

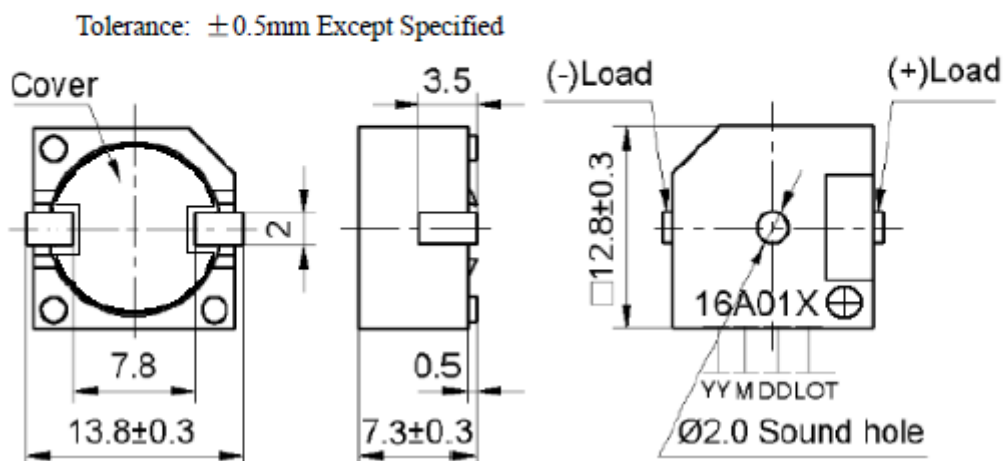
**SMD-Signalgeber (mit Ansteuerung) SMD-13D12** Art.-Nr.: 220037

**Specification:**

1	Rated Voltage (VDC)	12
2	Operating Voltage (VDC)	9~15
3	*Resonant Frequency (KHz)	2.4±0.4
4	*Sound Output at 10cm (dB)	≥85
5	*Current Consumption (mA)	≤30
6	Operating Temperature (°C)	-20~+70
7	Storage Temperature (°C)	-30~+80
8	Weight (g)	2.5
9	Housing Material	PPS

\*Applying rated voltage (VDC) Remark: The special requirements in the test for no anti reverse connection .

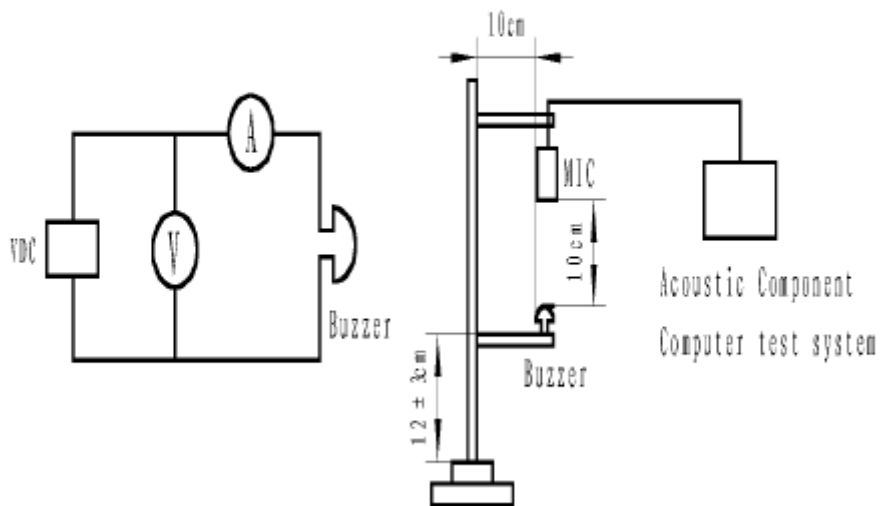
**DIENSIONS (UNIT: mm)**



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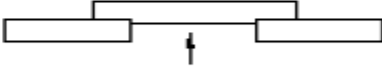
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**TEST METHOD:**



