

SPECIFICATION FOR DYNAMIC SPEAKER

Customer	
Customer P/N	
BeStar Model Name	SMS1515-08H04 LF
Product No.	138700
Issue No.	BS/TES01.529A
Issue Date	06/01/03

Approval:

- 1.Characteristics
- 2.Drawing
- 3.Reliability Test
- 4.Reflow condition
- 5.Tape on Reel Packing
- 6.MSL rating and Notice
- 7.History change record

Drawn by	Checked by	Approved by	Customer approved
周庆阳	王善梅	郭 敏	

For conform to the European Union Directive on the Restriction of Hazardous Substances(RoHS), this type of productions forbid use all the hazardous substances as follow:

Lead
Cadmium
Mercury
Hexavalent chromium
Polybrominated biphenyls (PBB)
Polybrominated diphenyl ethers (PBDE)



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SMS1515-08H04 LF

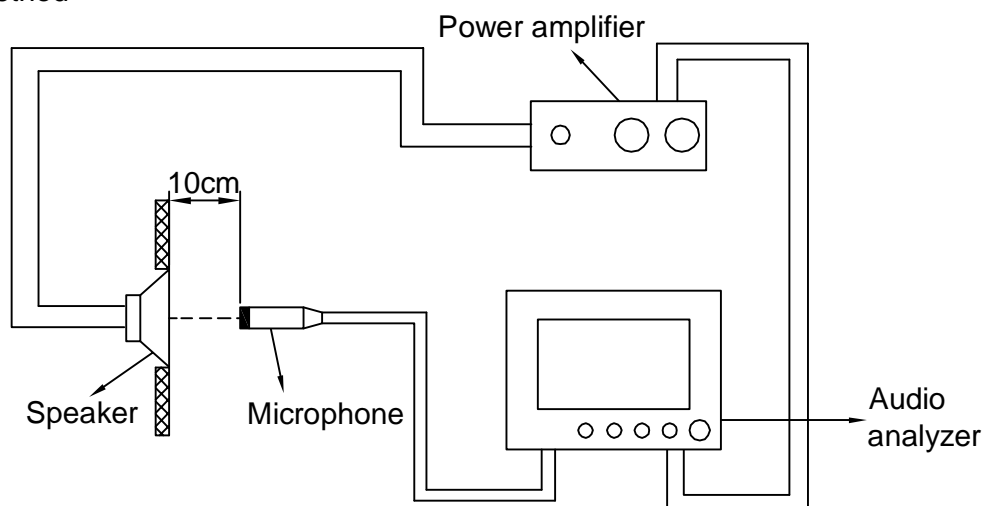


1. Characteristics

1.1 Electrical and Mechanical Characteristics

No.	Item	Specifications
1.	Dimensions	Please refer to profile drawing
2.	AC Impedance	8 ohm \pm 20% at 2KHz
3.	Resonance Frequency	800 \pm 15%Hz
4.	Rated Power	0.5W(2Vrms)
5.	Maximum Power	0.8W(2.53Vrms)
6.	Sound Pressure Level	87 \pm 3dB/0.5W/10cm
		at 1k,1.6k,2k,3.2kHz average
7.	Buzzes&Rattles	Must be normal at sine wave 2Vrms
8.	Total Hamonics Distortion	Max.5%
9.	Frequency Response	Refer to the attached figure
10.	Operating Temperature	-30~+85°C
11.	Storage Temperature	-40~+105°C
12.	Weight	~1.5g

