



soberton inc.

## NB SPEAKER

Acoustic Product Specification

Product Number: SPM-3040L



Release | Revision: A/2019

### CONTENTS

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## General Specifications

### Voice Coil Impedance

DC:  $4 \pm 15\% \Omega$

### Resonance Frequency

$800 \pm 20\% \text{ Hz @ 1V}$

### Sound Pressure Level

$86 \pm 3 \text{ dB SPL @ 1 Watt, at 50 cm}$   
Average @ 0.8, 1.0, 1.2, 1.5 KHz

### Response Range

F0 ~ 10 KHz

### Power Rating (Normal/ Maximum)

Normal: 2.0 Watt

Maximum: 3.0 Watt

### Distortion

5% Max. at 1000 Hz, 1.0 Watt, 0.5 Meter

### Abnormal Sound Test

Result must be normal when tested at 2.83 volts in free air.

### Magnet

Materials: NdFeB

### Polarity

Diaphragm shall move forward when a positive DC current is applied to the “+” or “Marked” Terminal.

### Environmental Protection Regulation

RoHS 2.0

### IP Level

None

### Dimension

40.0x30.0xH15.0mm  
WIRE 150mm (UL 1571 / AWG 28#)



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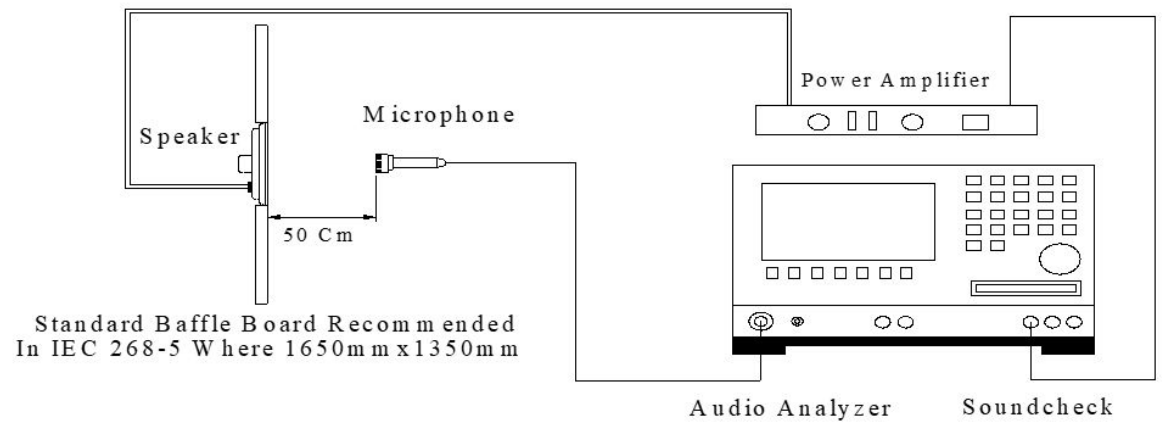
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### Standard Test Condition



### Test Conditions

#### Standard Test Condition

Temperature 15~ 35°C

Relative humidity 45% ~ 85%

Atmospheric pressure 860~1060 mbar

#### Standard Test Fixture

Input power: 2.0W(2.83V)

Zero level: -dB

Mode: TSR

Potentiometer Range: 50dB

Sweep time: 0.5sec



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## Reliability Tests

The sound pressure as specified will neither deviate more than  $\pm 3\text{dB}$  from the initial value, nor have any significant damage after any of following testing.

