汇 隆 电 子 (金 华) 有 限 公 司
HUILONG ELECTRONIC (JINHUA) CO.,LTD

SPECIFICATION FOR APPROVAL

CUSTOMER	
NOMINAL FREQUENCY	54.000000 MHz
HOLDER TYPE	**3225**
SPEC. NO. (P/N)	HL54000008
CUSTOMER P/N	
ISSUE DATE	Feb.20,2021

APPROVED	PREPARED	QA
SMD 2022.02.26 王俭锋	SMD 2022.02.26 付进	SMD 2022.02.26 唐春花
APPROVED BY CUSTOMER :		**AVL Status**
Please return one copy with approval toHLC		

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ISO9001
ISO14001

RoHS PASS

RoHS Compliant (Pb- Free)

TYPE HL SEAM SEALED X'TAL

ELECTRICAL SPECIFICATIONS

HLC Parts Number : **HL54000008**

Item	Symbol	Specifications				Notes
		Min	Type	Max	Units	
Nominal frequency	FO	54.000000			MHz	
Mode of Oscillation	OT	Fundamental				
Load Capacitance	LC	19			pF	
Frequency Tolerance	FT	± 10			ppm	at 25℃ ± 3℃
Frequency Stability		± 15			ppm	with working temperature Reference to 25℃
Working temperature range	TR	-20~95			℃	
Drive Level	DL	200			μW	Max.
Series Resonant Resistance RR	CI/RR	15			Ω	Max.
Shunt Capacitance C0	C0	7			pF	
DLDF		0			ppm	Max.
Storage temperature range		-55 ~ 125			℃	
Aging		±3			ppm/yr.	
C1		2	3.27	7	fF	
TS		3	4	8	ppm/pF	
L1		1	2.64	5	mH	
Q		40			K	
DLD2				8	Ω	0.01~100uW 10 STEPS
FDLD				8	ppm	0.01~100uW 10 STEPS
RLD2				15	Ω	0.01~100uW 10 STEPS
DLDF		< 0				
SPFR				-1000	ppm	±5000ppm/30points
SPUR		1100			Ω	±0.7mhz
SPDB		< 3			dB	-1000ppm~6500ppm

TYPE HL SEAM SEALED X'TAL

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

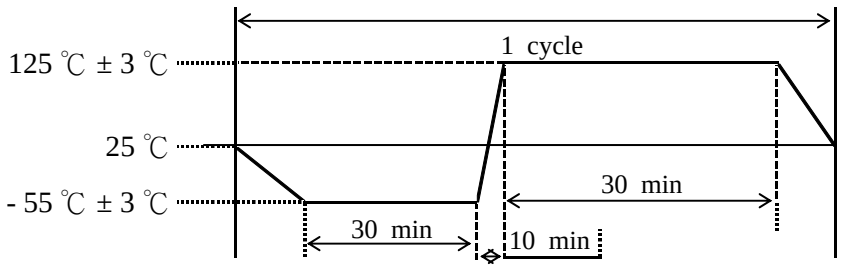
Jan-17	N	Jan-18	A
Feb-17	P	Feb-18	B
Mar-17	Q	Mar-18	C
Apr-17	R	Apr-18	D
May-17	S	May-18	E
Jun-17	T	Jun-18	F
Jul-17	U	Jul-18	G
Aug-17	V	Aug-18	H
Sep-17	W	Sep-18	J
Oct-17	X	Oct-18	K
Nov-17	Y	Nov-18	L
Dec-17	Z	Dec-18	M

