

Magnetic Buzzer

1. Scope

This specification is applied to SMD Buzzer (Self-Drive Type)

The product described below is used as a buzzer in various alarm systems

2. Basic Condition

2.1 Rated Voltage:5VDC

2.2 Operating Voltage:4~8VDC

2.3 Operating Temperature Range:-20 °C~+70 °C

2.4 Storage Temperature Range:-30°C~+80 °C



3. Electrical Characteristics

3.1 Sound Press Level:Level: ≥ 85 dB at 10cm / 5VDC

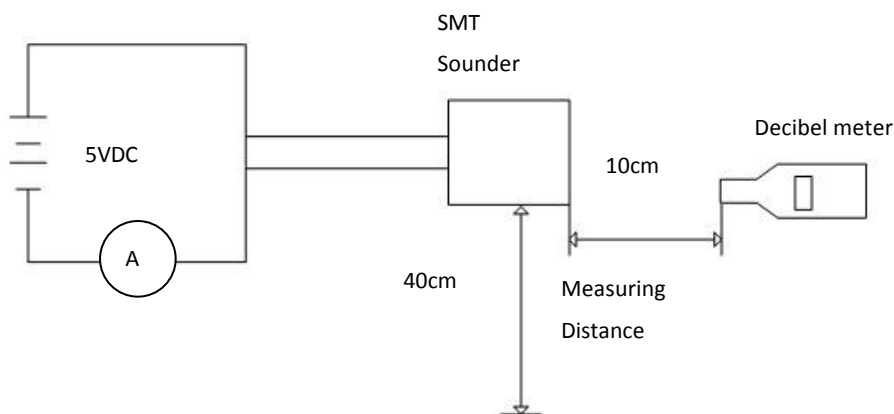
3.2 Consumption Current: ≤ 30 mA at 5VDC

3.3 Resonate Frequency:2400Hz \pm 500Hz

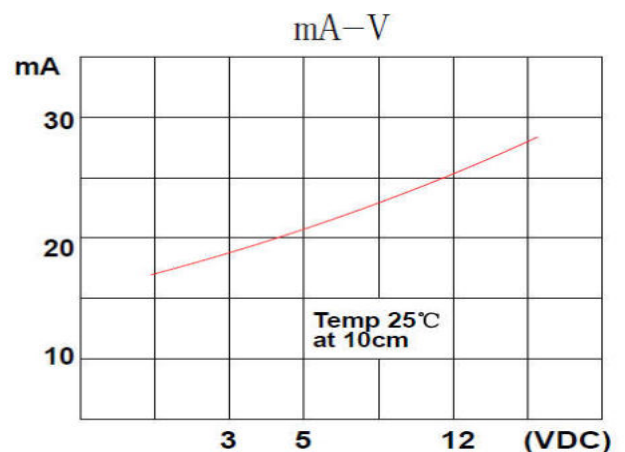
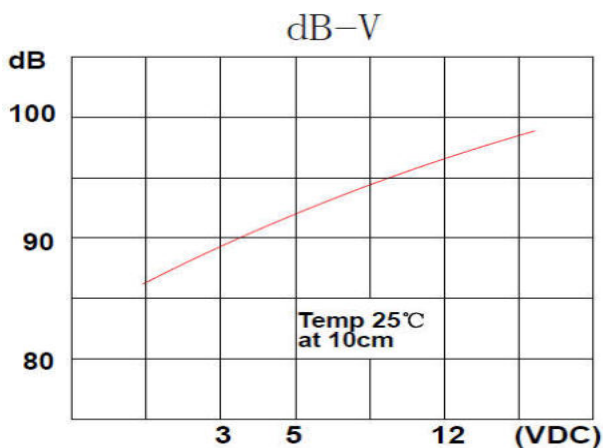
3.4 Tone Nature:Continuous Sound

3.5 Material:PPS

4. Measuring Method



5. Sound Press Level & Consumption Current Curve



TEST REPORT

#	dB	mA	Hz
1	95	21.5	2366
2	92	22.1	2440
3	93	22.5	2490
4	89	20.3	2382
5	88	19.8	2375
6	90	21.2	2410
7	92	19.3	2380
8	89	21.1	2431
9	91	20.5	2403
10	89	22.0	2388

