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ChangZhou Cre-Sound Electronics Co.,Ltd.

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MODEL NAME: LPT1030AS-HL-05-5.2-10-R

SPECIFICATION FOR APPROVAL SMD PIEZO TRANSDUCER

Model Name	LPT1030AS-HL-05-5.2-10-R
Note	RoHS Compliant

Product Photo	Cre-Sound
	DRAWING: 王 杨
	CHECKED: 姚宝鑫
	APPROVED: 宋雪琪
Customer Confirmation:	



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Alteration History Revision Change NO. Before of changes After of changes Reason Note Rev. by



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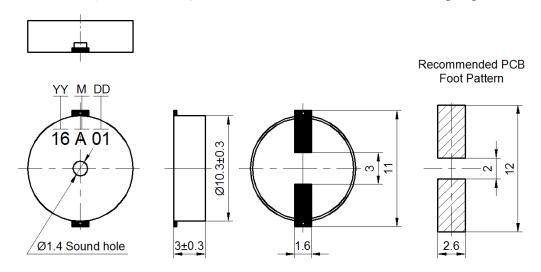
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Technical Terms:

No.	Technical terms	Value
1	Rated Voltage (Vp-p)	5
2	Operating Voltage (Vp-p)	1~25
3	*Current Consumption (mA)	≤5
4	Capacitance at100Hz (PF)	10000±30%
5	*Sound Output at 10 cm (dB)	≥75
6	Oscillation Frequency (Hz)	5200±500
7	Operating Temperature (°C)	-30~+85
8	Storage Temperature (°C)	-40~+90
9	Weight (g)	0.3
10	Housing Material	LCP
11	MSL(Moisture Sensitivity Level)	5a(≤30°C/60%RH 24hrs Floor life)
12	RoHS	Yes

^{*}Value applying at rated voltage (5.2KHz, 1/2 duty, square wave) Test Basic State: Temp($20\pm2^{\circ}$ C),Humidity($40\sim70\%$ RH),Air pressure($860\sim1060$ hPa).

Dimensions (UNIT: mm): Tolerance: ± 0.5 mm Except Specified



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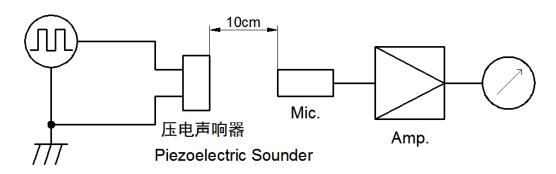
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Test Method:



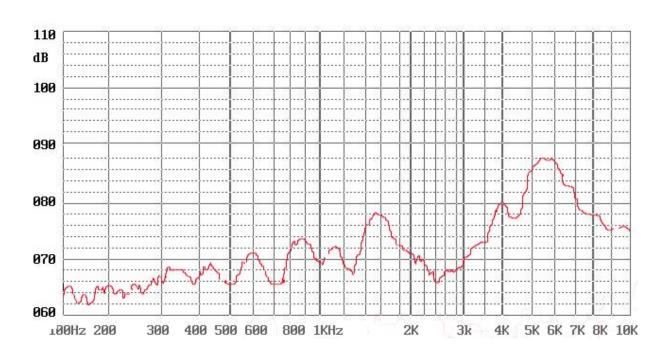
MIC: ND10 普通声级计或等同品

MIC: ND10 Sound Meter or equivalent

信号发生器: DF1641D或等同品

Signal Generator: DF1641D or equivalent

Frequency Response:



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Reliability Test:

No.	Item	Test condition	Variance after test	
1	High temp. storage life	The part shall be capable of withstanding a storage temperature is +90℃ for 120 hours		
2	Low temp. storage life	The part shall be capable of withstanding a storage temperature is -40° C for 120 hours	After being placed for 2 to 4hrs at room temp, the	
3	Temp. Cycle	Total 5 cycles, 1 cycle consisting of $-40\pm2^{\circ}\text{C}$, 30 minutes $20\pm5^{\circ}\text{C}$ 15 minutes $90\pm2^{\circ}\text{C}$, 30 minutes $20\pm5^{\circ}\text{C}$ 15 minutes	product shall meet specifications, except the SPL should be in ±10dB compared with initial one.	
4	Humidity Test	40±2℃, 90∼95% RH, 120 hours		
5	Vibration Test	To-and-fro. sweep time (from 10 to 55 Hz and then 55 to 10) under single amplitude of 1.0mm is 1 minute. The vibration test shall consist of 2 hours per plane in each three mutually perpendicular planes for a total time of 6 hours.	The SPL shall meet specification.	
6	Shock	Sounder shall be measured after being applied shock (980m/s²) for each three mutually perpendicular directions to each of 3 times by half sine wave.	After the test, the product shall meet	
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.	specifications, except the SPL should be in ±10dB compared with initial one.	
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	Recommende d temp. Profile for Reflow Oven	Shown in Fig.1	The SPL shall meet specification.	

