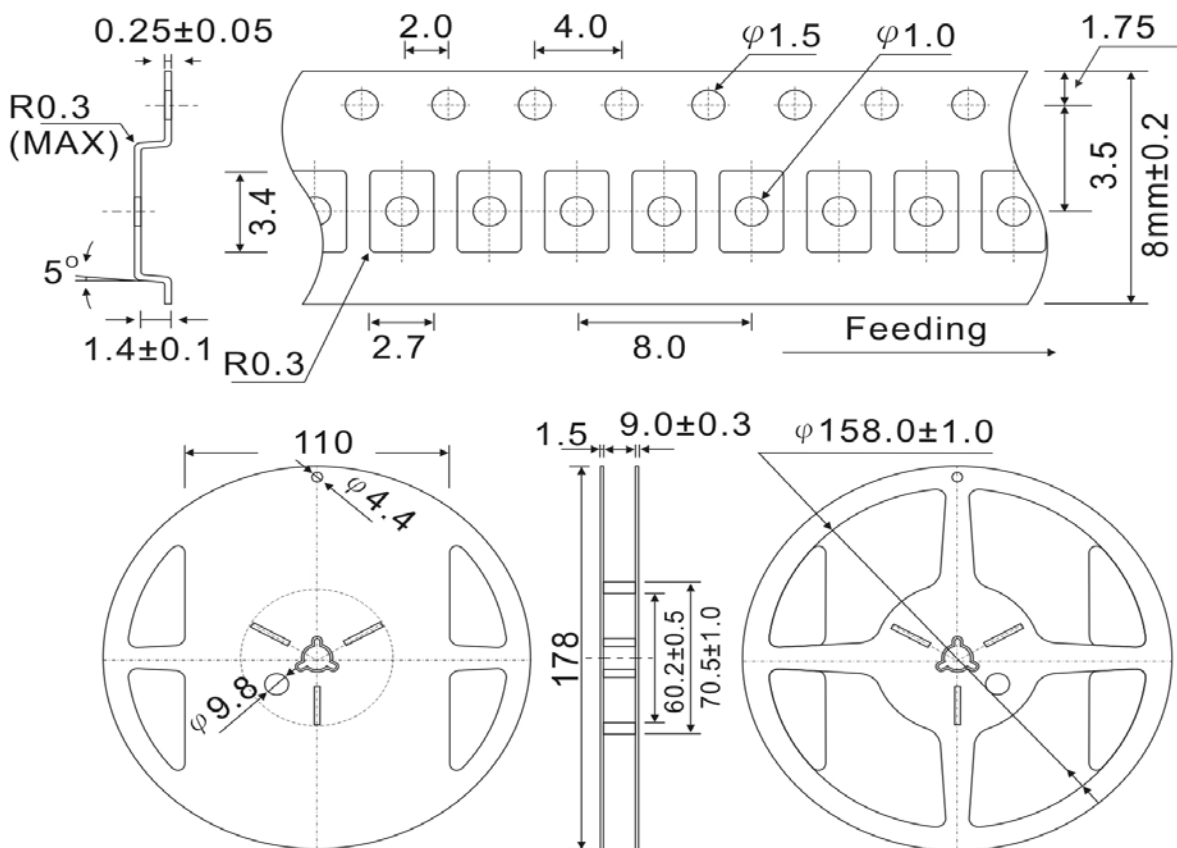
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SUGGESTED IR REFLOW PROFILE



