



# Product Specification

## Ningbo East Electronics Limited

NO. 88 East Jinhui Road, Yinzhou Ningbo 315100, P.R. China

<http://www.east-mingtao.com>

Product Name:	SMD Speaker	
Part Number:	SES-13S04-8N0.7R	(8Ω 0.7W)
Version:	Rev. 1	
Date:	2014-8-18	
Note:		

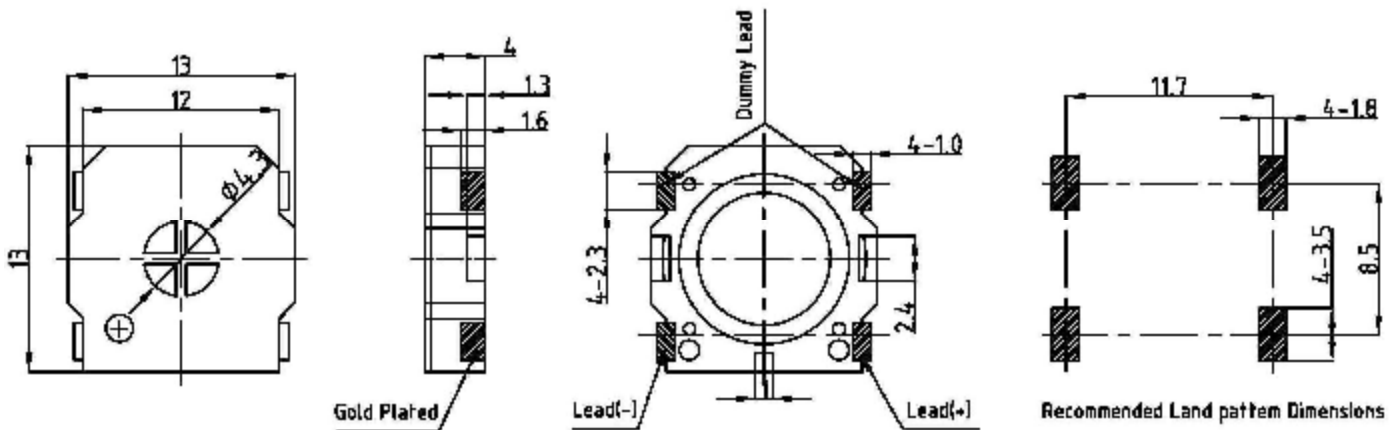
**Company passed ISO 9001 / ISO TS16949 / ISO 14001 Certifications**

### Revision History

Rev.	Description	Author/Date	Checked By	Approver
1	Released	Lv Wenbin Aug. 18. 2014	Zhao Pengsen	Wang Jiancheng

# 1. Part Number : SES-13S04-8N0.7R

## 2. Dimension Drawing:



Unit: mm

Tolerance:  $\pm 0.3$

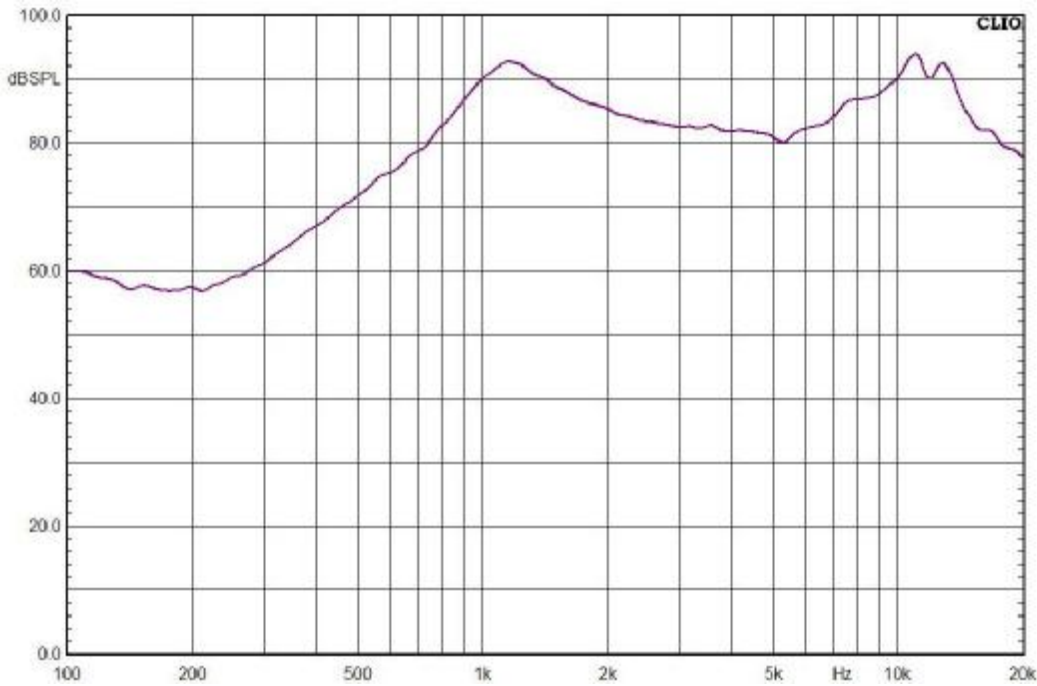
## 3. Specification :

