



浙江汇隆晶片技术有限公司

Zhejiang Huilong Crystals Technology Co.,Ltd

SPECIFICATION FOR APPROVAL

CUSTOMER

NOMINAL FREQUENCY

10.000000 MHz

HOLDER TYPE

HC-49S-SMD

SPEC. NO. (P/N)

HB10000X004

CUSTOMER P/N

TZ3491AP

ISSUE DATE

Sep.18,2024

APPROVED	PREPARED	QA
彭达梅	金文波	陈全根
APPROVED BY CUSTOMER:		AVL Status
Please return one copy with approval to HLC		

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ISO9001
ISO14001



RoHS Compliant (Pb- Free)



TYPE HB SEAM SEALED X'TAL

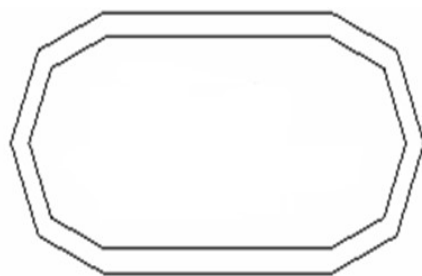
ELECTRICAL SPECIFICATIONS

Item	Symbol	Specifications				Notes
		Min	Type	Max	Units	
Nominal frequency	FO	10.000000			MHz	
Mode of Oscillation	OT	Fundamental				
Load Capacitance	CL	18			pF	
Frequency Tolerance	FT	± 30			ppm	at 25°C $\pm 3^\circ\text{C}$
Frequency Stability		± 50			ppm	with working temperature Reference to 25°C frequency
Working temperature range	TR	-40 ~ 85			°C	
Drive Level	DL	500			μW	
Series Resonant Resistance RR	CI/RR	60			Ω	Max.
Shunt Capacitance C0	C0	7			pF	Max.
Aging		± 5			ppm/yr.	
Storage temperature range		-40 ~ 85			°C	