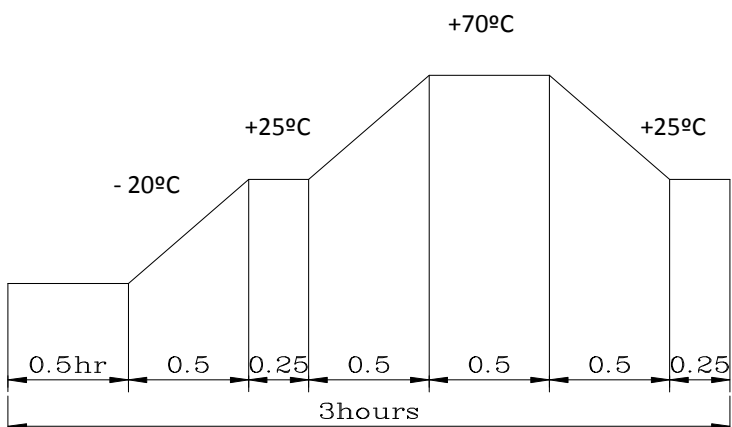
Remark:

(1)Sound Press Level : ≥ 85 dB at 10cm / 5VDC

(2)Consumption Current : ≤ 30 mA at 5VDC

(3)Resonate Frequency : 2400Hz \pm 500

6. Environment Test Method

NO.	ITEM	TEST CONDITION AND REQUIREMENT
1	High Temperature Test (Storage)	After being placed in a chamber with $85\pm 2^{\circ}\text{C}$ for 96 hours and then being placed in normal condition for 2 hours. Allowable variation of SPL after test: $\pm 10\text{dB}$.
2	Low Temperature Test (Storage)	After being Placed in a chamber with $-40\pm 2^{\circ}\text{C}$ for 96 hours and then being placed in normal condition for 2 hours. Allowable variation of SPL after test: $\pm 10\text{dB}$.
3	Humidity Test	After being Placed in a chamber with 90-95% R.H. at $40\pm 2^{\circ}\text{C}$ for 96 hours and then being placed in normal condition for 2 hours. Allowable variation of SPL after test: $\pm 10\text{dB}$.
4	Temperature Cycle Test	<p>The part shall be subjected to 5 cycles. One cycle shall be consist of:</p>  <p>Allowable variation of SPL after test: $\pm 10\text{dB}$.</p>
5	Drop Test	Drop on a hard wood board of 4cm thick, any directions ,6 times, at the height of 100cm. Allowable variation of SPL after test: $\pm 10\text{dB}$.
6	Vibration Test	After being applied vibration of amplitude of 1.5mmwith 10 to 55 Hz band of vibration frequency to each of 3 perpendicular directions for 2 hours . Allowable variation of SPL after test: $\pm 10\text{dB}$.
7	Solder ability Test	Lead terminals are immersed in rosin for 5 seconds and then immersed in solder bath of $+300\pm 5^{\circ}\text{C}$ for 3 ± 1 seconds.90% min. lead terminals shall be wet with solder (Except the edge of terminals).
8	Terminal / Wire Strength Pulling Test	The force of 9.8N(1.0kg) is applied to each terminal in axial direction for 10 seconds. No visible damage and cutting off.