No.	Items	Specification			
3-1	Rated Impedance	$8\Omega \pm 15\%$			
3-2	Resonant Frequency ( $f_0$ )	$900 \pm 20\%$ Hz			
3-3	Sound Pressure Level(S.P.L)	$87\text{dB} \pm 3$ 0.7W / 0.1M (at 1K,1.6K,2K,3.2K Hz average)			2.37V
3-4	Rated Frequency Range	$f_0 \sim 20\text{kHz}$	S.P.L-10dB	2.37V	
3-5	Rated Harmonic Distortion	$< 5\%$ at 1kHz			2.37V
3-6	Rated Power	0.7 W (2.37Vrms)			
3-7	Maximum Power	1.0W (2.83Vrms)			
3-8	Appearance Normal	@ A.T. 15~35°C, H.M. 25~75%, B.P. 86~106kPa			
3-9	Buzzes & Rattles	Must be normal at sine wave 2.37 Vrms			
3-10	weight	1.1g			

**NOTES :**

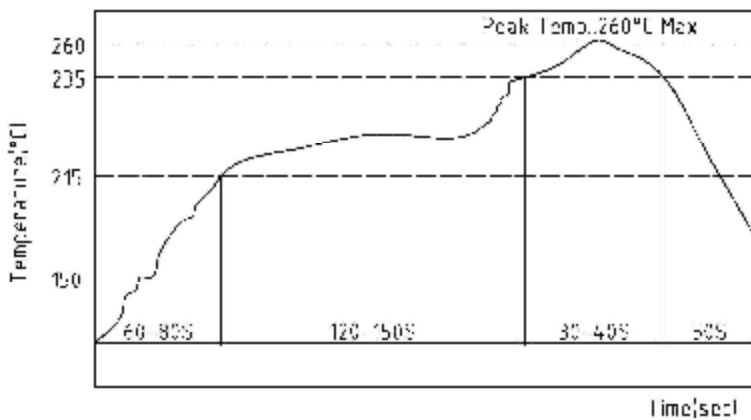
- 1. Test in anechoic room and use the IEC standard baffle which size at : 1350 mm (W) X 1650 mm (H)
- 2. Test should be made under the conditions of room temperature ( $20 \pm 10 \text{ }^\circ\text{C}$ ), relative humidity ( $60 \pm 20\%$ ) and normal atmospheric pressure. In this case, however, that the judgment is questionable, the test conditions are to be changed to room temperature  $20 \pm 2 \text{ }^\circ\text{C}$ , relative humidity 60~70% and normal atmospheric pressure.

**4. Typical Frequency Response Curve:**



**5. Reflow condition:**

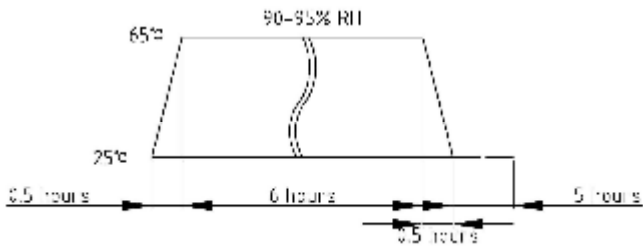
reflow soldering



- Preheating:  $215 \text{ }^\circ\text{C}$  for 120-150 seconds.
- Soldering Temperature:  $235 \text{ }^\circ\text{C}$  for 30-40 seconds.
- Peak Soldering Temperature:  $260 \text{ }^\circ\text{C}$  max for 10 seconds.