### High Temperature Test

High Temperature  $+60\pm 2^\circ\text{C}$

Duration 96 hours

### Low Temperature Test

Low Temperature  $-20\pm 2^\circ\text{C}$

Duration 96 hours

### Heat Shock Test

High Temperature  $+60\pm 2^\circ\text{C}$

Low Temperature  $-20\pm 2^\circ\text{C}$

Changeover Time  $< 30$  seconds

Duration 1 hour

Cycle 100

### Humidity Test

Temperature  $+40\pm 2^\circ\text{C}$

Relative Humidity 90%~95%

Duration 96 hours

### Temperature Cycle Test

Temperature  $-20^\circ\text{C}$                        $+60^\circ\text{C}$

Duration      45 minutes              45 minutes

Temperature gradient  $1\sim 3^\circ\text{C}/\text{min}$

Cycle 25

### Drop Test

Mounted with dummy set mass: In Normal Box

Height:                      75 cm

Cycle:                      10 (1 each plain) onto the concrete board

### Load Test

White Noise (EIA filter) for 96 hours @2.0W input power



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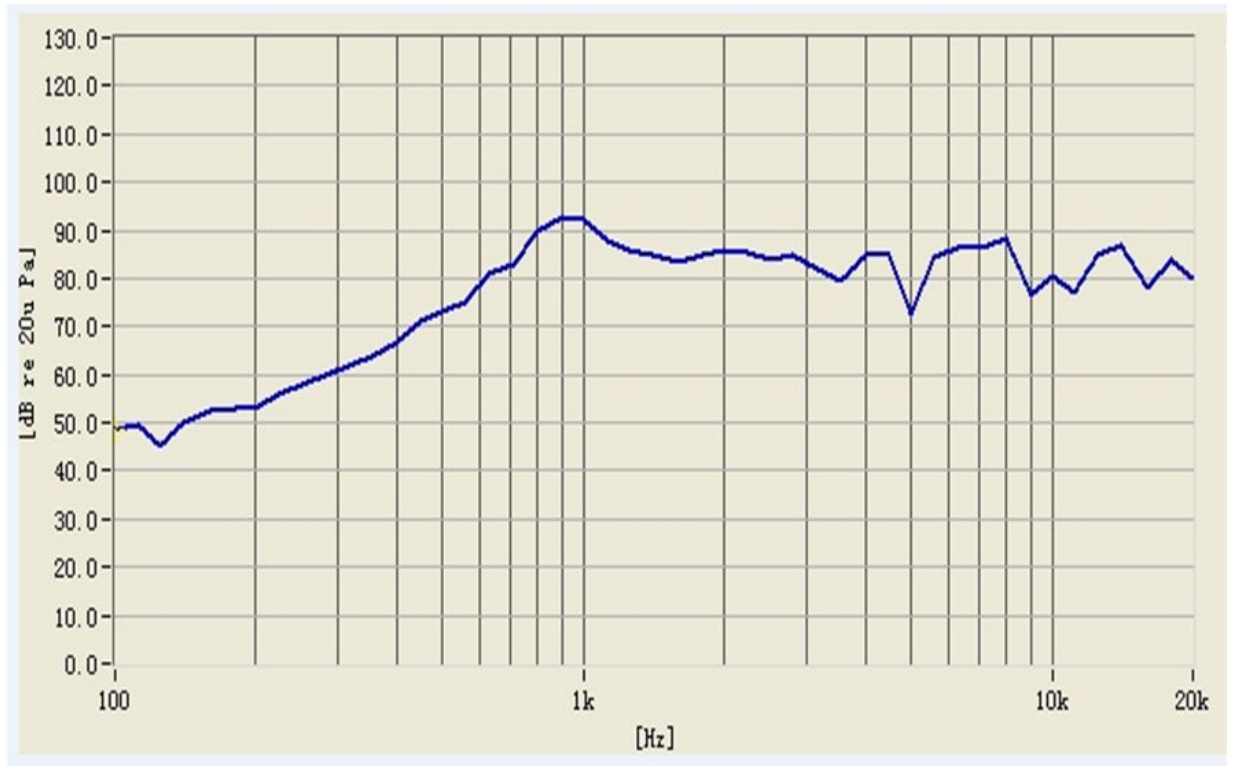
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## Frequency Response Curve

Test condition: 1.0W/0.5M





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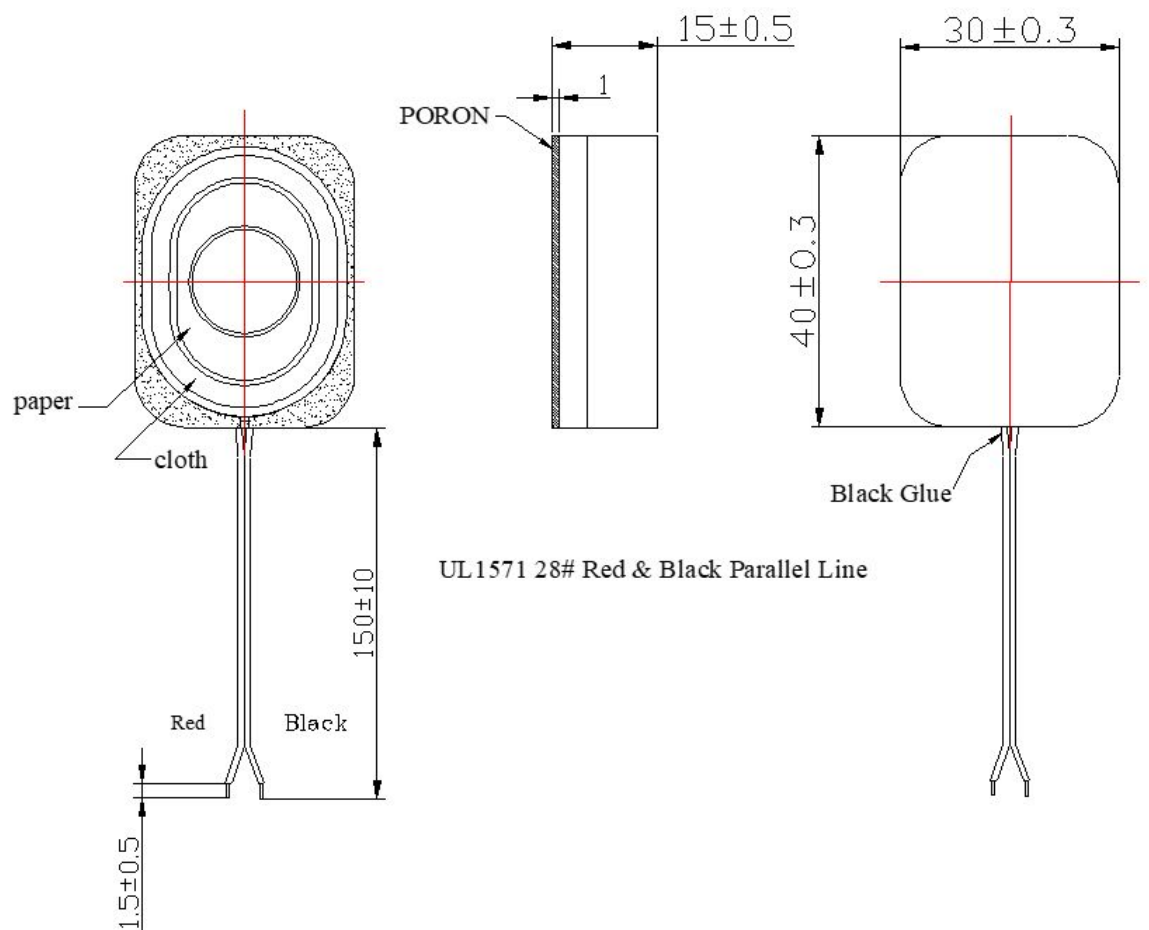
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## Dimensions