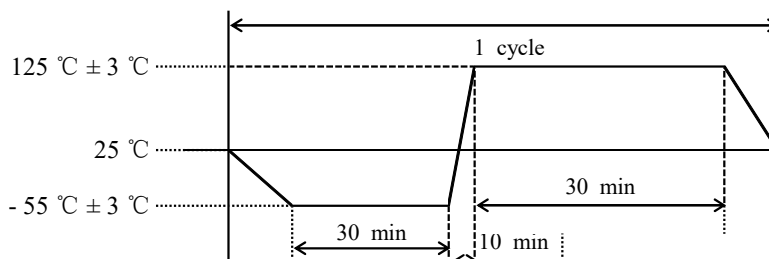
TYPE HB SEAM SEALED X'TAL

MARKING

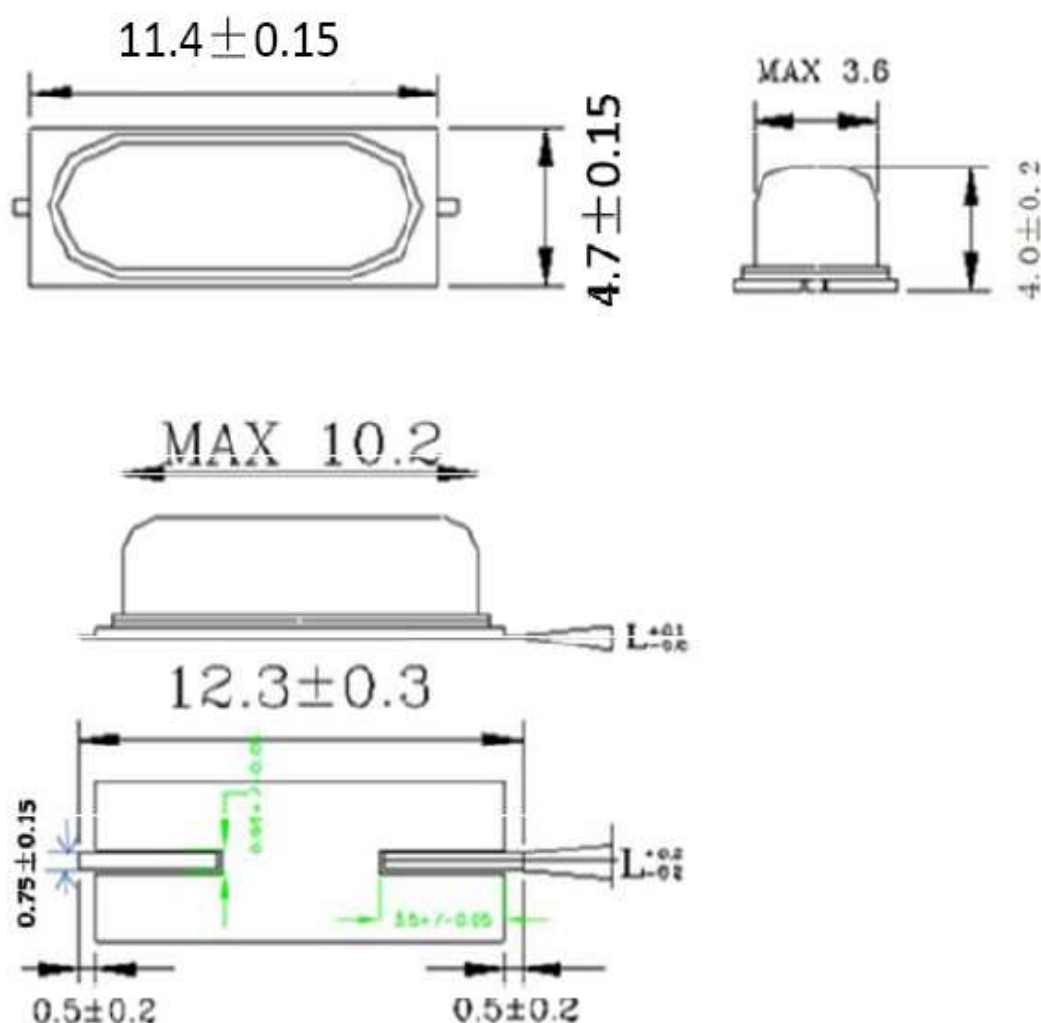


RELIABILITY SPECIFICATIONS

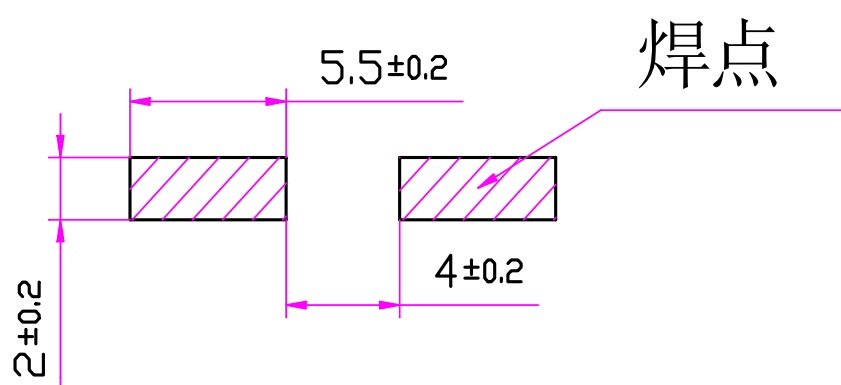
NO.	TEST ITEM	TEST METHODS
1	DROP TEST	Device are dropped from a height of 75 cm onto 3 mm thick wood to perform 3 times of random drops.
2	MECHANICAL SHOCK	Device are shocked to half sine wave (1000 G) three mutually perpendicular axes each 3 times.
3	VIBRATION	Frequency range Amplitude Sweep Time Test Time 10 ~ 2000 Hz 1.5 mm 20 minute 2 hours
4	SOLDERABILITY	MIL - STD - 20E Method 208C Temperature Material Immersion depth Immersion time Flux 245°C±5°C H63A (Silver 2 ~ 3 %) 0.5 mm minimum 3 ± 0.5 seconds 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