1.2 Test Method

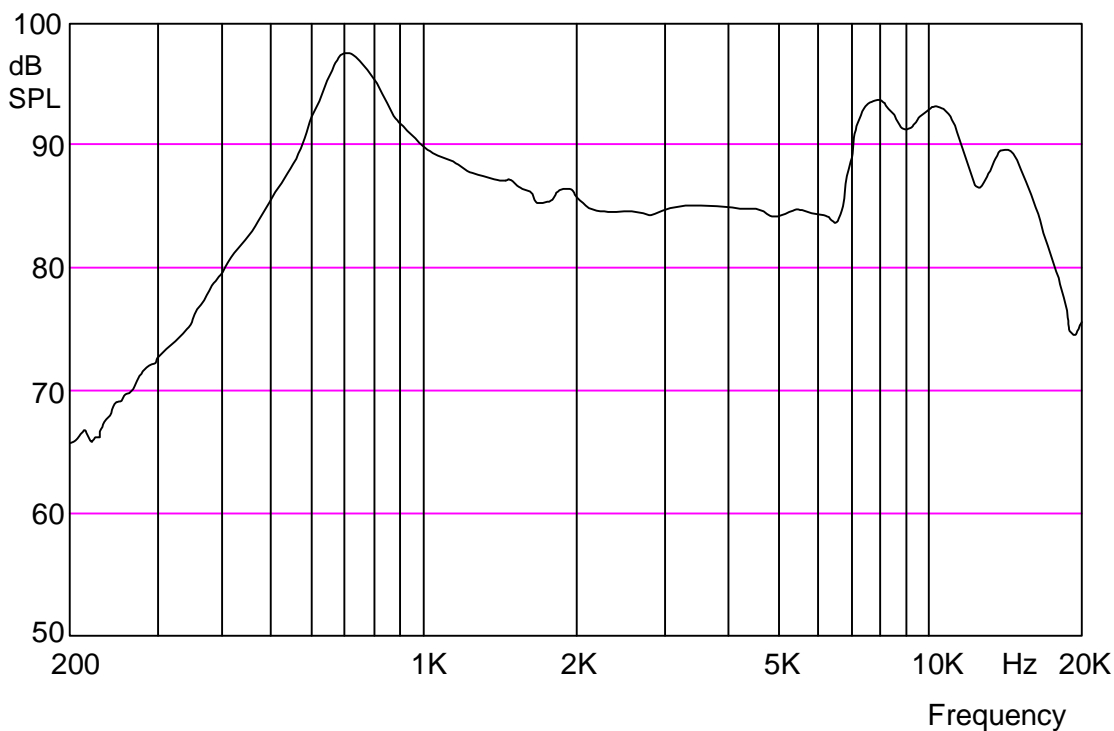


Digital Audio Analysis System

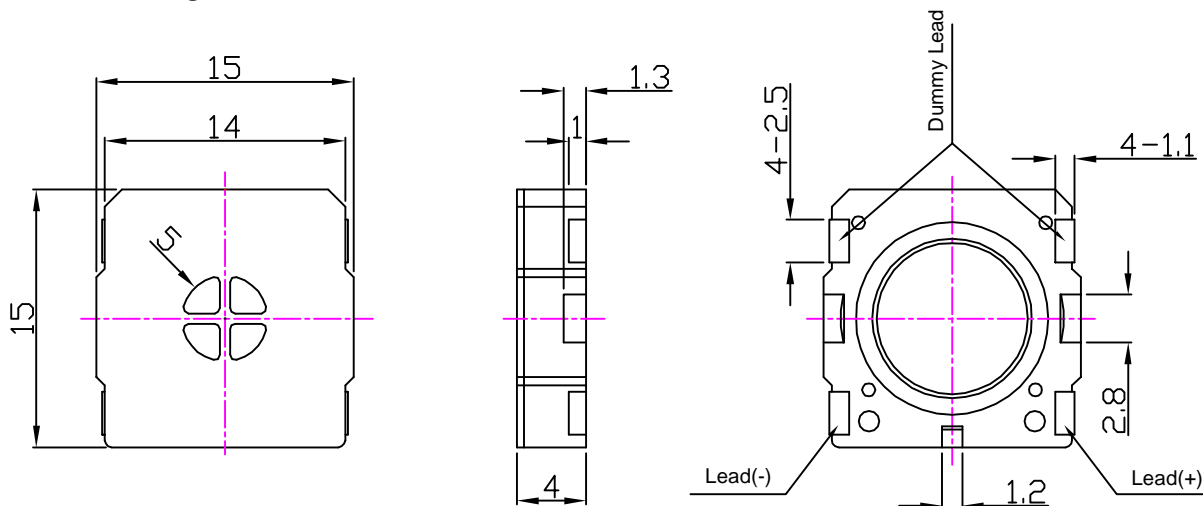
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				Drawn by:	王文邦		
A	A	06/01/03	王文邦	Checked by:	高正	Speaker	
REV.	Date	Drawn	Note	Approved by:	程久生		
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1.3 Frequency response



