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	MODEL NAME: HQT-5020			

SPECIFICATION FOR APPROVAL

SMD ELECTRO-MAGNETIC TRANSDUCER

Model Name	HQT-5020
Note	

CUSTOMER	Hq-sound
	DRAWN: 吴小芹
	CHECKED: 许 海
	APPROVED: 唐宽红

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HQT5020

SMD ELECTRO-MAGNETIC TRANSDUCER

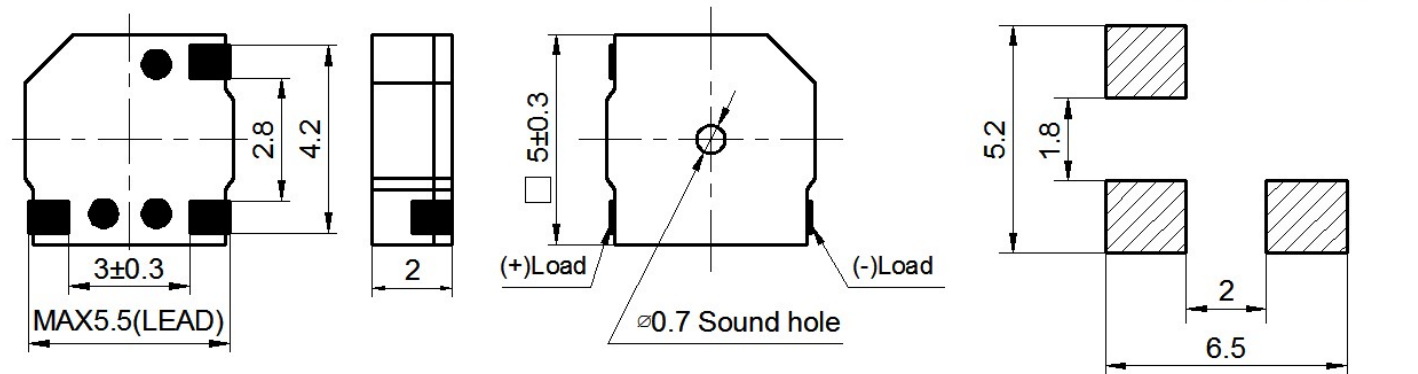
1	Model No.	SYT5020CS-03L-4.0-12-R
2	Rated Voltage (V)	3
3	Operating Voltage (V)	2~5
4	Resonant Frequency (Hz)	4000
5	☆Coil Resistance (Ω)	12 ± 2
6	☆*Sound Output at 10cm (dB)	≥ 75
7	☆*Current Consumption (mA)	≤ 100
8	Operating Temperature (°C)	-20~+70
9	Storage Temperature (°C)	-30~+80
10	Weight (g)	0.3
11	Case material and colour	LCP / Black

*Applying rated voltage (Resonant frequency, 1/2 duty, Square wave)

☆Tset Basic State: Temp($20 \pm 2^{\circ}\text{C}$), Humidity(40~70%RH), Air pressure(860~1060hPa).

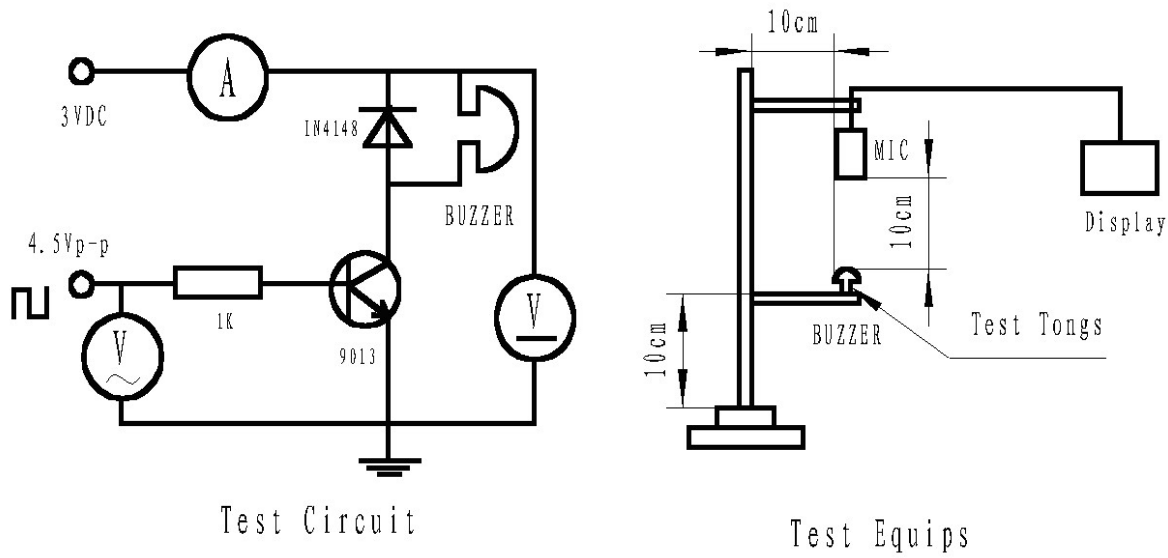
DIMENSIONS (UNIT: mm)