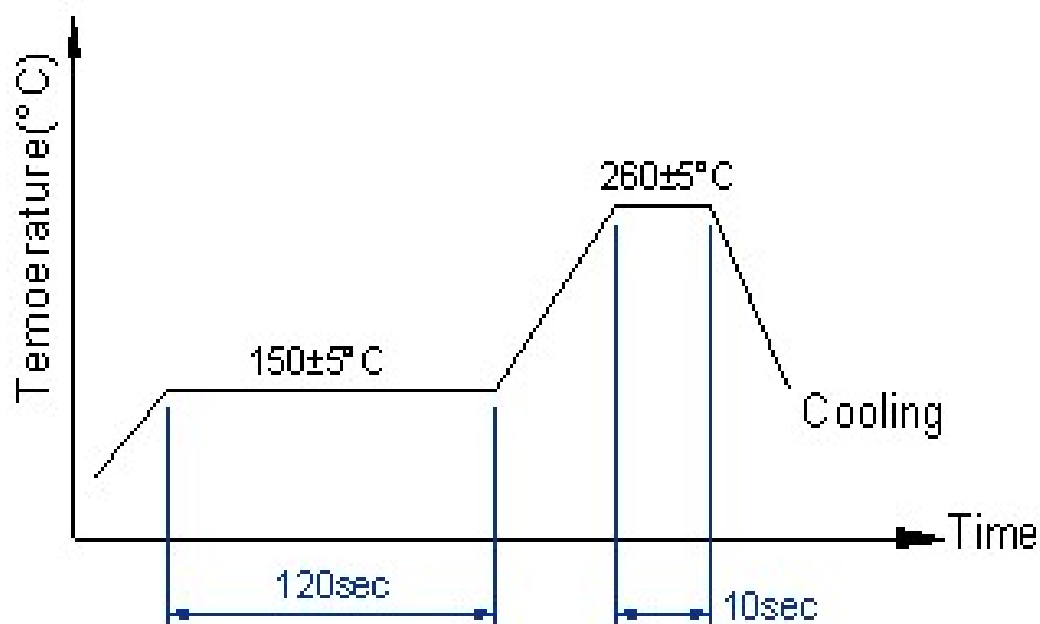
DIMENSIONS



推荐焊点设计尺寸（单位：MM）



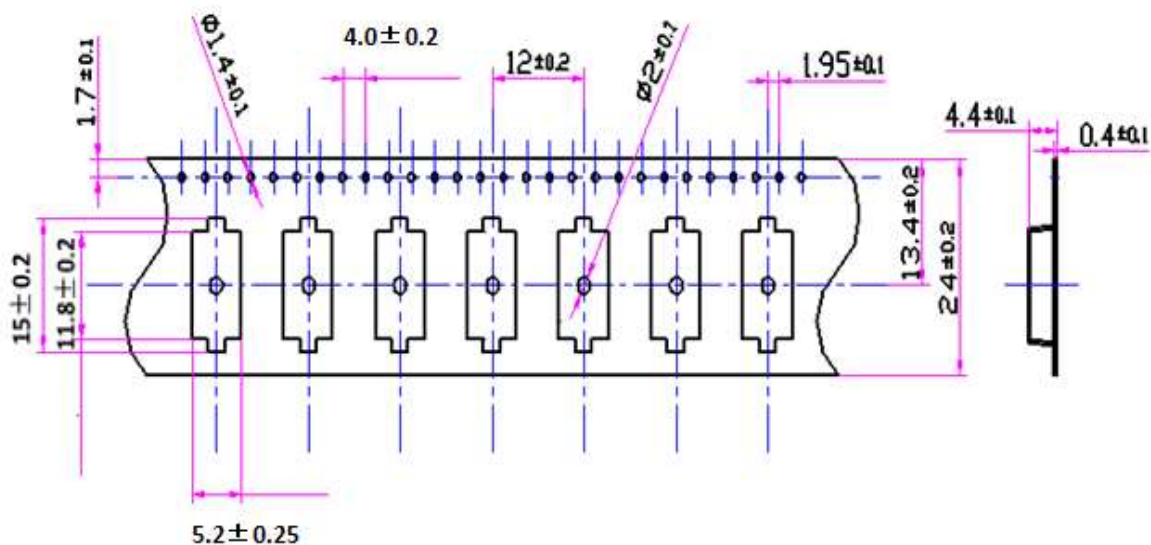
SUGGESTED IR REFLOW PROFILE



Total Time: 200 Sec.Max

Solder melting point : 185°C

Taping



Reel