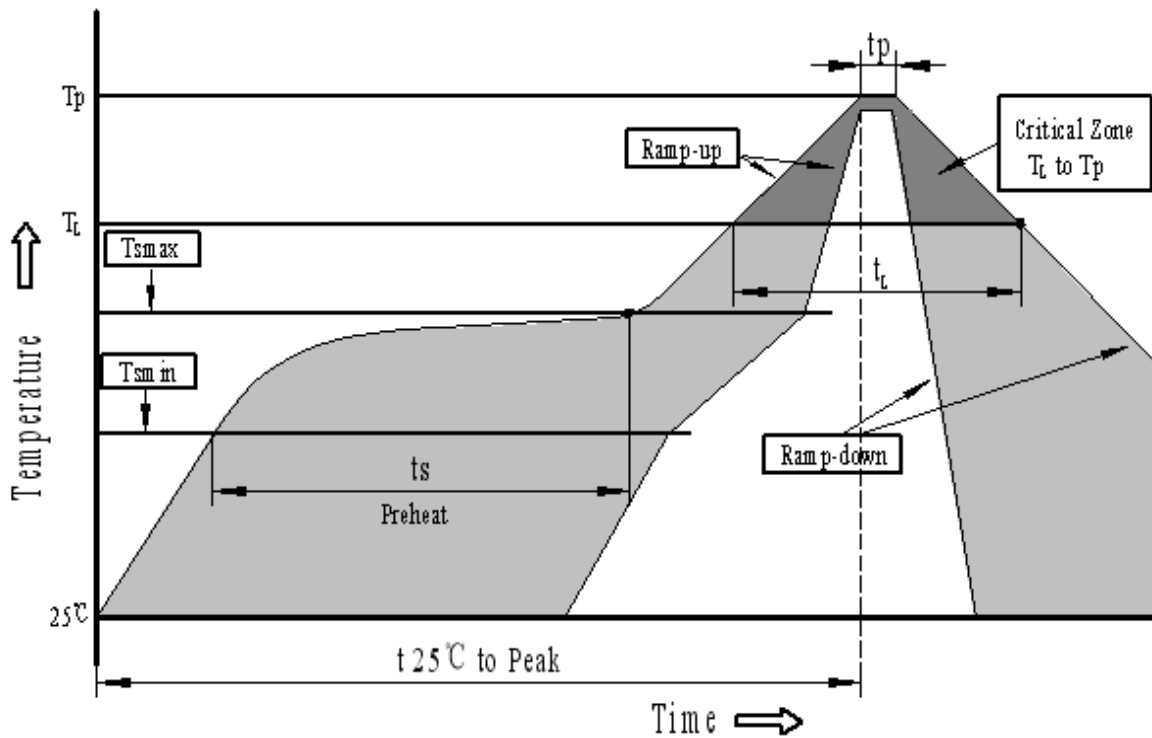
7. Reliability Test

Continuous life test:

250 Hours continuous operating at $+70^{\circ}\text{C}$ with maximum rated voltage applied . Intermittent life test:

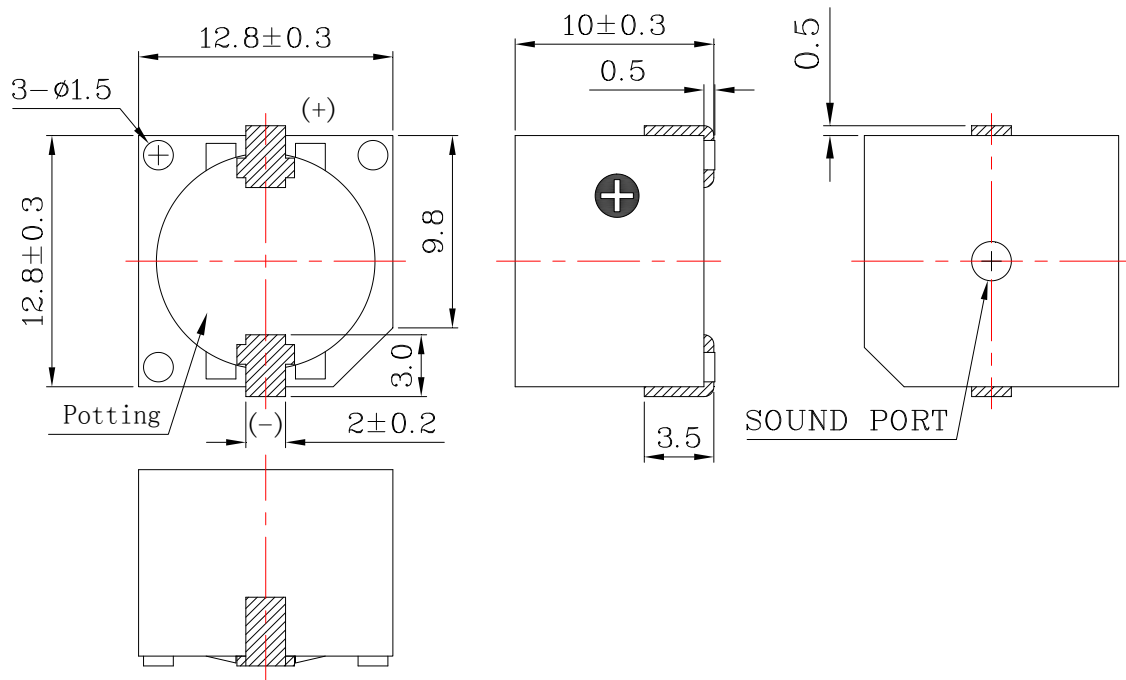
Aduty cycle of 1 minute on, 5 minutes off,a minimum of 10000 times at temperature $+25^{\circ}\text{C}\pm 2$

8. 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.

9. Dimensions



Tolerance ± 0.5 mm