2 .Drawing



Unit:mm
tolerance:±0.2

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3. Reliability test

3.1 Low Temperature Test

Temperature -40°C
Duration 240hrs

3.2 High Temperature Test

Temperature +105± 2°C
Duration 240hrs

3.3 Damp Heat

Temperature 40± 2°C
Relative Humidity 90%-95%RH
Duration 240hrs

3.4 Room temperature life test

Temperature 15~35°C
Relative Humidity 25%-85%RH
Voltage 2Vrms
Duration 240hrs

3.5 Temperature Cycle

Temperature -20°C / +40°C
Temperature Change 1± 2 /min
Duration at +65°C 2h(each cycle)
Duration at -25°C 2h(each cycle)
Duration for one cycle 8h
Cycles 10

All these tests above should be measured after leaving normal temperature for 2hrs.

3.6 Drop Test

Height 1m(on the concrete floor)
Direction of drop 1 each corner, 3 each sides, 6 plain

Notice:

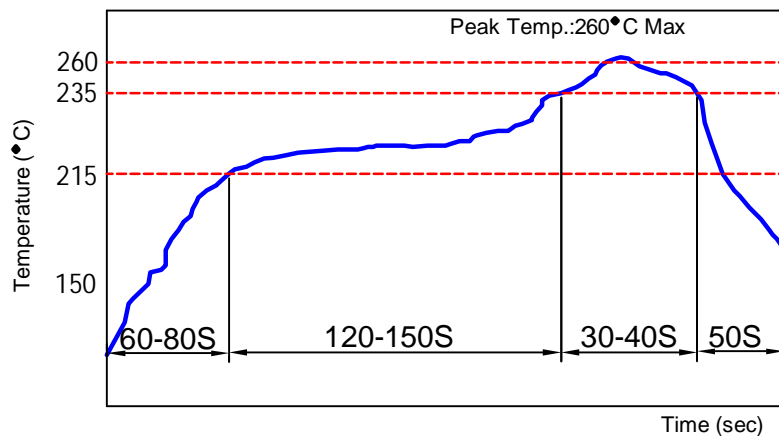
sensitivity difference at 1kHz shall be within ± 3dB from initial value after test.

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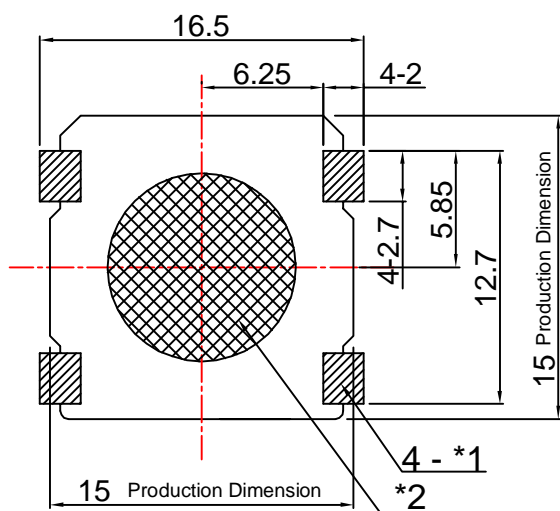
4.Reflow condition

4.1 reflow soldering



Preheating: 215°C for 120-150 seconds
Soldering Temperature: 235°C for 30-40 seconds
Peak Soldering Temperature: 260°C max for 10 seconds

4.2 Recommended Land Pattern Dimensions



Unit:mm

Note

- 1) Land pattern*1
2) Avoid any pattern
on the shade area
*2 of PC board is highly recommended