备注：年份印字代码原则按奇偶年两年一个循环

TYPE HL SEAM SEALED X'TAL

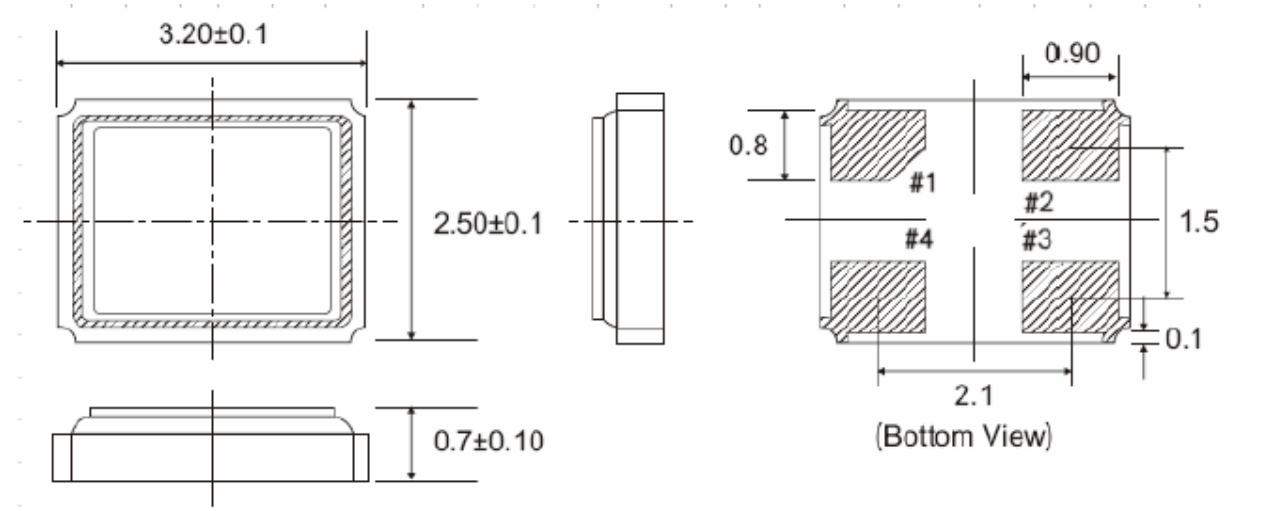
RELIABILITY SPECIFICATIONS

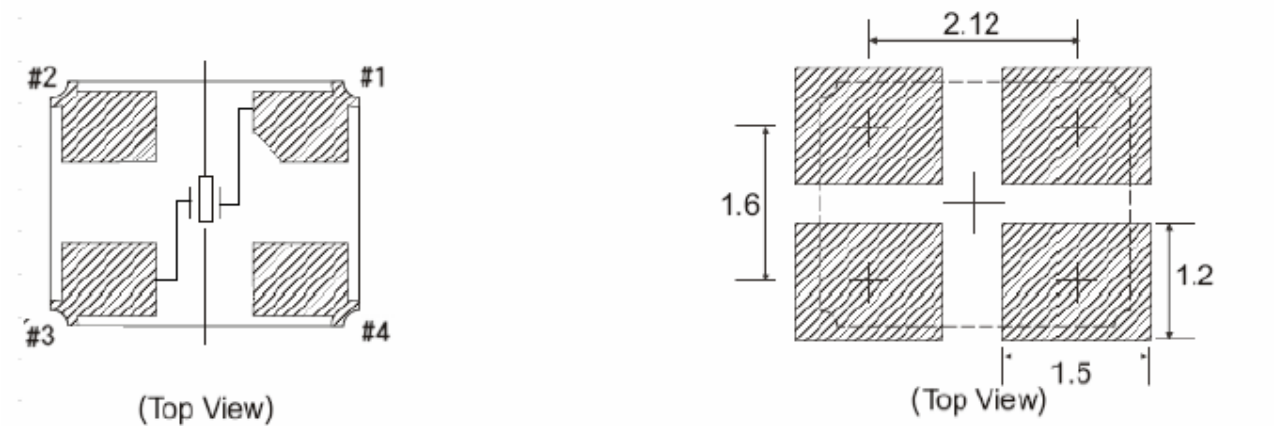
NO.	TEST ITEM	TEST METHODS	
1	DROP TEST	Device are dropped from a height of 150 cm onto 2 mm thickness stainless plate executing 3 times of random drops.	
2	MECHANICAL SHOCK	Device are shocked to half sine wave (1000 G) three mutually perpendicular axes each 3 times.	
3	VIBRATION	Frequency range	10 ~ 2000 Hz
		Amplitude	1.5 mm
		Sweep Time	20 minute
		Test Time	2 hours
4	SOLDERABILITY	MIL - STD - 20E Method 208C	
		Temperature	245℃±5℃
		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℃ solder pot, above 180℃ is 90 ~ 120 sec.	
6	LOW TEMP. STORAGE	Leave at - 55 ℃ ± 2℃ for 1000 ± 12 hours	
7	HIGH TEMP. STORAGE	Leave at 125 ℃ ± 2℃ for 1000 ± 12 hours	
8	THERMAL SHOCK	Total 100 cycles of the following temperature cycle	

