

**SMD-Signalgeber** (ohne Ansteuerung) **SMD-P12A03** Art.-Nr.: 220075

**Specification :**

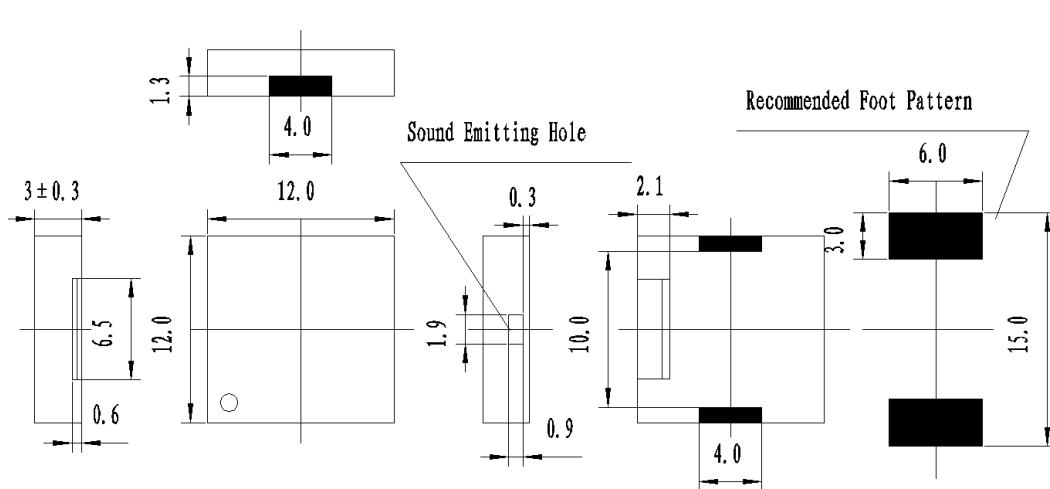
1	Rated Voltage (Vp-p)	3
2	Resonance Frequency (KHz)	4.0±0.5
3	Max Input Voltage (Vp-p)	25
4	Capacitance at 120Hz (pF)	15000±30%
5	*Sound Output at 10cm (dB)	≥75
6	Operating Temperature (°C)	-40~+85
7	Storage Temperature (°C)	-40~+85
8	*Rated Current (mA)	≤3
9	*Typical S.P.L. at 10cm (dB)	77-82
10	Housing Material	LCP
11	RoHS	Yes

\* Applying rated voltage (Resonant frequency, Square wave)

**Dimensions :**

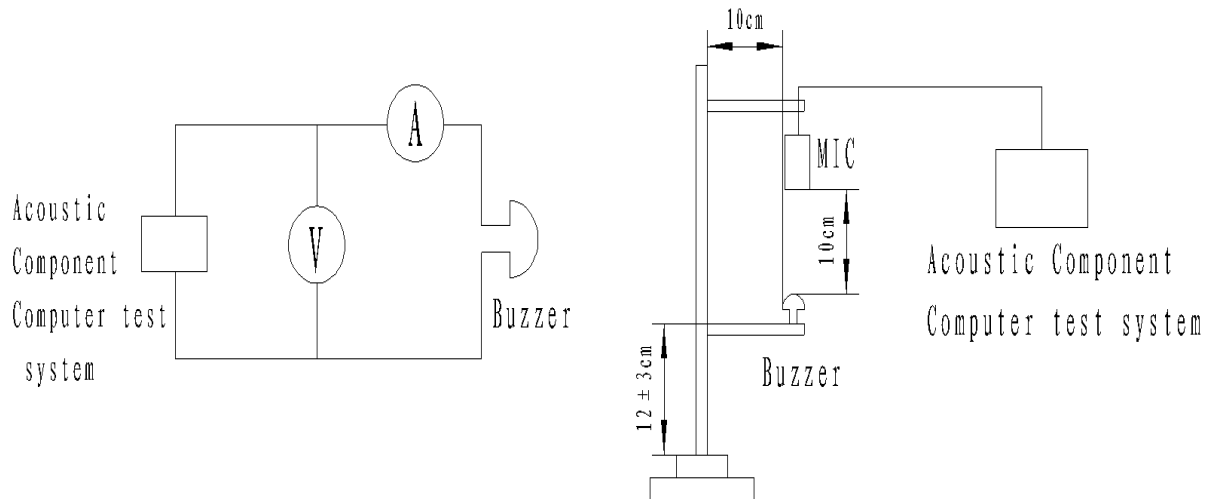
(Unit: mm)