**6. Reliability Test:**

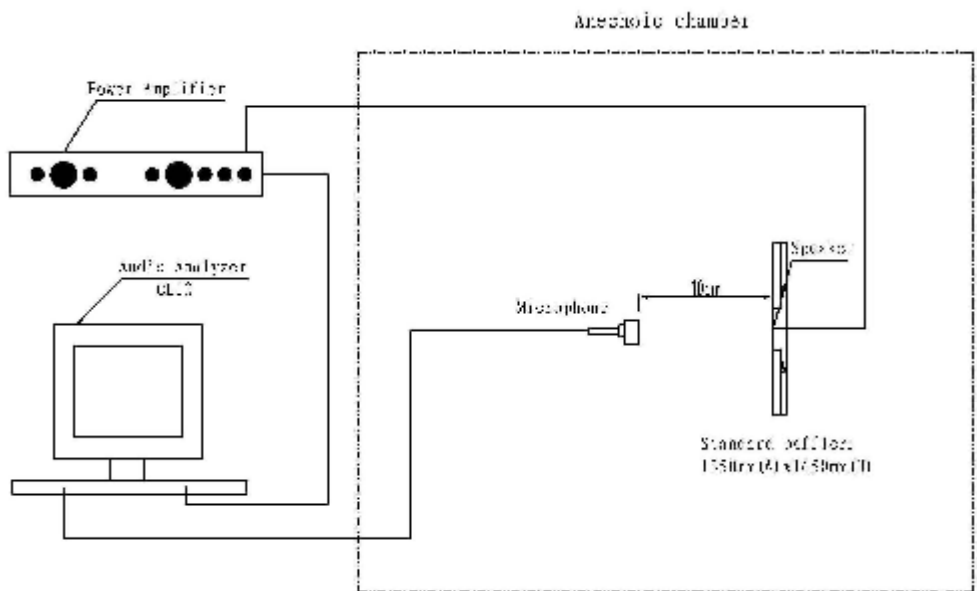
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No.	Item	Method of Test
6-1	Operating Temperature	-30°C ~ +85 °C
6-2	High Temperature Test	Keep 96 hours at +85°C±3°C and leave 3 hours in normal temperature and then check.
6-3	Low Temperature Test	Keep 96 hours at -40°C±3°C and leave 3 hours in normal temperature and then check.
6-4	Humidity Test	Keep 96 hours at +40°C±3°C relative humidity 92-95% and leave 3 hours in normal temperature and then checked.
6-5	Temperature Humidity Cycle	<p>The part shall be subjected 5 cycles. One cycle shall be 12 hours and consist of.</p> 
6-6	Vibration	10~55~10 Hz sin-wave sweep 15 min. 5G(constant). X,Y,Z 3 direction. 2 hours each, total 6 hours.
6-7	Free Drop Test	Free drop from 100 cm height to the concrete floor X,Y,Z 6 direction. 5 times each, total 30 mites.
6-8	Load Test	Rated Power White noise is applied for 96 hours.
6-9	Max Power Test	Max power 1 min. on – 2 min. off 10 cycle.

**Criterion:**

After these test, the change of S.P.L shall be within ±3 dB

**7. Electrical Testing Method:**



## 8. Packing Information:

NO.	Item	Description
8-1	Tape type in formation	a) The design for such tape packing was executed under standard IEC-268-3. b) The material of the tape is polystyrene in black color. Detailed dimensions are as below (see figure8-1).
8-2	Dimensions of the rolling plate	a) The material of the rolling plate is paper. b) The dimensions of the rolling plate are as below(see Figure8-2)
8-3	Packing dimensions and quantity	a) The rolling plate is put into a 340x335x35mm inner packing box and is packed with 750pcs of speaker per plate. b) The dimension of the outer carton is 400x350x350mm containing 1 0inner boxes with a total quantity of 7500 pcs of speaker. c) The total gross weight per carton is 13.5Kgs, while net weight is 8.3Kgs.

Figure 8-1 (unit:mm)

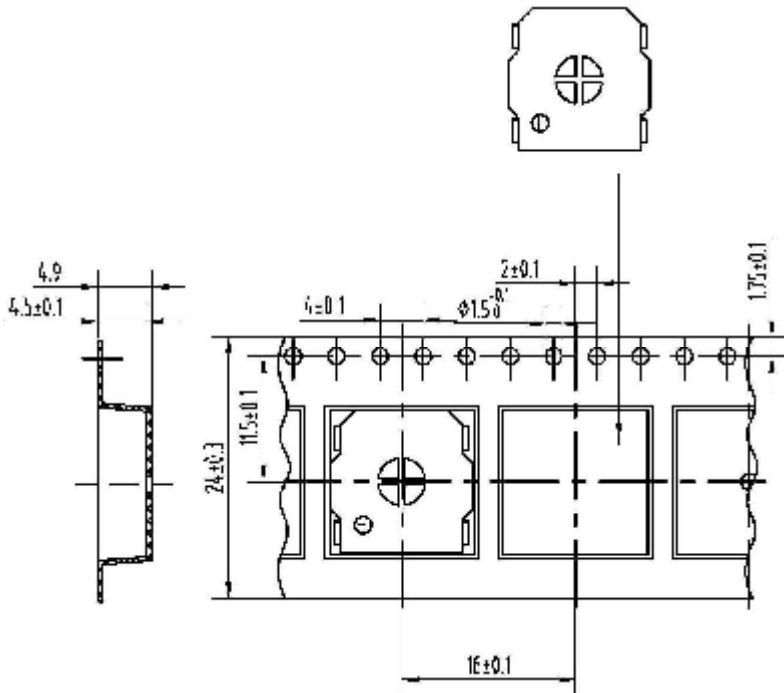


Figure 8-2 (unit:mm)