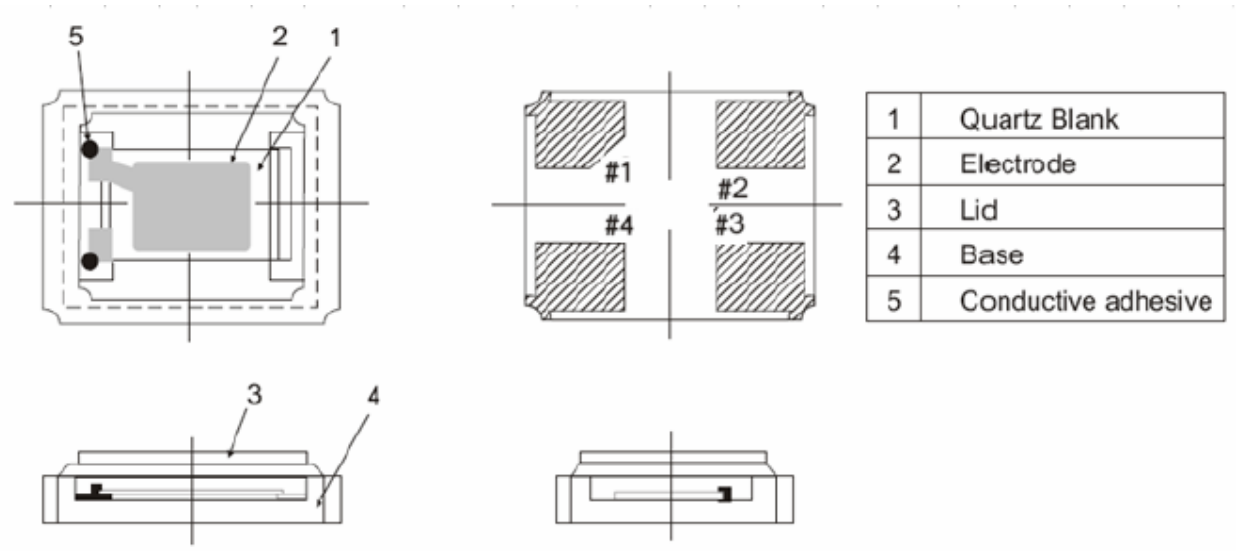


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DIMENSIONS



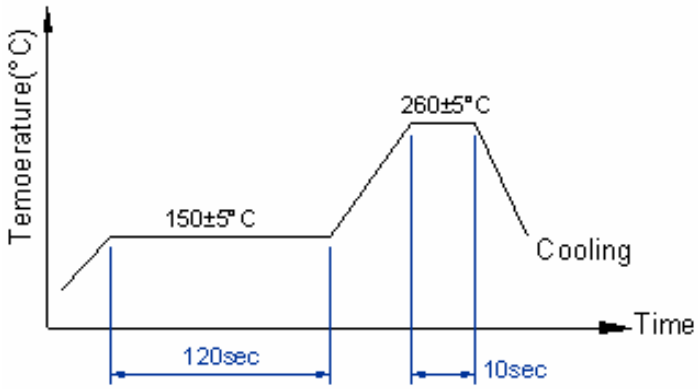




1	Quartz Blank
2	Electrode
3	Lid
4	Base
5	Conductive adhesive

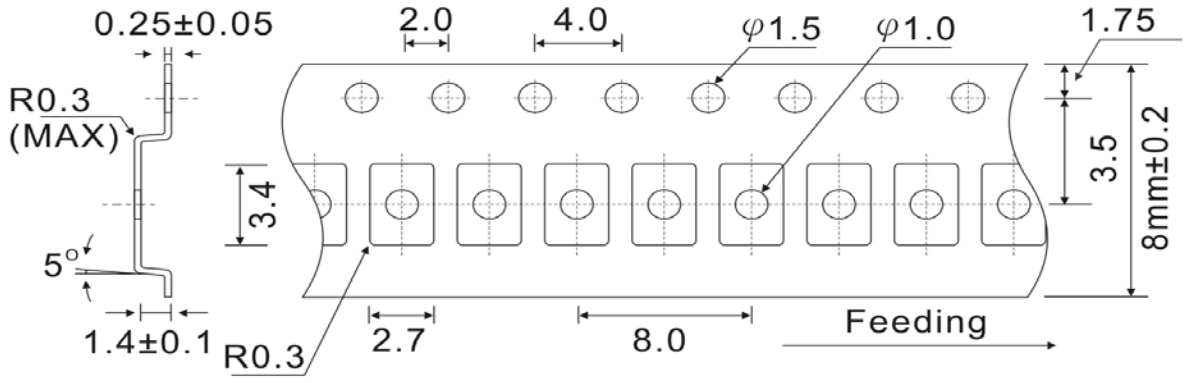
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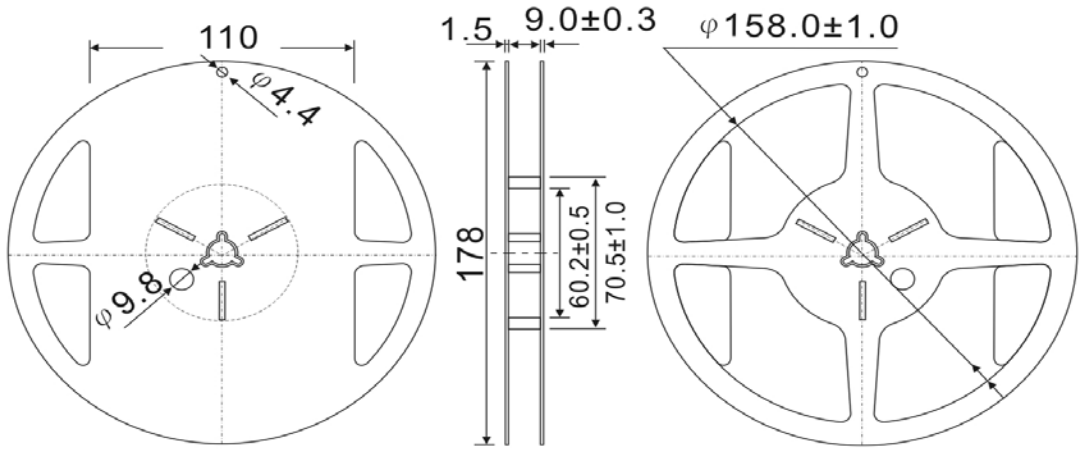
SUGGESTED IR REFLOW PROFILE