Warranty: For a period of six months from date of manufacturer under normal operations.



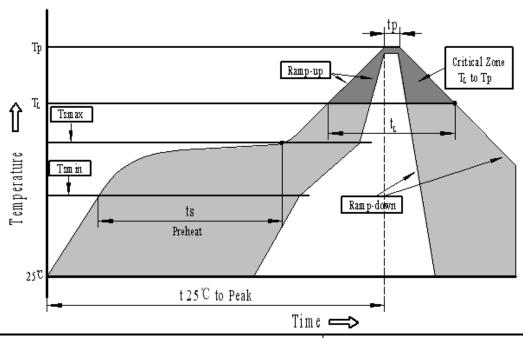
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Recommended Temp. Profile for Reflow Oven (Fig.1)



Profile Feature	Pb-Free Assembly
Average ramp-up rate(T _L to Tp)	3°C/second max.
Preheat	
-Temperature Min.(Ts _{min})	150°C
-Temperature Min.(Ts _{max})	200℃
-Temperature Min.(ts)	60∼180 seconds
Ts_{max} to T_L	
-Ramp-up Rate	3°C/second max.
Time maintained above:	
- Temperature(T _L)	217℃
-Time(t _L)	60∼150 seconds
Peak temperature(Tp)	245°C+0/-5°C
Time within 5 °C of actual Peak temperature (tp)	6 seconds max.
Ramp-down Rate	6°C/second max.
Time 25 °C to Peak Temperature	8 minutes max.
We suggest the customer do the reflow soldering once.	



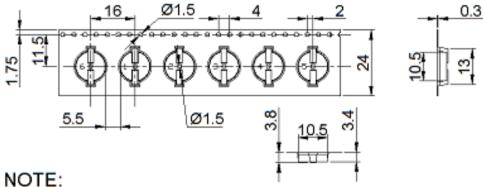
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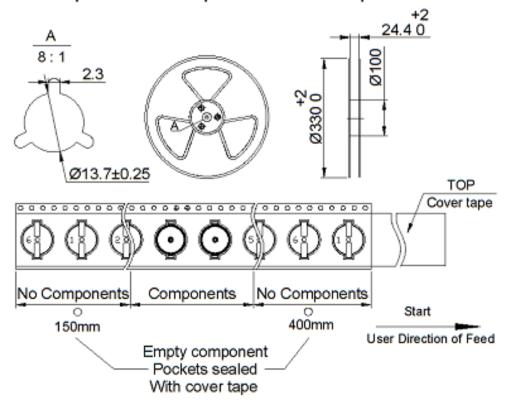
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Packing:



- 1.10 sprocket hole pitch cumulative tolerance +/-0.20mm.
- 2.All dimensions meet EIA-481-D requirements.
- Thickness: 0.3+/-0.05mm.
- 4. Component loaded per 13"reel: 1000pcs.





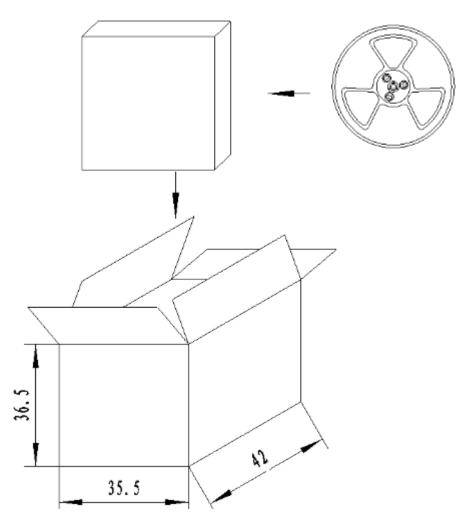
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Packing:



NOTES:

- 1.1000 PCS per box
- 2.Total 10 boxes per carton
- 3.Total 10000 PCS carton
- 4. Volum: 42*35.5*36.5cm



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MSL Rating and Notice

Moisture Sensitivity level and Floor Life

Level	Floor life(out of bag) at factory Ambient ≤30°C/60%RH
5a	24 hours

1 The products must not be washed.

② Storage Condition:

The products should be stored in the room, where the temperature/humidity is stable.

And avoid such places where there are large temperature changes.

Please store the products at the following conditions:

Temperature:-10 to +40°C Humidity: 15 to 85% R.H.

(3) Expire Date on Storage:

Expire date (shelf life) of the products is **six months** after delivered under the conditions of a sealed and an unopened package.

Please use the products with **six months** after delivered.

4 Notice on product Storage:

Please use the products immediately after the package is opened, because the characteristics may be reduced at quality.