Tolerance: ±0.5mm Except Specified

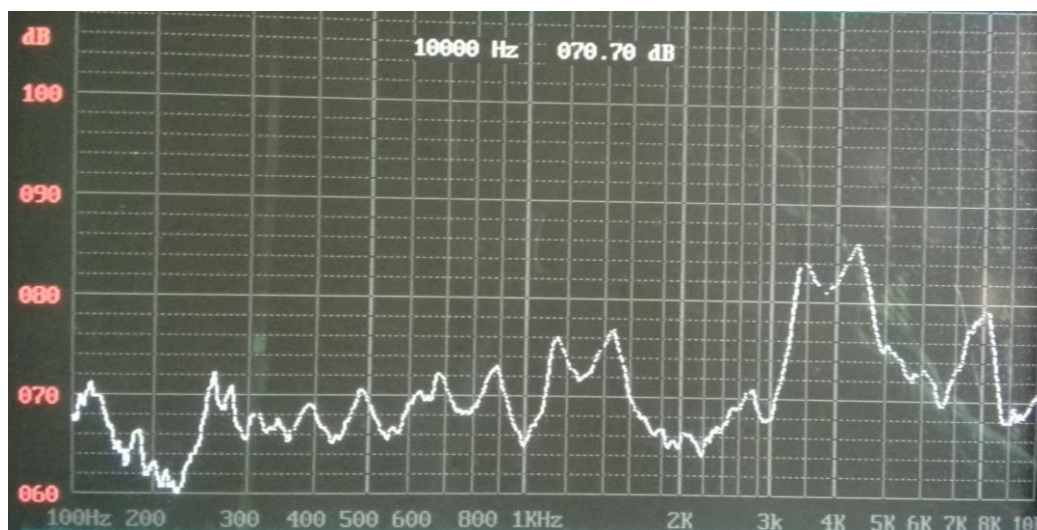


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**Testing Method :**

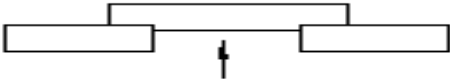


**Frequency Response Curve :**

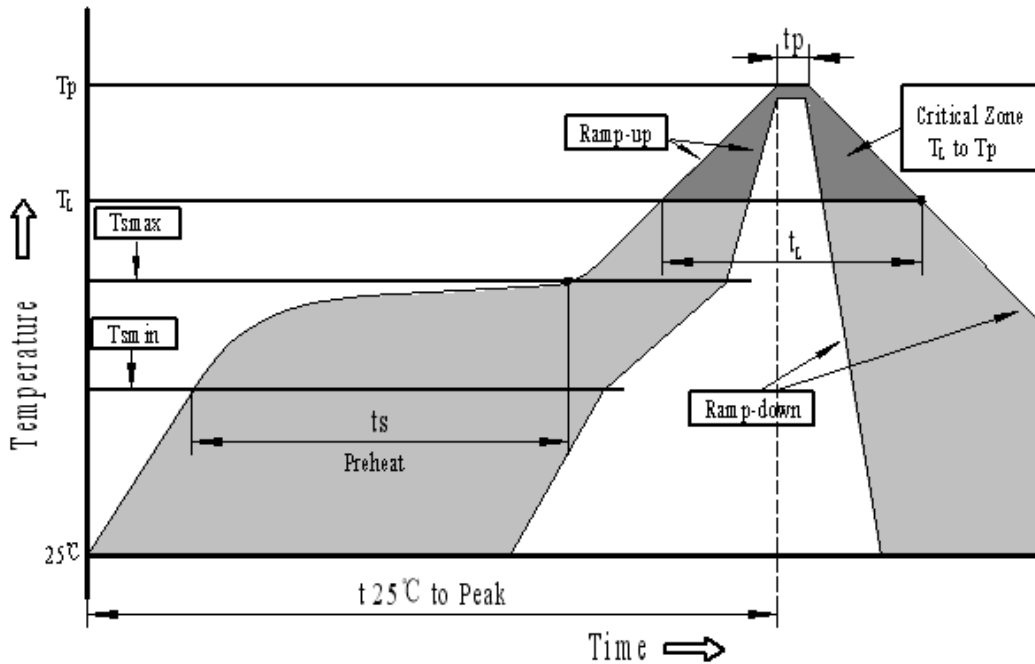


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**Reliability Test :**

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	<i>All specifications must be satisfied after the test.</i>
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±2°C, 30 minutes 20±5°C 15 minutes 80±2°C, 30 minutes 20±5°C 15 minutes	
4	Humidity Test	40±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±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	

