



soberton inc.

NB SPEAKER

Acoustic Product Specification

Product Number: SPM-4343W



Release | Revision: C/2021

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This document contains the technical specifications for the NB speaker unit.

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General Specifications

Sound Pressure Level

100±3dB SPL @2.0 Watt, 0.1 Meter
Average at 2.0KHz

Resonance Frequency

1200±20%Hz @1V

Response Range

F0 ~ 20.0KHz

Input Power (Nominal/ Maximum)

Rated Noise Power: 2.0 Watt

Short Term Max Power: 2.5 Watt

Voice Coil Impedance

DC: 8±15%Ω

Distortion

10% Max. at 1.0KHz, 2.0 Watt

Abnormal Sound Test

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

Polarity

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

Operating Temperature

-30°C ~ +65°C

Storage Temperature

-30°C ~ +75°C

Dimension

43.5 x 43.5 x H13.05mm
Wire: 72mm (UL1571 / AWG30#)
Connector: PH-2Y, 2P = 2.0

IP Level

No Rating



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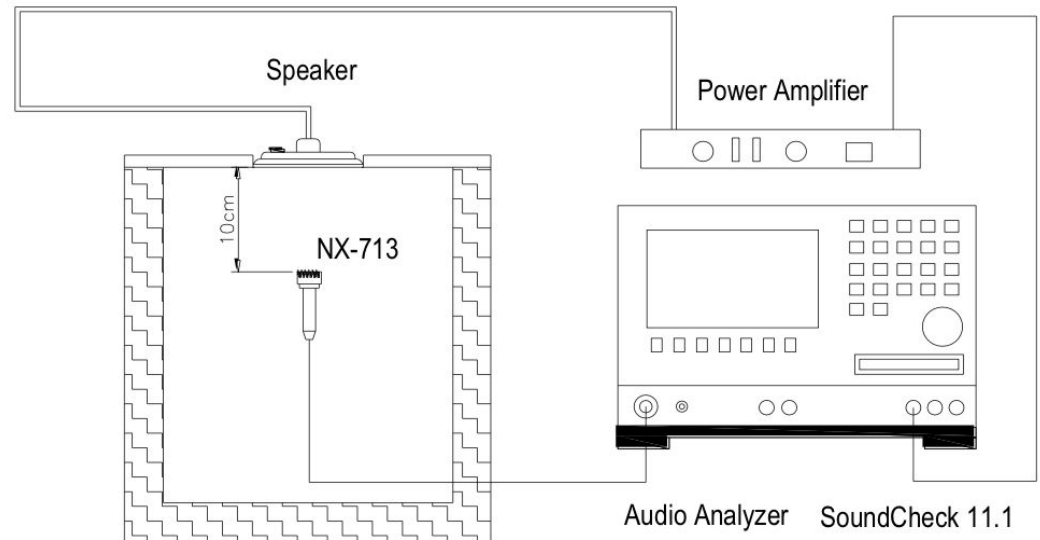
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Standard Test Condition of Speaker

Standard test condition of speaker



Measuring Method (Speaker Mode)

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	$+75\pm 2^\circ\text{C}$
Duration	96 hours

Low Temperature Test

Low Temperature	$-30\pm 2^\circ\text{C}$
Duration	96 hours

Heat Shock Test

High Temperature	$+75\pm 2^\circ\text{C}$
Low Temperature	$-30\pm 2^\circ\text{C}$
Changeover Time	<30 seconds
Duration	1 hour
Number of Cycles	10

Humidity Test

Temperature	$+40\pm 2^\circ\text{C}$
Relative Humidity	90% ~ 95%
Duration	48 hours

Temperature Cycle Test

Temperature	-40°C	$+85^\circ\text{C}$
Duration	45 minutes	45 minutes
Temperature gradient	1~3 $^\circ\text{C}/\text{min}$	
Number of Cycles	25	

Drop Test

The speaker is mounted onto the dummy assembly, placed in a standard cardboard box and then dropped onto a concrete board

