



MANORSHI ELECTRONICS CO.,LTD

PRODUCT SPECIFICATION

Product Name: SMD Buzzer

Part Number: SM13PT03AV5SH

Document No: _____

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1.ELECTRICAL AND ACOUSTICAL SPECIFICATION

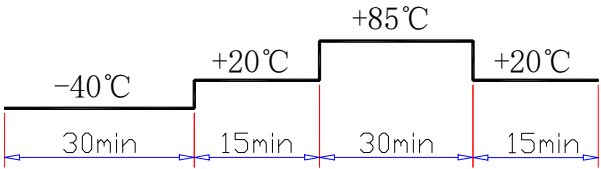
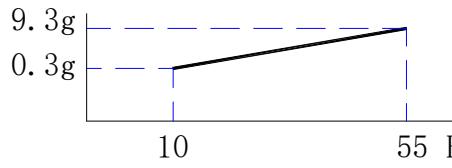
No.	Item	Unit	Specifications
1-1	Rated Voltage (Square Wave)	Vp-p	5
1-2	Operating Voltage	Vp-p	1-25
1-3	* Rated Current (Max)	mA	3
1-4	* Min Sound Output at 4.1kHz/10cm	dB	80
1-5	* Resonant Frequency	Hz	4100
1-6	Capacitance at 120Hz	pF	16000±30%
1-7	Operating Temperature	℃	-30~+70
1-8	Storage Temperature	℃	-40~+85
1-9	Weight	g	0.5
1-10	Housing Material		LCP
1-11	Tone Nature		Single
1-12	Connection		SMD

* Value Applying at Rated Voltage(resonant frequency, 1/2 duty, square wave)



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2.ENVIRONMENTAL TEST

2-1	Storage in High temp.	Storage in $+85^{\circ}\text{C}\pm 2^{\circ}\text{C}$ test box for 96 hours, then expose to the room temperature for 2 hours without applying power.
2-2	Storage in Low temp.	Storage in $-40^{\circ}\text{C}\pm 2^{\circ}\text{C}$ test box for 96 hours, then expose to the room temperature for 2 hours without applying power.
2-3	Storage in Humidity	Storage in $+40^{\circ}\text{C}\pm 2^{\circ}\text{C}$ 90-95%RH test box for 96 hours, then expose to the room temperature for 2 hours without applying power.
2-4	Thermal test. cycle	 <p>Make this test for 5 cycles without applying power, then expose to the room temperature for 2 hours.</p>
2-5	Vibration test	 <p>Amplitude: 1.5mm Time : 1min/axis</p> <p>Make this test for the directions of X,Y, Z for 2 hours each (total 6 hours).</p>
2-6	Drop test	Free drop a unit from the height 70cm to the surface of 10mm thick board, three directions(X,Y,Z).
2-7	Solderability test	Soldering temp.: $260\pm 5^{\circ}\text{C}$ Heat applying time: $3\pm 0.5\text{sec}$.

PASS CRITERION :

After these tests, the change of S.P.L shall be within $\pm 5\text{ dB}$.

3.MEASURING METHOD(BUZZER MODE)

3-1 .Test Condition

3-1-1.STANDARD

Temperature : $25\pm 3^{\circ}\text{C}$

Relative humidity : 60% ~ 70%,

Atmospheric pressure : 860mbar to 1060mbar

3-1-2.JUDGEMENT

Temperature : $15 \sim 35^{\circ}\text{C}$

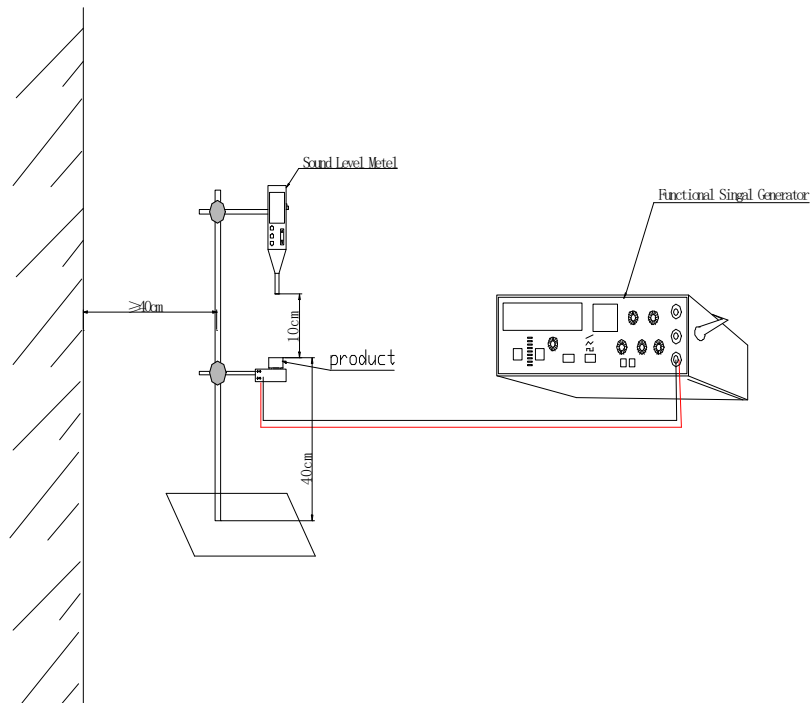
Relative humidity : 45% ~ 85%,

Atmospheric pressure : 860mbar to 1060mbar.