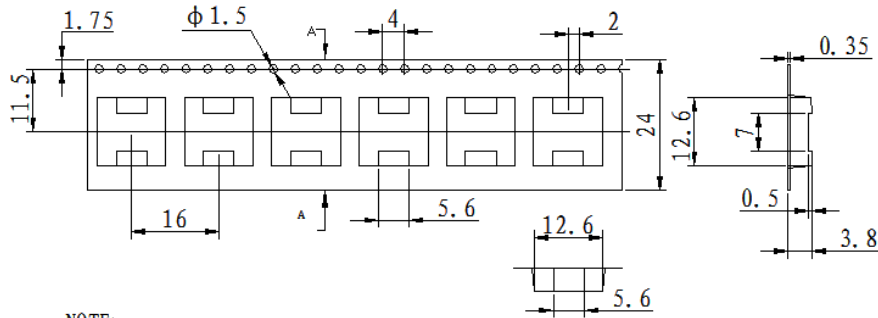
**Recommended Temp.Profile for Reflow Oven (Fig.1):**



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.

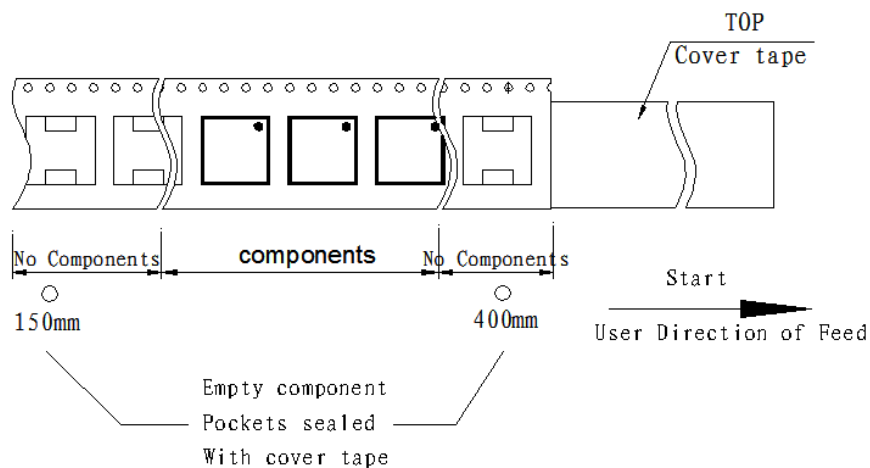
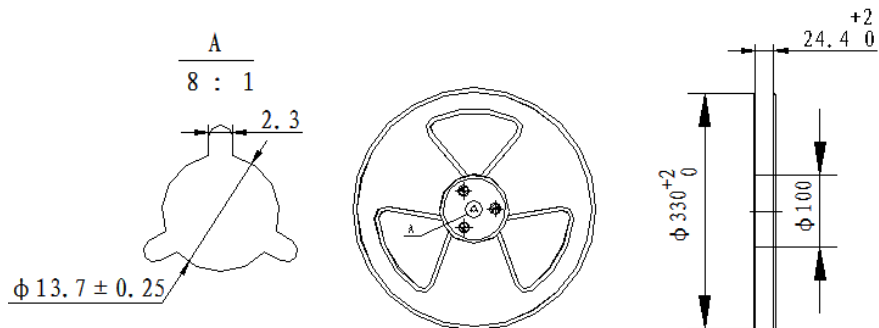
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**Packing :**



NOTE:

1. 10 sprocket hole pitch cumulative tolerance  $\pm 0.2\text{mm}$ .
2. All dimensions meet EIA-481-D requirements.
3. Thickness:  $0.35 \pm 0.05\text{mm}$ .
4. Component loaded per 13" reel: 1000pcs.



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