



soberton inc.

## SP DYNAMIC SPEAKER UNIT

Acoustic Product Specification

Product Number: SP-2811N



Release | Revision: A/2019

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## General Specifications

### Sound Pressure Level

84 ±3dB SPL @0.1Watt, at 10 cm  
Average @0.8, 1.0, 1.2, 1.5 KHz

### Voice Coil Impedance

DC : 8±15% Ω

### Resonance Frequency

380±20% Hz

### Response Range

F0~20 KHz

### Power Rating (Normal / Maximum)

Normal: 2.0 W  
Maximum: 3.0 W

### Distortion

5% Max @1,000 Hz, 1.0 Watt

### Abnormal Sound Test

Result must be normal when tested at 4.0 Volts in free air.

### Magnet

Material: NdFeB

### Polarity

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

### Load Test

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

### Environmental Protection Regulation

RoHS 2.0

### IP Level

None

### Dimension

28.0x28.0xH11.2mm



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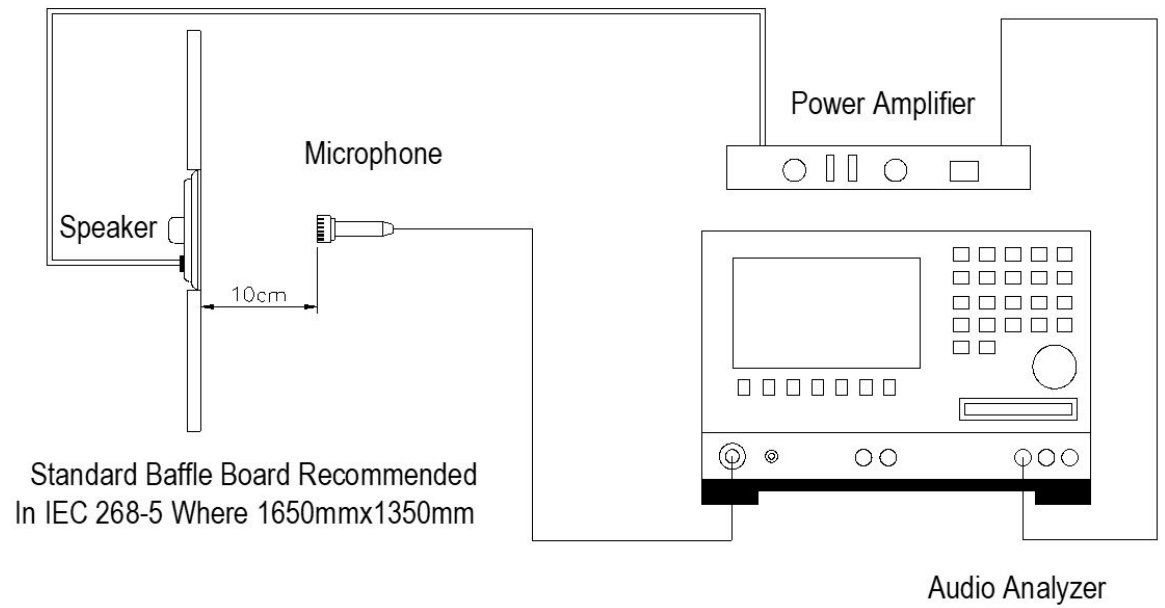
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## Standard Test Condition



