



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 5032

SPEC. NO. (P/N) HY54000004

CUSTOMER P/N _____

ISSUE DATE Feb.26,2022

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 HY SEAM SEALED X'TAL

ELECTRICAL SPECIFICATIONS

HLC Parts Number : HY54000004

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°C ± 3°C
Frequency Stability1		± 15			ppm	with working temperature
Working temperature range1	TR	-20~85			°C	
Frequency Stability2		± 20			ppm	with working temperature
Working temperature range2	TR	85~95			°C	
Drive Level	DL	100			μW	
Series Resonant Resistance RR	CI/RR	15			Ω	Max.
Insulation Resistance	IR	>500			MΩ	
Shunt Capacitance C0	C0	7			pF	Max.
Aging		± 2			ppm/yr.	
Storage temperature range		-40 ~ 85			°C	
C1		3	5.17	7	fF	
TS		4	6	8	ppm/pF	
L1		2	1.68	5	mH	
Q		40			K	
DLD2				8	Ω	0.01~100uW 10 STEPS
FDDL				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



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MARKING

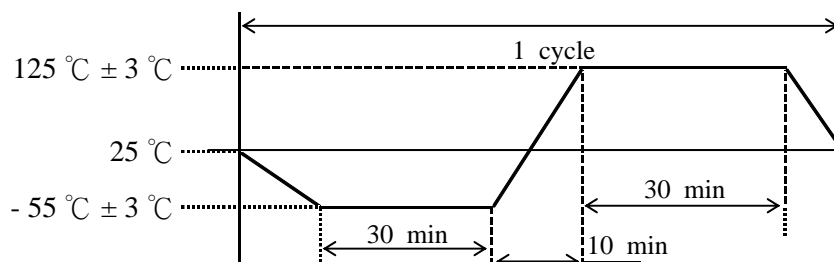
54.000



TYPE HY SEAM SEALED X'TAL

RELIABILITY SPECIFICATIONS

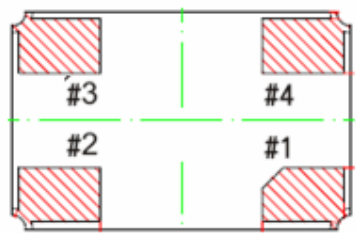
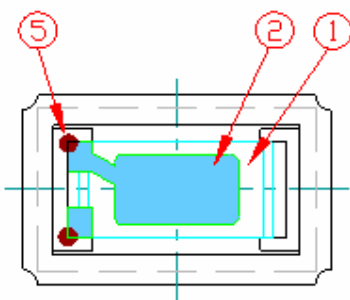
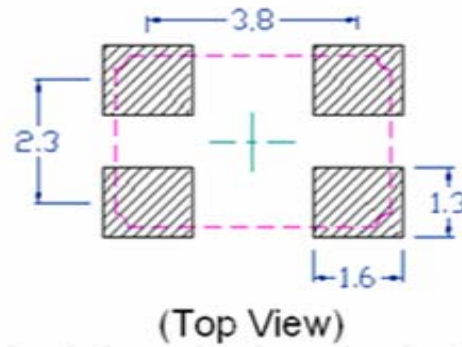
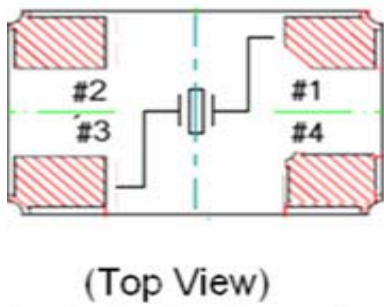
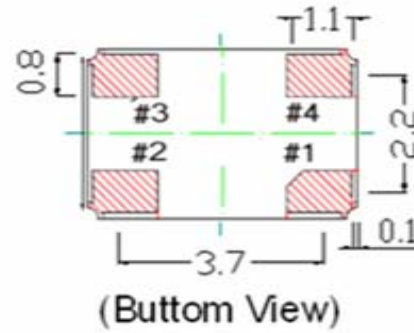
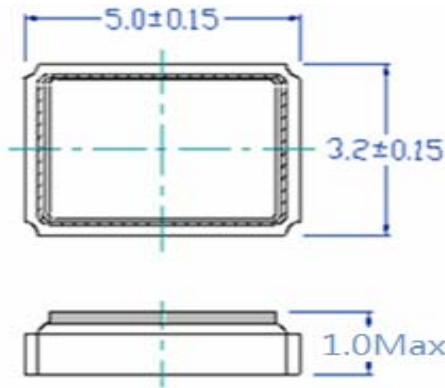
NO.	TEST ITEM	TEST METHODS
1	DROP TEST	Device are dropped from a height of 150 cm onto 2 mm thickness stainless plate executing 3 times of random drops.
2	MECHANICAL SHOCK	Device are shocked to half sine wave (1000 G) three mutually perpendicular axes each 3 times.
3	VIBRATION	Frequency range 10 ~ 2000 Hz Amplitude 1.5 mm Sweep Time 20 minute Test Time 2 hours
4	SOLDERABILITY	MIL - STD - 20E Method 208C Temperature $245^{\circ}\text{C} \pm 5^{\circ}\text{C}$ 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



