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# Data Sheet

SMS-2008MS-R

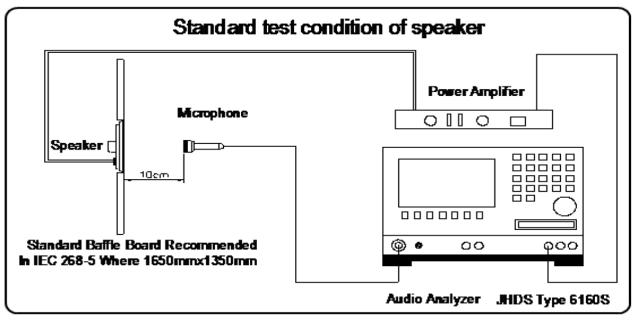
#### **Features:**

- Pick-and-place, reflow capable speaker with good output
- Great frequency response in a small package
- Grill is integrated into the housing for speaker protection

#### **Speaker Specifications**

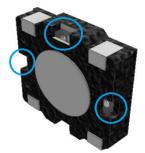
Parameters	Values	Units	
Rated Input Power	0.8	Watts	
Max Input Power	1.0	Watts	
Impedance	8±15%	Ohms	
Sensitivity @ 0.1W/0.1M			
(Avg 1.0, 1.6, 2.0, 3.2 kHz)	90±3	dB	
Resonant Frequency	850±20%	Hz	
Frequency Range			
(based on -10 dB limits on			
frequency response graph)	550 ~ 20,000	Hz	
Diaphragm Material	Mylar - Kapton	-	
Frame Material	LCP	-	
Magnet Material	SmCo		
Weight	1.5	Grams	
Acceptable Soldering Methods	Hand Solder, Reflow Solder	See below for soldering information	
Environmental Compliances	RoHS/REACH	-	
Polarity	Diaphragm moves outward when positive voltage is applied to positive terminal	-	
Storage Temperature	-40 ~ +105	°C	
Operating Temperature	-40 ~ +105	°C	

## **Measurement Method**



### Typical Frequency Response (0.89V signal applied)





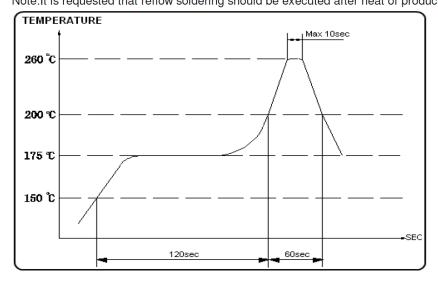
For best frequency response results, fill in these vent holes after reflow or hand soldering to prevent potential cancelation.

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### **Recommended Soldering Procedure**

 a) Recommendable reflow soldering condition is as follows (Reflow soldering is twice)
Note: It is requested that reflow soldering should be executed after heat of product goes down to normal.



Heat resistant line (Used when heat resistant reliability test is performed)

b) Manual soldering Manual soldering temperature 350° C within 5 sec.

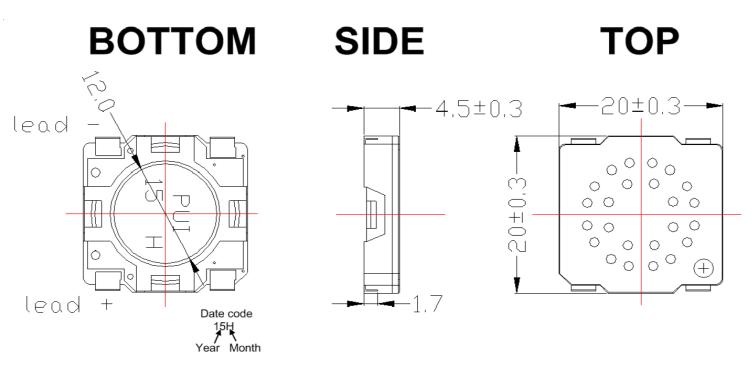
## **Reliability Testing**

Type of Test	Test Specifications		
High Temperature Test	96 hours at +85°C allow speaker to rest at room temperature for 3 hours before testing		
Low Temperature Test	96 hours at -40°C allow speaker to rest at room temperature for 3 hours before testing		
	96 hours at +40°C with relative humidity at 92-95% allow speaker to rest at room temperature for 3 hours before testing		
Humidity Test			
Temperature Cycle Testing	The part shall be subjected 5 cycles. One cycle shall be 12 hours and consist of;		
Vibration Test	10~55~10 Hz sine-sweep 15 min. at 5G constant. X, Y, Z 6 directions, 1 time for a total of 6 cycles.		
Drop Test	Free drop from 100cm height onto concrete floor, X, Y, Z 6 directions, 1 time for a total of 6 cycles		
Load Test	Apply white noise at the rated power for 96 hours		

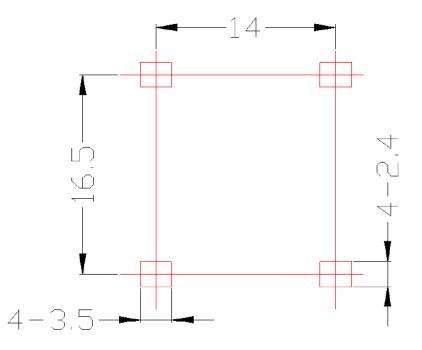
Call out how pass/fail conditions are determined after the reliability testing is complete

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## Dimensions

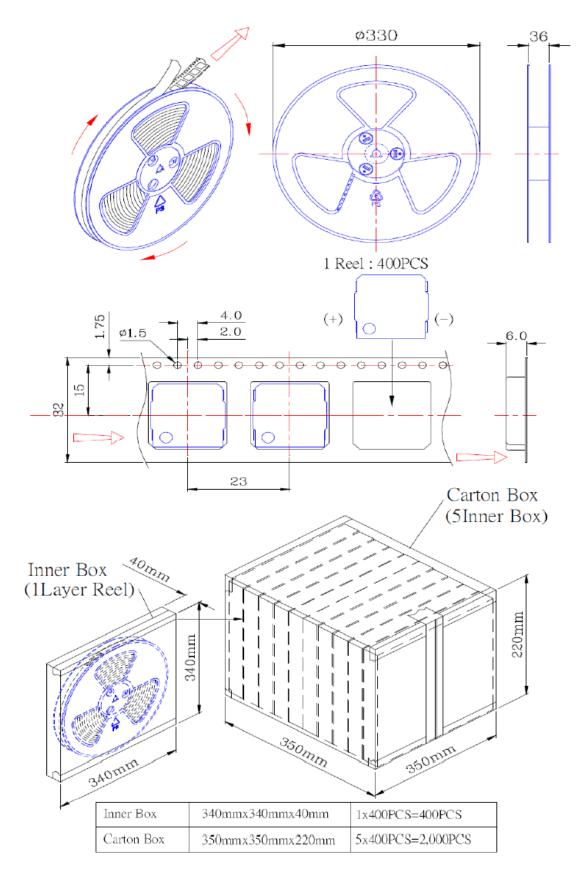


# Suggested Land Pattern\*



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# Packaging



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Specifications Revisions       Revision     Description		Date
-	Released from Engineering	8/25/2015
А	Revised Operating & Storage Temperature range	5/14/2020

#### Note:

- 1. Unless otherwise specified:
  - A. All dimensions are in millimeters.
  - B. Default tolerances are  $\pm 0.5$ mm and angles are  $\pm 3^{\circ}$ .
- 2. Specifications subject to change or withdrawal without notice.