3-2 . Standard Test Fixture

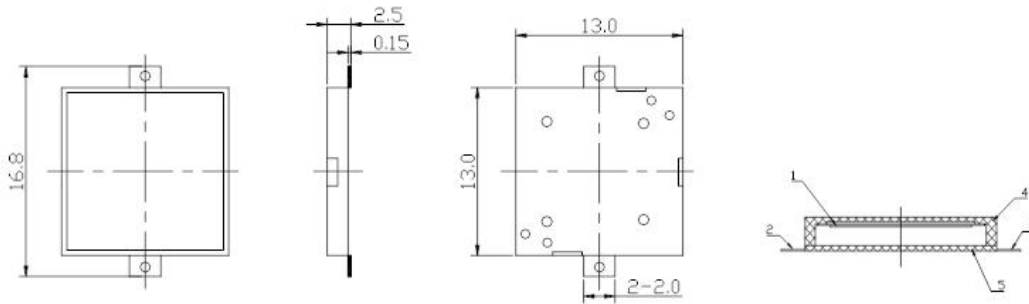
1.rated Voltage(Square wave):5V

2.Resonant Frequency:4100Hz



4.DIMENSIONS

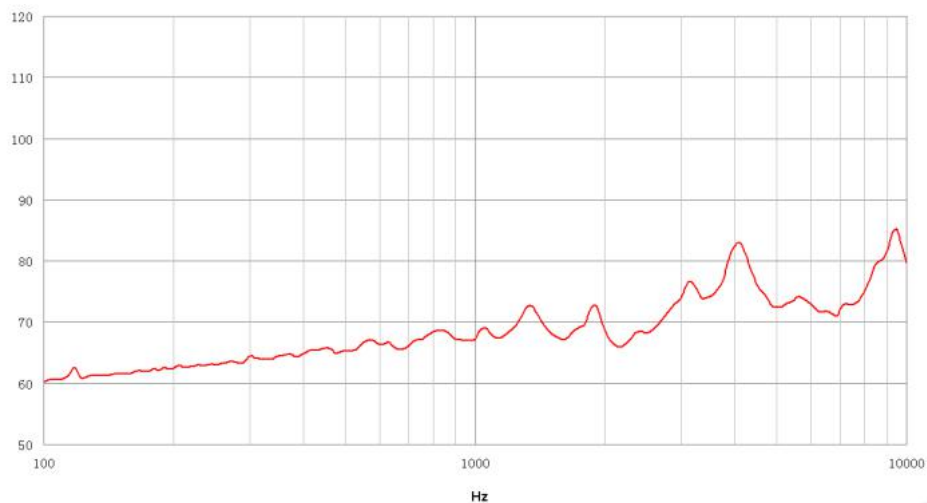
Unless otherwise specified, tolerance:±0.5(unit: mm)



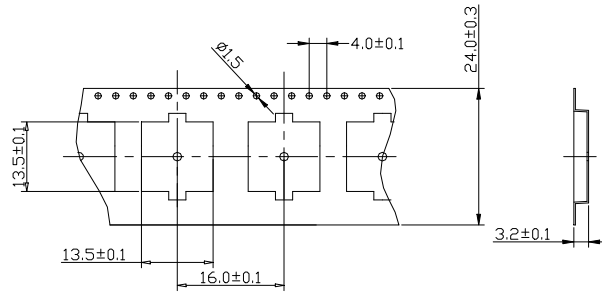
- 1) All parts must be meet to ROHS.
- 2) Reflow solder allowed.
- 3) Wash not allowed.

5	Cover	1	LCP	
4	Housing	1	LCP	
3	Pin	1	Brass (Sn plated)	
2	Pin	1	Brass (Sn plated)	
1	Piezo element	1	Nickel	
Part No.	Part Name	Q'TY	Material	Remark

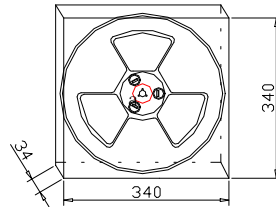
5.FREQUENCY RESPONSE CURVE



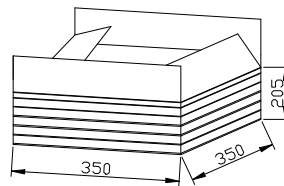
6.PACKING



1000PCS/SPOOL 每卷放1000只



1ROLL CARRIER REEL/INNER BOX;1卷放入一内盒



5000PCS/CTN 每箱放5000只(5只内盒)