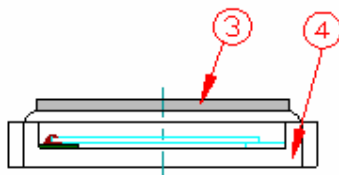


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DIMENSIONS



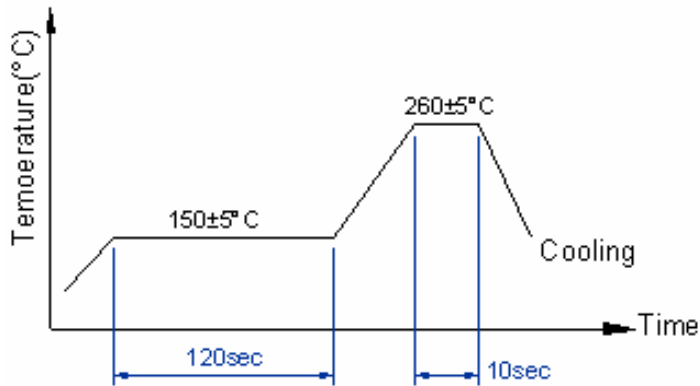
1	Quartz Blank
2	Electrode
3	Lid
4	Base
5	Conductive adhesive





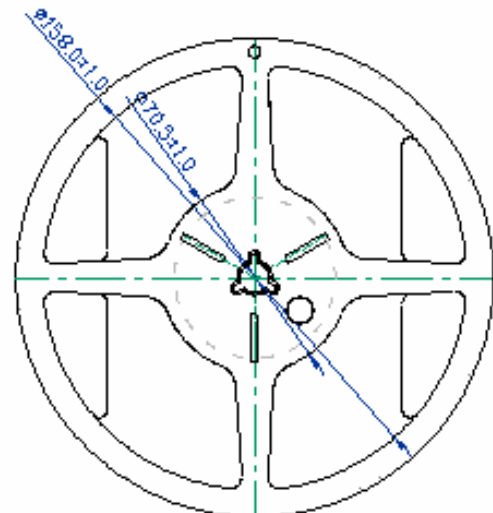
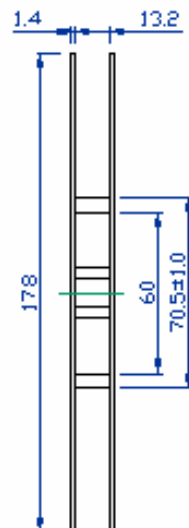
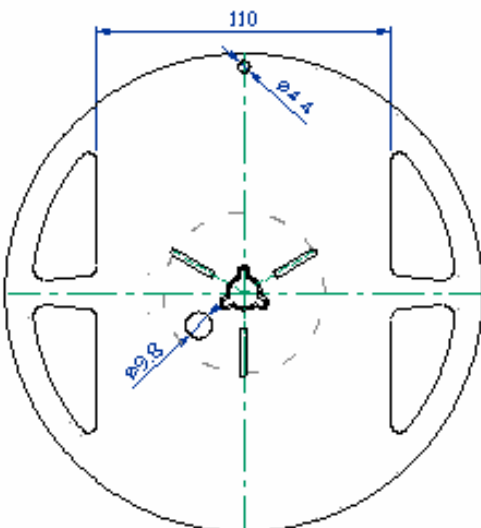
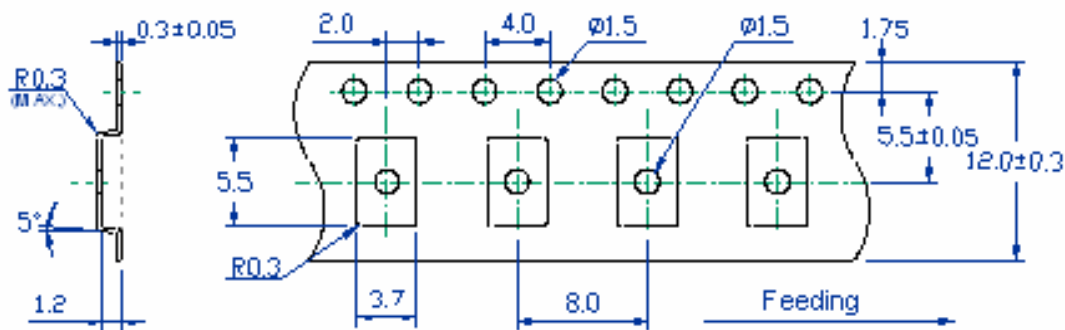
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SUGGESTED IR REFLOW PROFILE