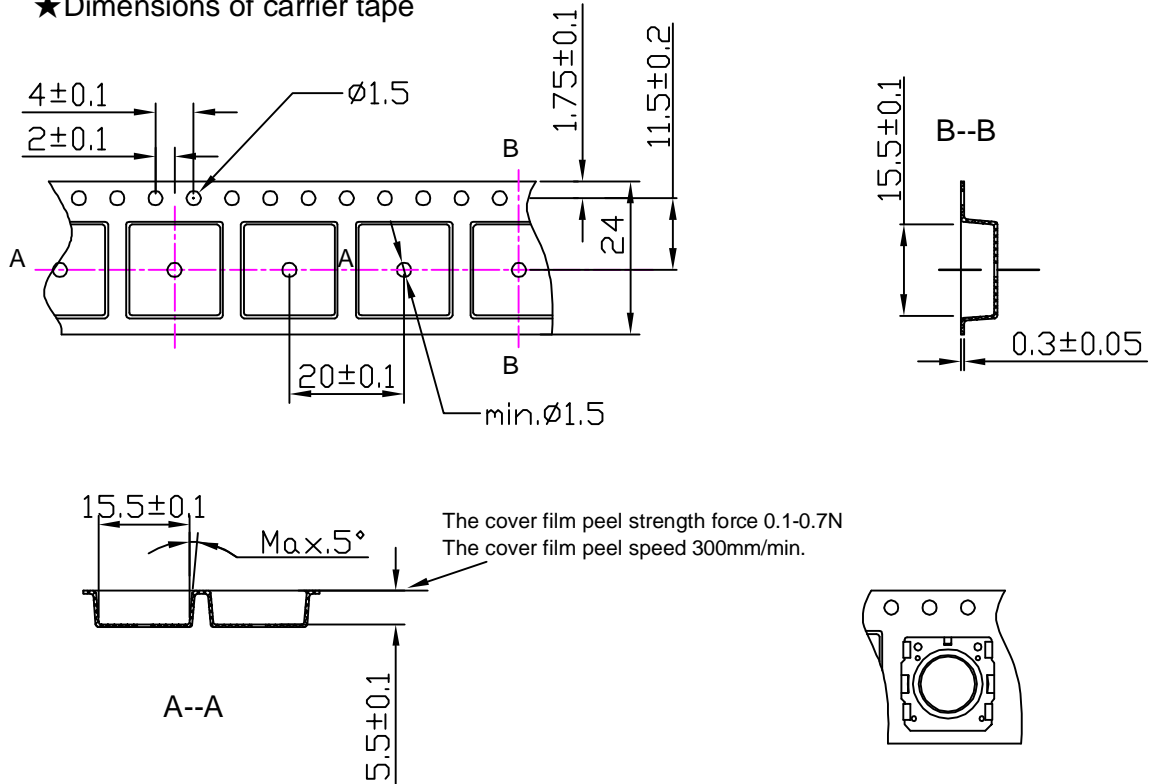
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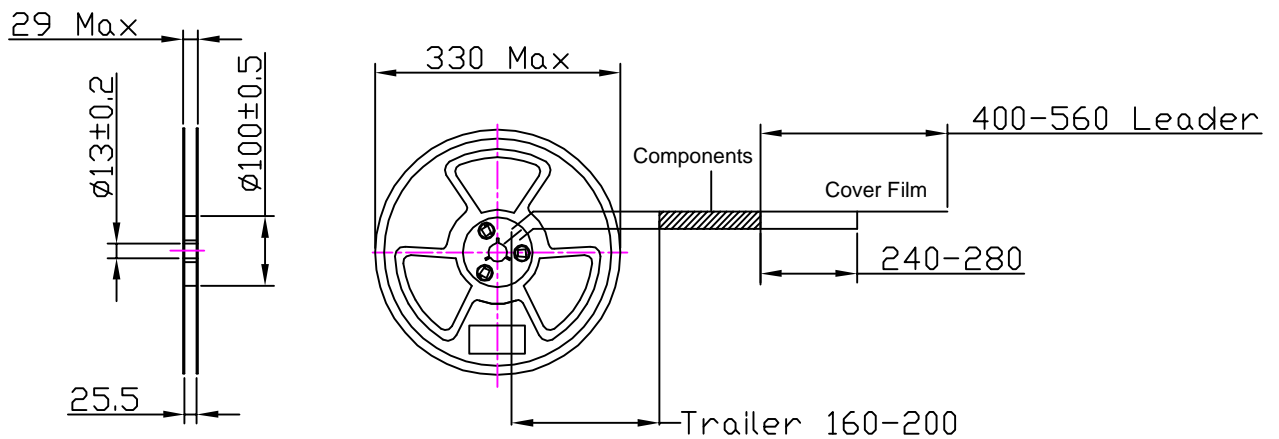
5. Tape on Reel Packing