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

PACKING



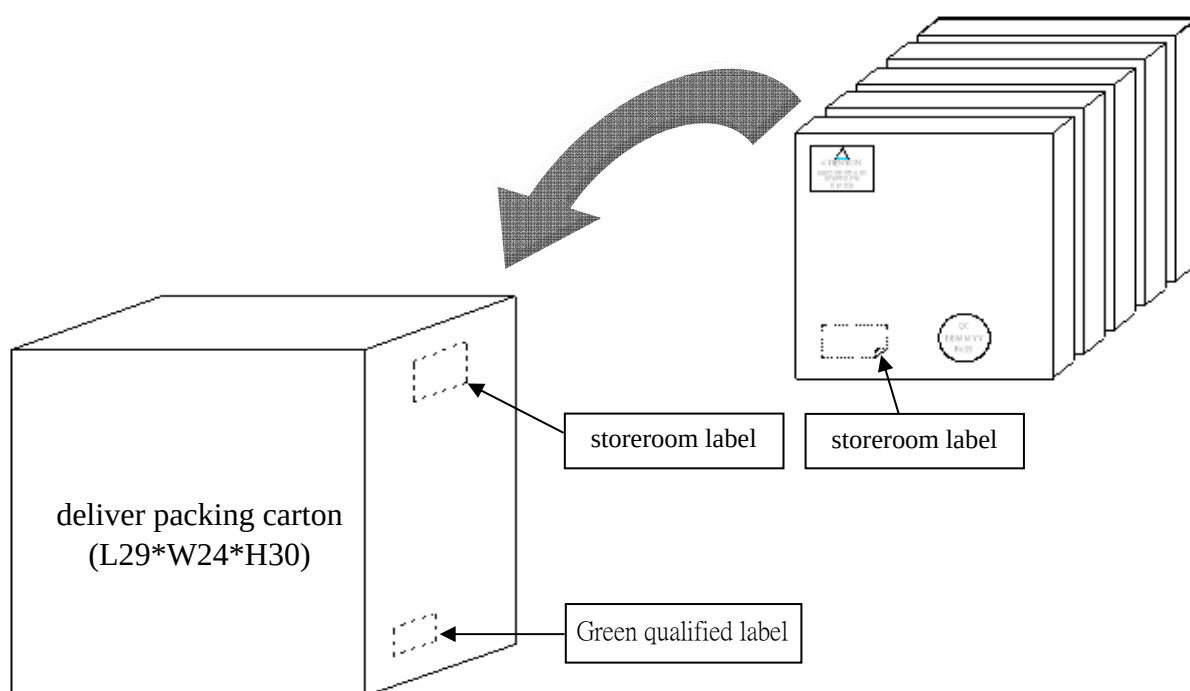
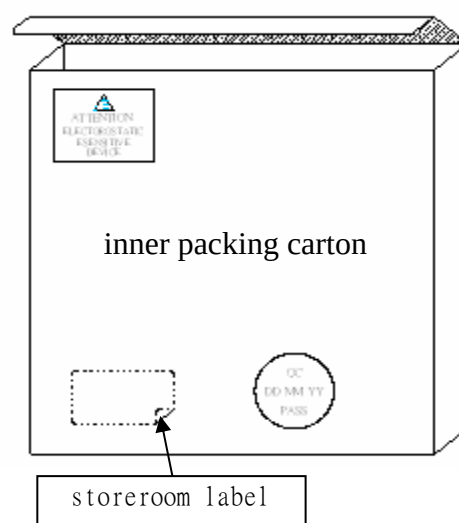
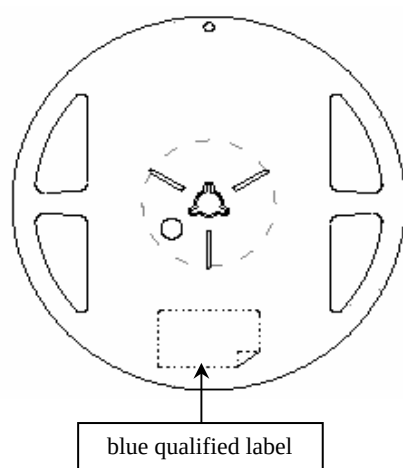
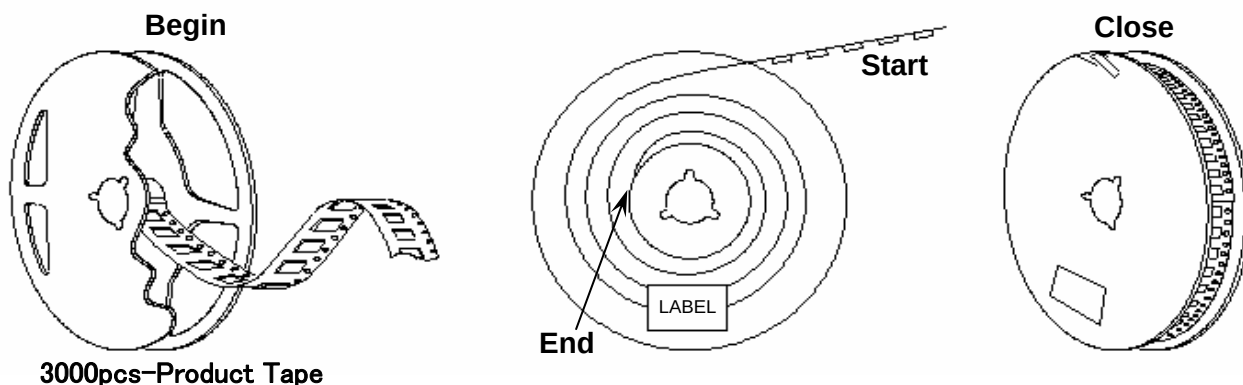
1. 230mm minimum leader which consist of carrier and/or tape followed by a minimum of 160mm of empty carrier tape sealed with cover tape.
2. 160mm minimum trailer of empty carrier tape sealed with cover tape.

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