Tolerance: $\pm 0.5\text{mm}$ Except Specified

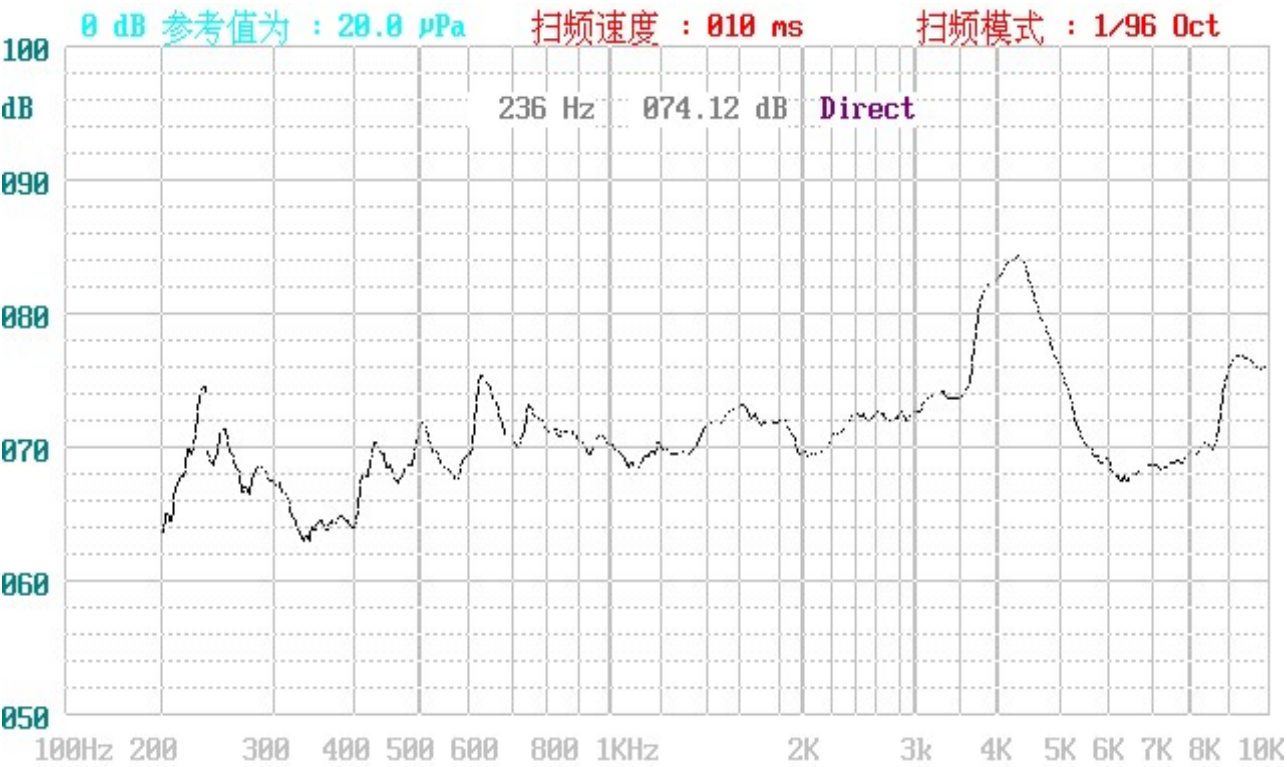


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TEST METHOD:

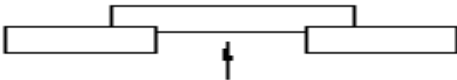


FREQUENCY RESPONSE:



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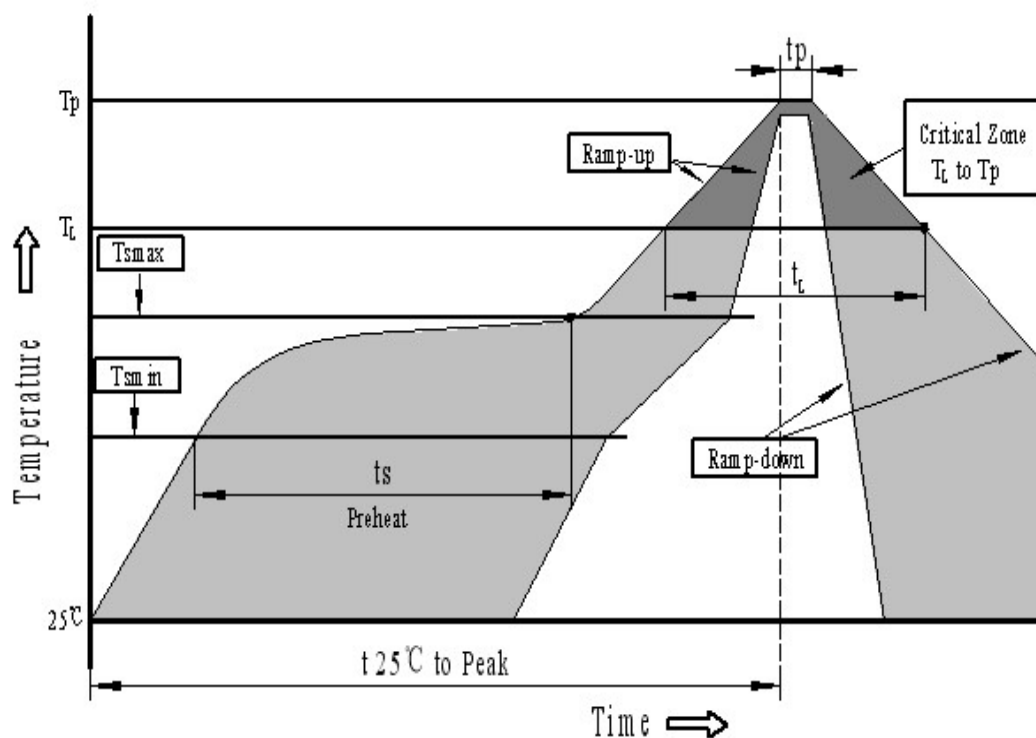
RELIABLY TEST:

NO.	ITEM	TESTING CONDITION	VARIANCE AFTER TEST
1	High temp. storage life	The part shall be capable of withstanding a storage temperature is $+80^{\circ}\text{C}$ for 120 hours	After the test the part shall meet specifications without any degradation in appearance and performance except SPL shall be initial value $\pm 10\text{dB}$ or more.
2	Low temp. storage life	The part shall be capable of withstanding a storage temperature is -30°C for 120 hours	
3	Temp. Cycle	Total 5 cycles, 1 cycle consisting of $-30 \pm 2^{\circ}\text{C}$, 30 minutes $20 \pm 5^{\circ}\text{C}$ 15 minutes $80 \pm 2^{\circ}\text{C}$, 30 minutes $20 \pm 5^{\circ}\text{C}$ 15 minutes	
4	Humidity Test	$40 \pm 2^{\circ}\text{C}$, 90~95% RH, 120 hours	
5	Vibration Test	The part shall be subjected to a vibration cycle is 10Hz in a period of 1 minute. Total peak amplitude shall be 1.52mm(9.3g). The vibration test shall consist of 2 hours per plane in each three mutually perpendicular planes for a total time of 6 hours.	
6	Shock	Sounder shall be measured after being applied shock (980m/s^2) for each three mutually perpendicular directions to each of 3 times by half sine wave.	
7	Drop Test	Dropped naturally from 700mm height onto the surface of 10mm thick wooden board. 2 directions-upper and side of the part are to be applied.	
8	Lead pull	The part shall be pushed with a force of 9.8N for 10 ± 1 seconds behind the part. 	After the test part shall meet specifications without any degradation in appearance and performance.
9	Recommended temp. Profile for Reflow Oven	Shown in Fig.1	