## 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 (4.0V)

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  $+70\pm 2^\circ\text{C}$

Duration 96 hours

### Low Temperature Test

Low Temperature  $-30\pm 2^\circ\text{C}$

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 92%~95%

Duration 96 hours

### Temperature Cycle Test

Temperature  $-25^\circ\text{C}$      $+65^\circ\text{C}$

Duration    6 hours    6 hours

Temperature gradient  $\pm 2^\circ\text{C}$

Cycle 5

### Drop Test

Mounted with dummy set mass    In Normal Box

Height 75 cm

Cycle 10 (1 each plain) onto the concrete board

### Load Test

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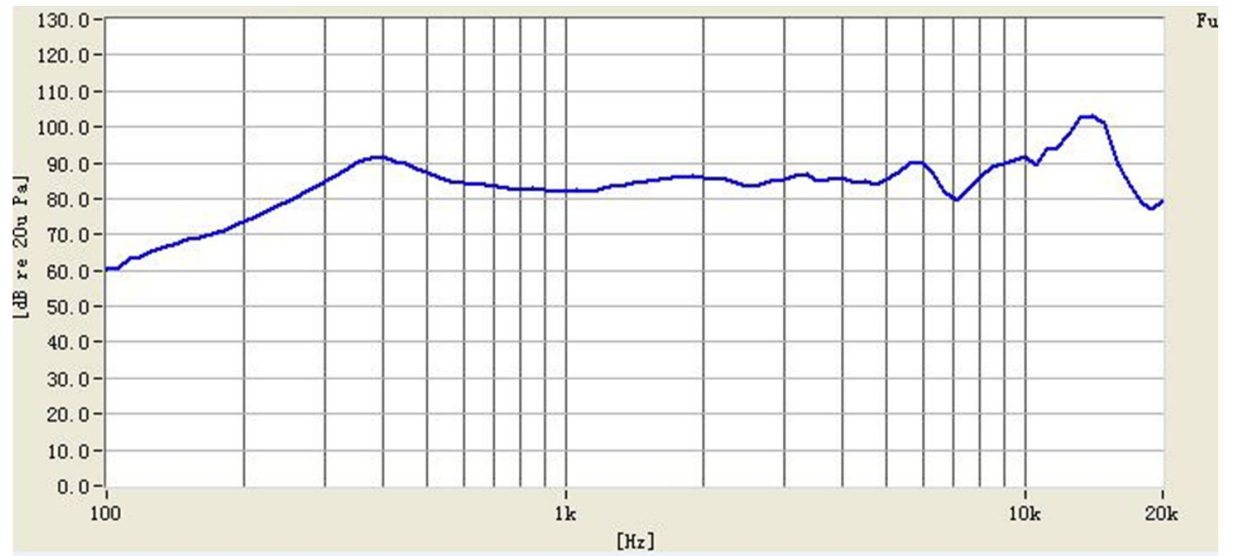
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## Frequency Response Curve

Test condition: 0.1W / 0.1M





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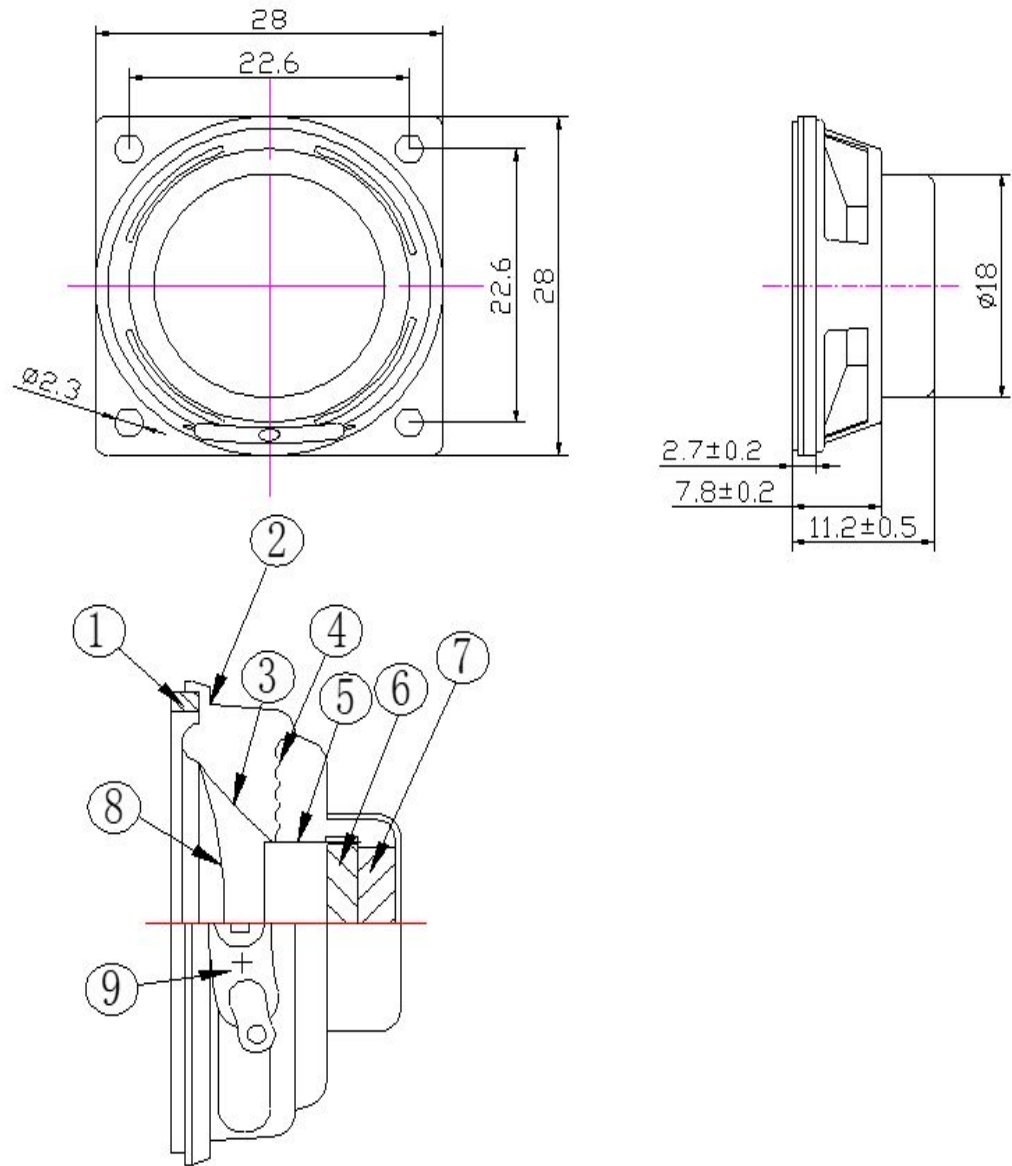
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## Dimensions