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

PACKING



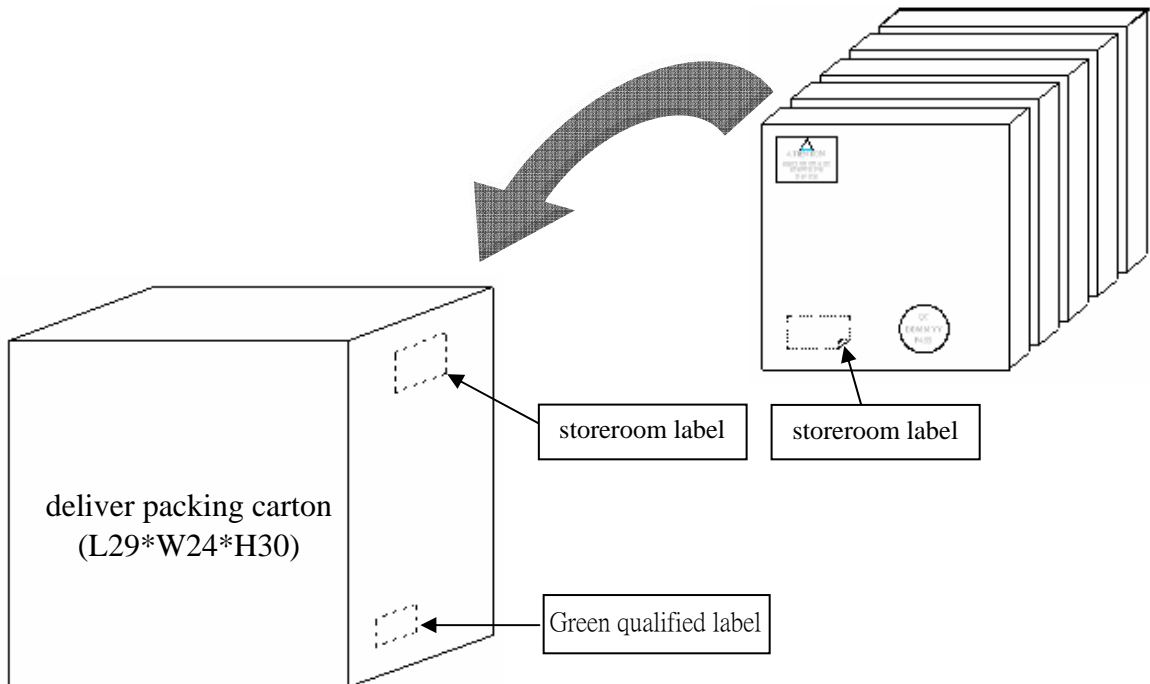
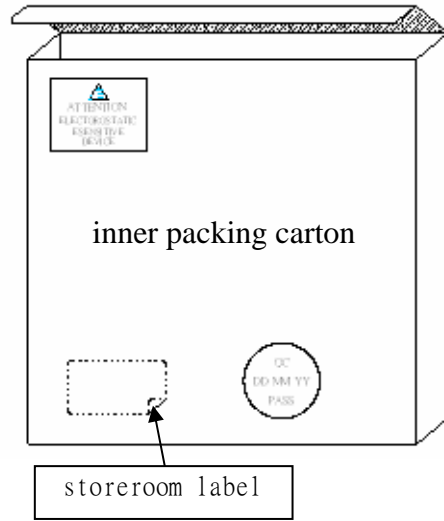
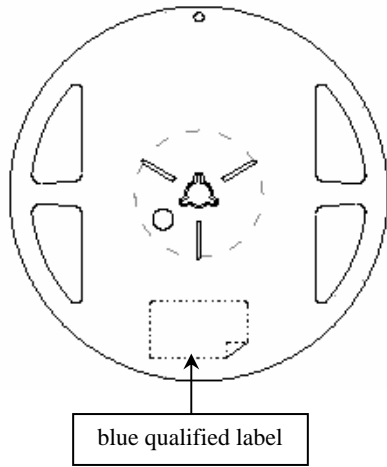
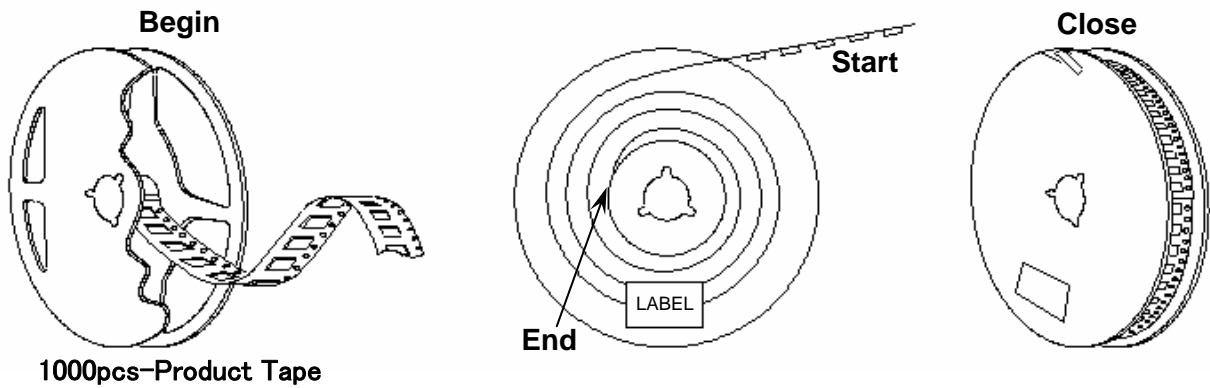
1. 230mm minimum leader which consist of carrier and/or tape followed by a minimum of 160mm of empty carrier tape sealed with cover tape.
2. 160mm minimum trailer of empty carrier tape sealed with cover tape.

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