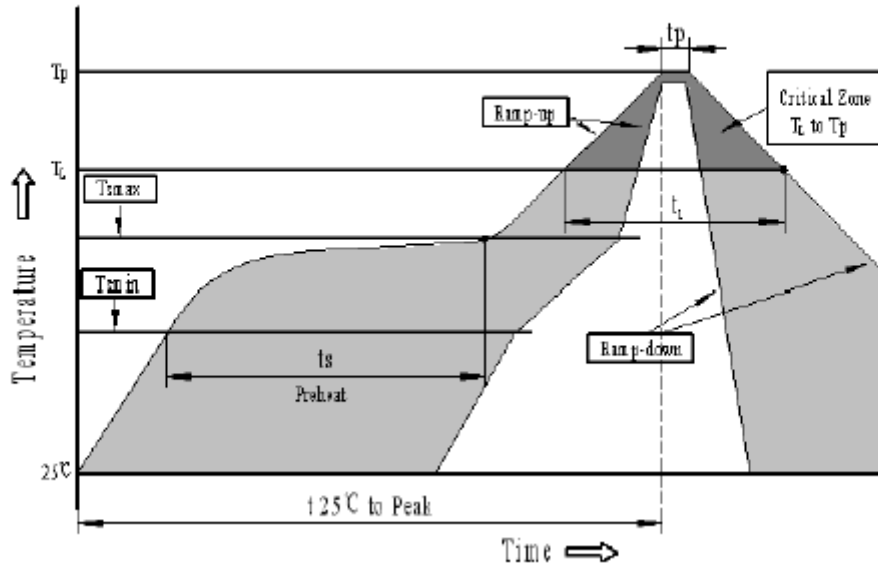
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**RELIABLY TEST:**

NO.	ITEM	TESTING CONDITION	VARIANCE AFTER TEST
1	High temp. storage life	The part shall be capable of withstanding a storage temperature is +80°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 $\pm 10$ 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°C, 30 minutes 20 $\pm$ 5°C 15 minutes 80 $\pm$ 2°C, 30 minutes 20 $\pm$ 5°C 15 minutes	
4	Humidity Test	30 $\pm$ 2°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 <sup>2</sup> ) 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 $\pm$ 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	
<p><b>Warranty:</b>For a period of one year from date of manufacture under normal operations.</p>			

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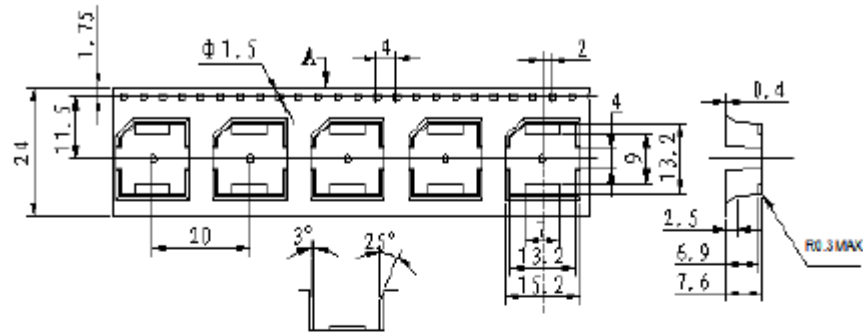
**Recommended Temp. Profile for Reflow Oven (Fig.1)**



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( $T_p$ )	245°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.