5.1 packing drawing

★Dimensions of carrier tape

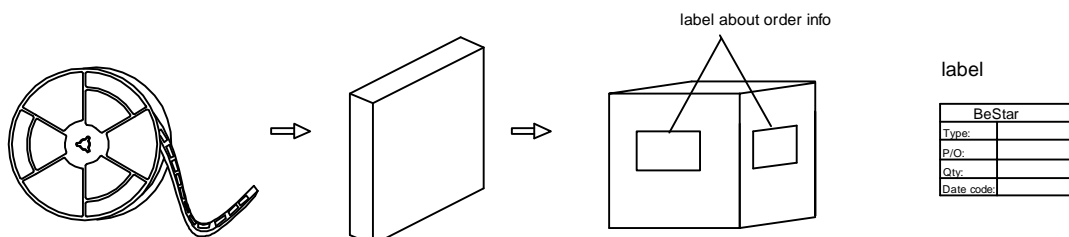


★Dimensions of reel



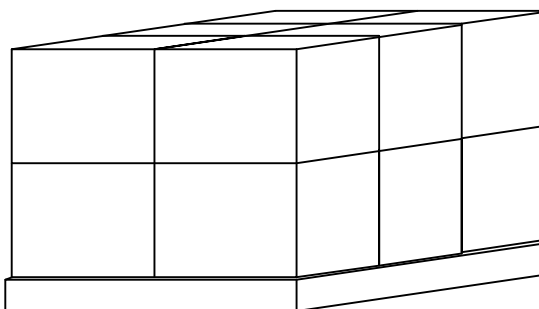
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5.2 packing quantity

- 5.21 600pcs/reel
- 5.22 5reel/carton
- 5.23 3000 pcs/carton in total
- 5.24 carton size 38x28x37cm
- 5.25 12carton/tray
- 5.26 tray size 85x77x74cm



6.MSL rating and Notice

Moisture Sensitivity Level and Floor Life

Level	Floor Life(out of bag) at Factory Ambient $\leq 30^{\circ}\text{C}/85\%\text{RH}$ or as Stated
3	168 hours

6.1 The products mustn't be washed

6.2 Storage Condition

The products should be stored in the room ,where the temperature/humidity is stable.
And avoid such places where there are large temperature changes.

Please store the products at the following conditions:

Temperature: -10 to $+40^{\circ}\text{C}$ Humidity: 15 to 85% R.H.

6.3 Expire Date on Storage

Expire date (Shelf life) of the products is six months after delivered under the conditions of a sealed and an unopened package. Please use the products within six months after delivered.

If you store the products for a long time (more than six months), use carefully because the products may be degraded in the solderability and/or rusty.Please confirm solderability and characteristics for the products regularly.

6.4 Notice on Product Storage

(1) Please do not store the products in a chemical atmosphere (Acids, Alkali, Bases, Organic gas, Sulfides and so on), because the characteristics may be reduced at quality, and/or be degraded in the solderability due to the storage in a chemical atmosphere.

(2) Please use the products immediately after the package is opened, because the characteristics may be reduced at quality, and/or be degraded in the solderability due to storage under the poor condition.

(3) Please do not drop the products to avoid cracking of ceramic element.

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7. History change record

[illegible]

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