Total Time：200 Sec.Max
Solder melting point ：185℃

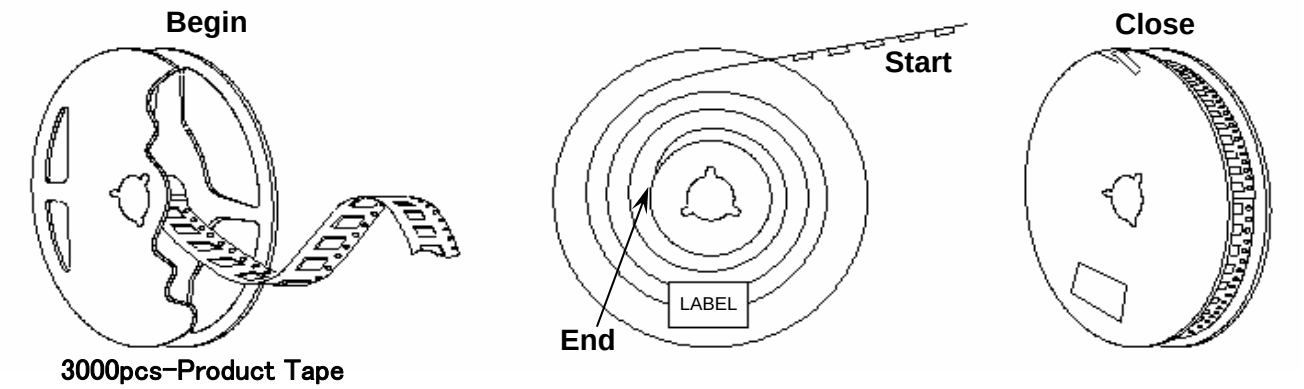
PACKING

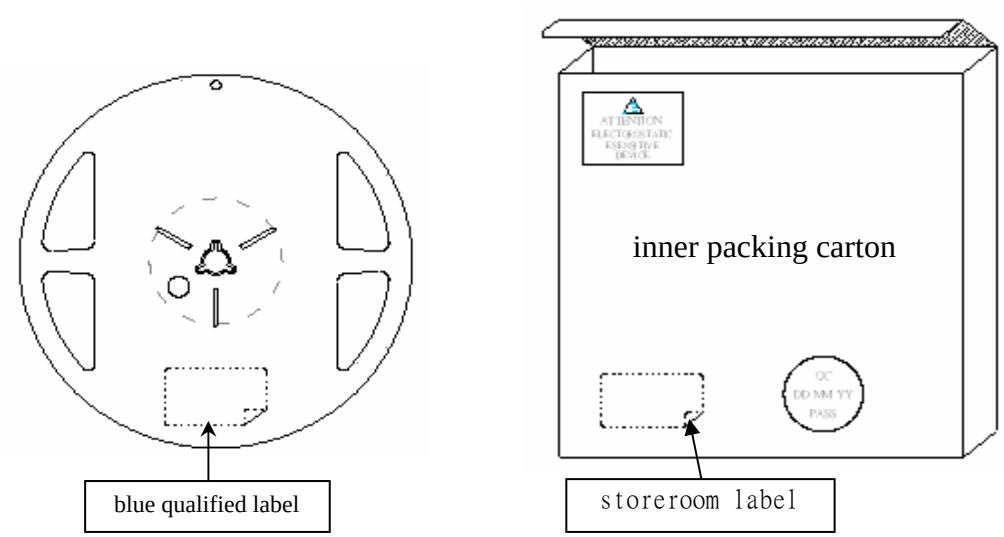


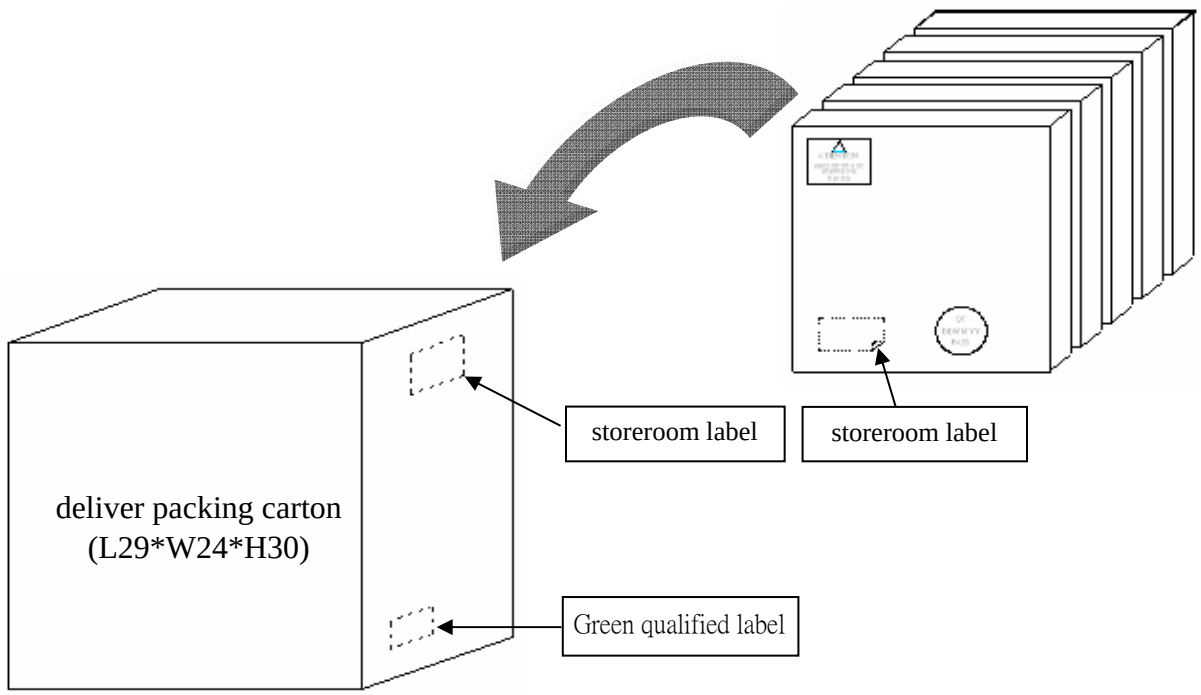


1. 230mm minimum leafer which consist of carrier and/or tape followed by a minimum of 160mm of empty carrier tape sealed with cover tape.
2. 160mm minimum trailer of empty carrier tape sealed with cover tape.

PACKING


Begin
Start
Close
LABEL
End
3000pcs-Product Tape


inner packing carton
blue qualified label
storeroom label


deliver packing carton
(L29*W24*H30)
storeroom label
storeroom label
Green qualified label