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



No.	Part Name	Material	Quantity
1	Gasket	Paper	1
2	Frame	SPCC	1
3	Diaphragm	Pu + Paper	1
4	Damper	Cloth	1
5	Voice Coil	Paper CU	1
6	Plate	SPCC	1
7	Magnet	NdFeB	1
8	Dust Cap	Paper	1
9	PCB Terminal	FR-4	1



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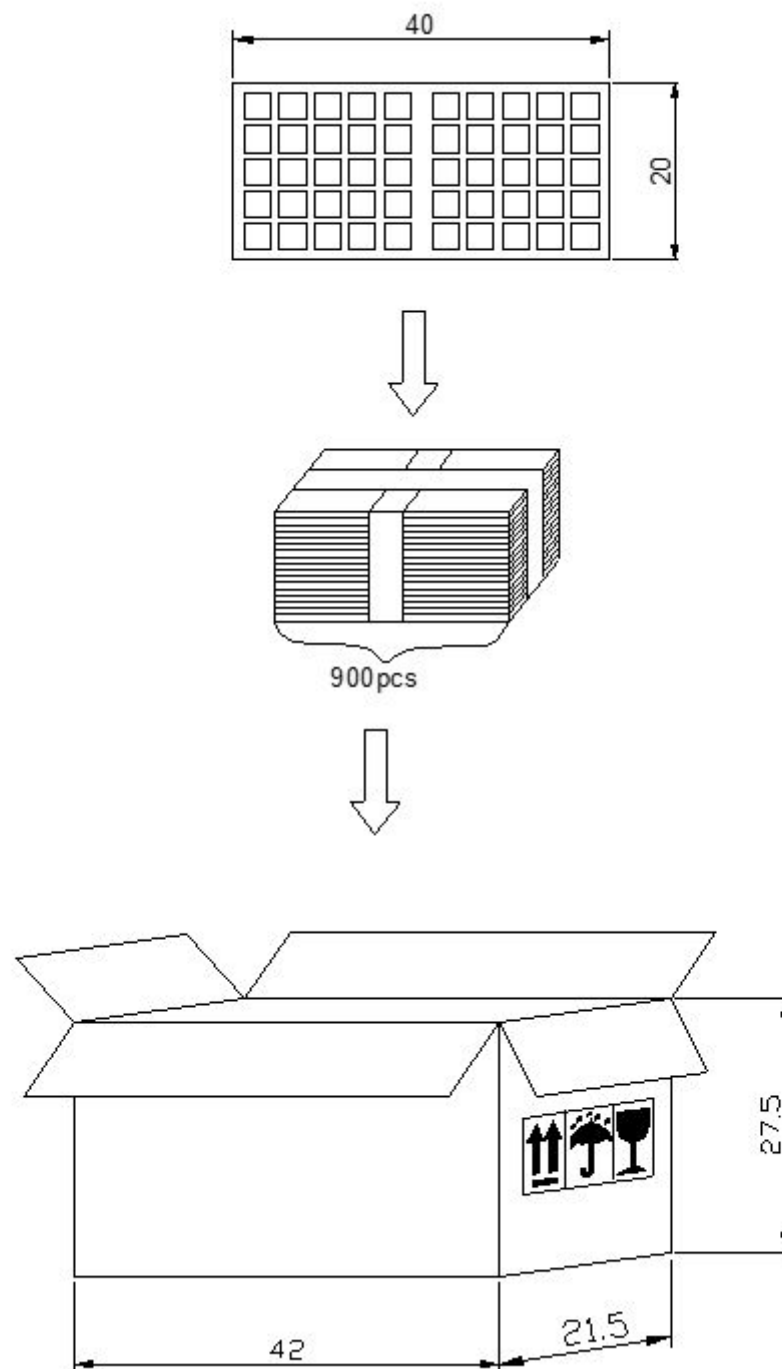
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### Packing



### Packing Information

- Unit: cm
- Per Tray: 50 pcs
- Per Carton: 18 trays
- Per Carton: 900 pcs
- Size: 42.0 x 21.5 x 27.5cm