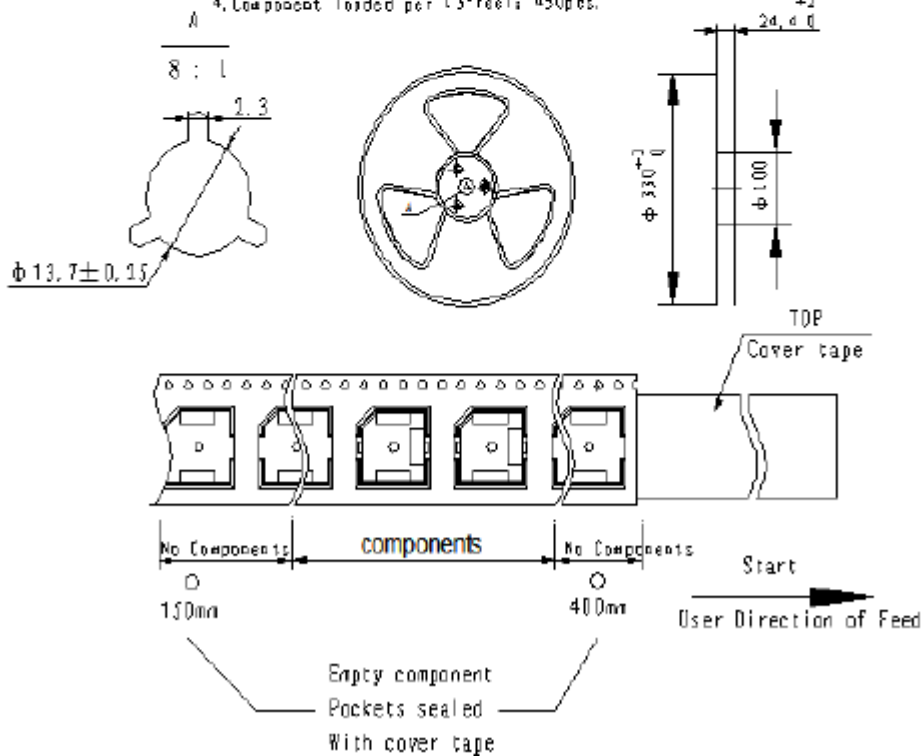
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**PACKING:**



**NOTE:**

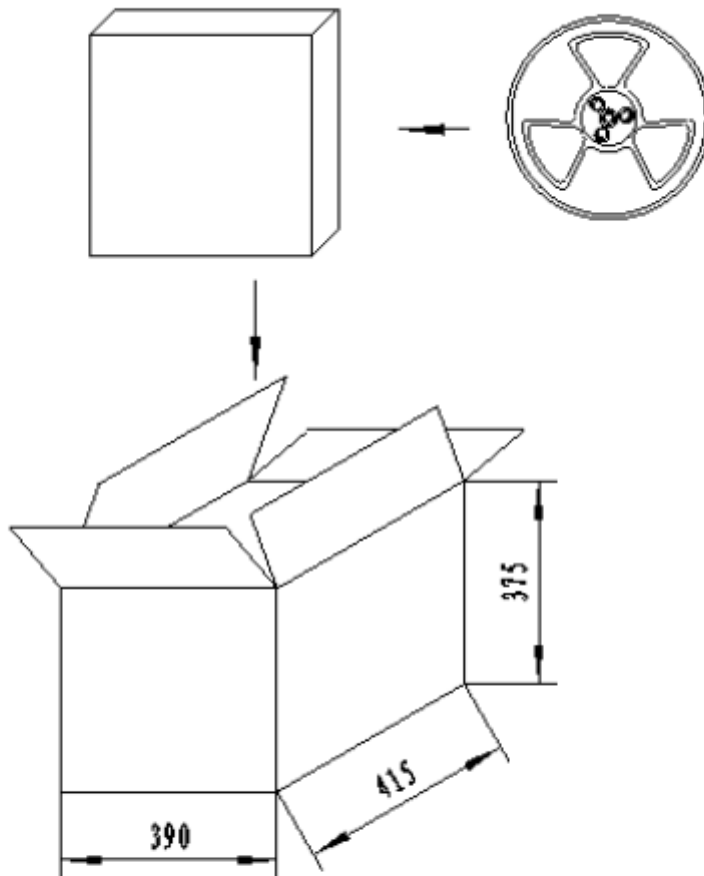
1. 10 sprocket hole pitch cumulative tolerance  $\pm 0.2\text{mm}$ .
2. All dimensions meet EIA-481-D requirements.
3. Thickness:  $0.4 \pm 0.05\text{mm}$ .
4. Component loaded per 13" reels: 450 pcs.



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**PACKING:**



**NOTES:**

- 1.450 PCS per box
- 2.Total 10 boxes per carton
- 3.Total 4500 PCS carton