Tolerance:  $\pm 0.5$  (unit: mm)



No.	Part Name	Material	Quantity
1	Diaphragm	Cloth	1
2	Voice Coil	Paper Cu	1
3	Plate	SPCC	1
4	Magnet	NdFeB	1
5	PCB Terminal	FR-4	1
6	Frame	ABS	1



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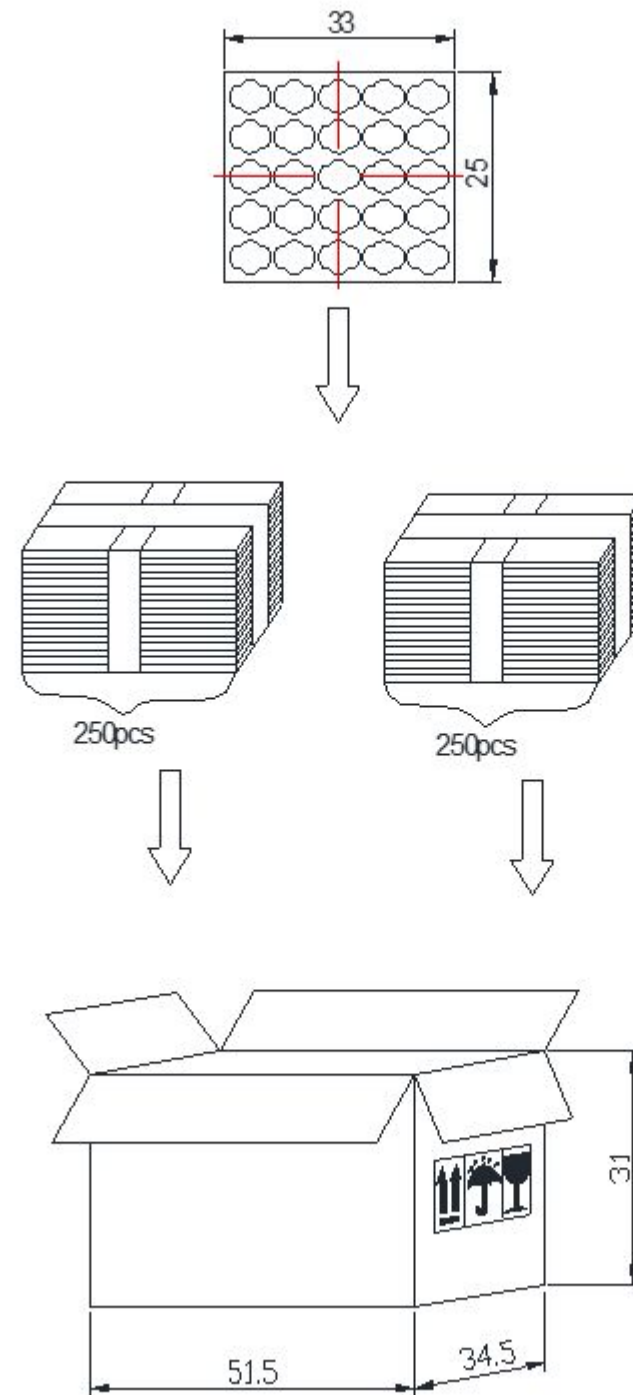
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## Packing



## Packing Information

**Unit:** cm

**Per Tray:** 25 pcs

**Per Unit:** 10 trays per unit,

**Per Carton:** 2 units

**Total:** 500 pcs per carton

**Size:** 51.5 x 34.5 x 31cm