Warranty:For a period of one year from date of manufacture under normal operations.

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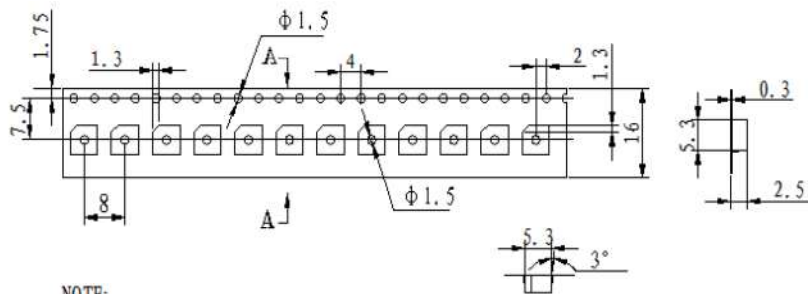
Recommended Temp. Profile for Reflow Oven (Fig.1)



Profile Feature	Pb-Free Assembly
Average ramp-up rate(T_L to T_p)	3°C/second max.
Preheat	
-Temperature Min.(T_{smin})	150°C
-Temperature Min.(T_{smax})	200°C
-Temperature Min.(t_s)	60~180 seconds
T_{smax} to T_L	
-Ramp-up Rate	3°C/second max.
Time maintained above:	
- Temperature(T_L)	217°C
-Time(T_L)	60~150 seconds
Peak temperature(T_p)	250°C+0/-5°C
Time within 5°C of actual Peak temperature (t_p)	6 seconds max.
Ramp-down Rate	6°C/second max.
Time 25°C to Peak Temperature	8 minutes max.

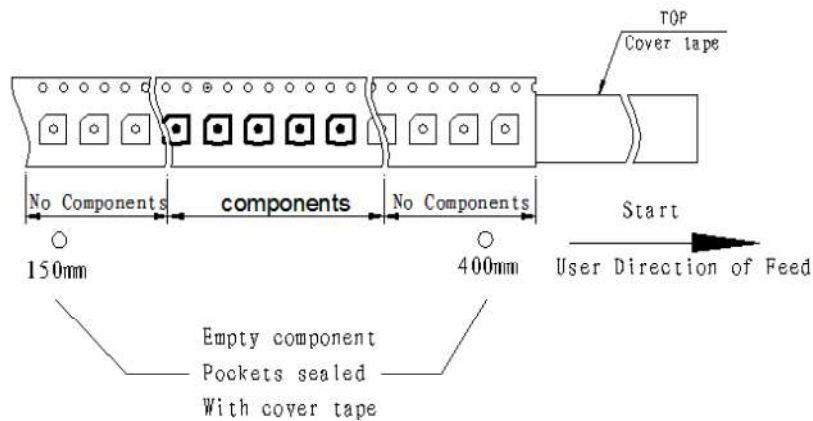
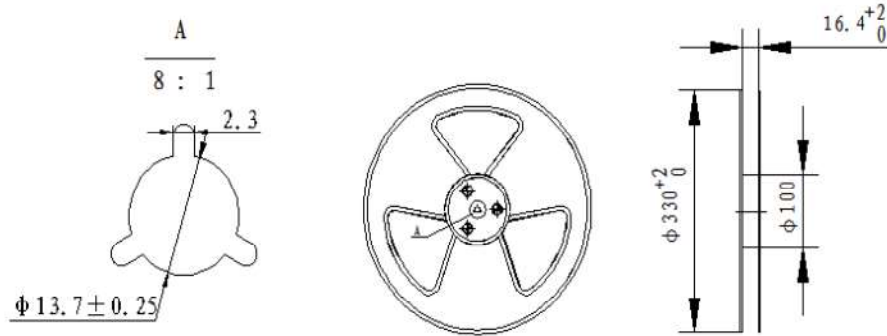
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PACKING:



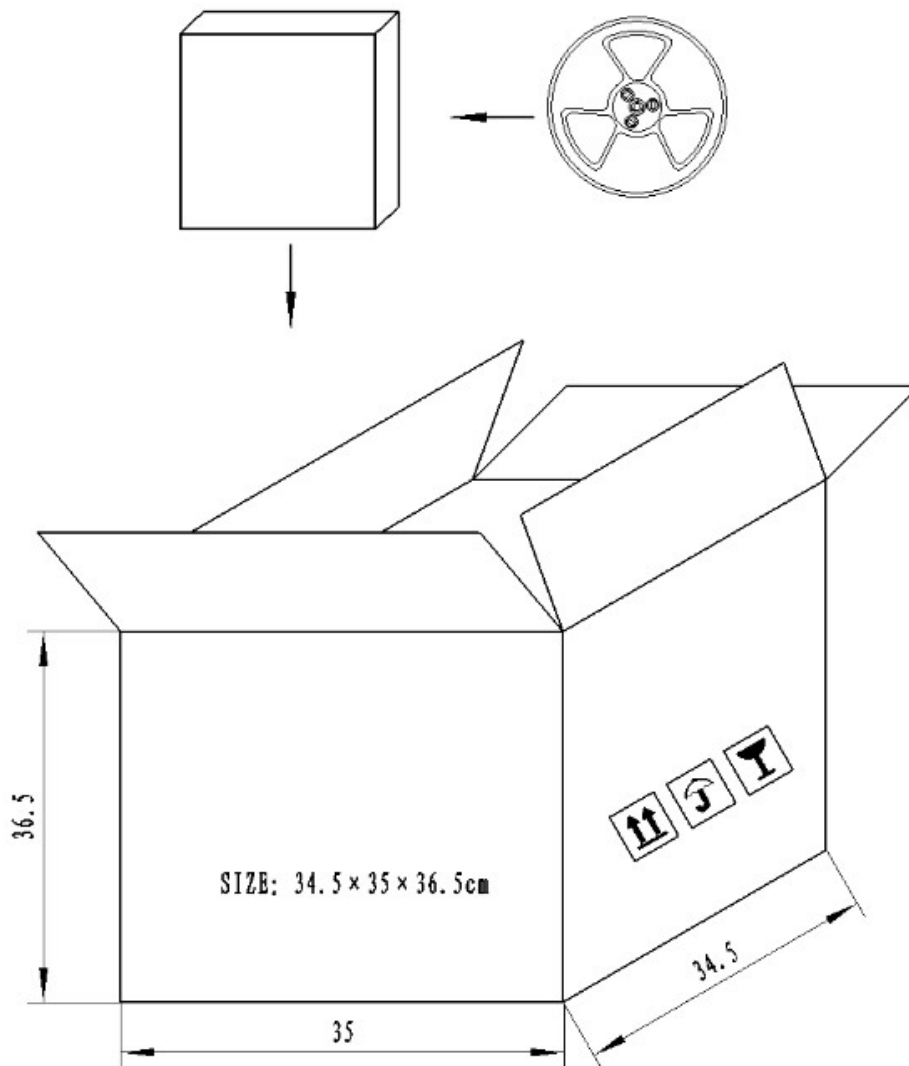
NOTE:

- 1.10 sprocket hole pitch cumulative tolerance $\pm 0.20\text{mm}$.
2. All dimensions meet EIA-481-D requirements.
3. Thickness: $0.3 \pm 0.05\text{mm}$.
4. Component loaded per 13" reel: 2500pcs.



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PACKING:



NOTES:

1. 2500 PCS per box
2. 10 boxes / carton 25000 PCS
3. 4 boxes / carton 10000 PCS