Height:	0.75m
Number of Cycles:	6

Load Test

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



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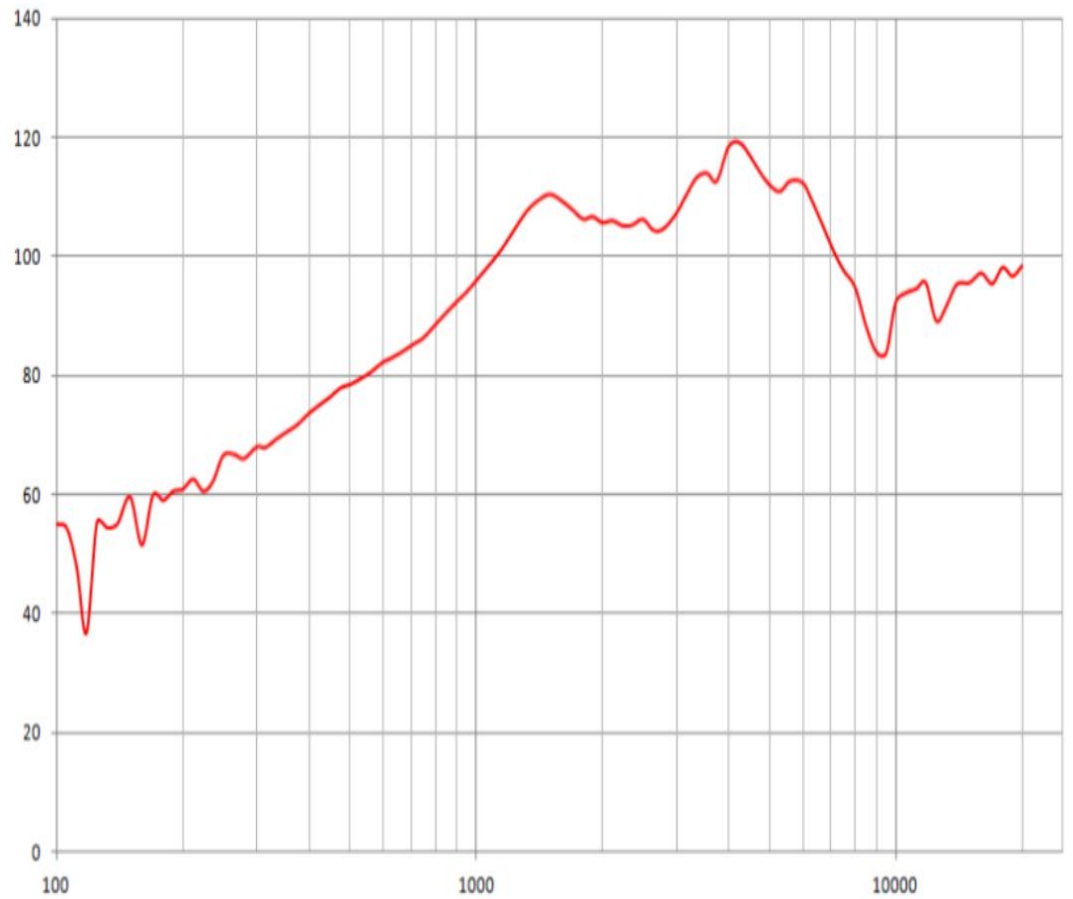
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Frequency Response Curve

Test condition: 2.0W/0.1M





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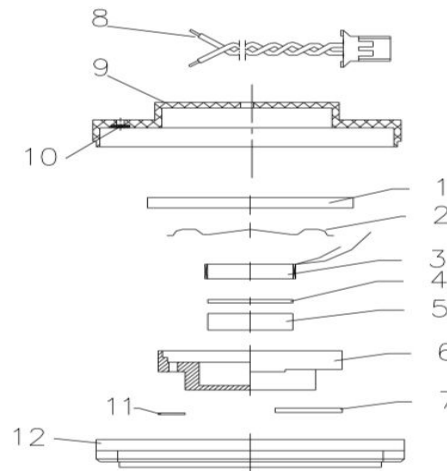
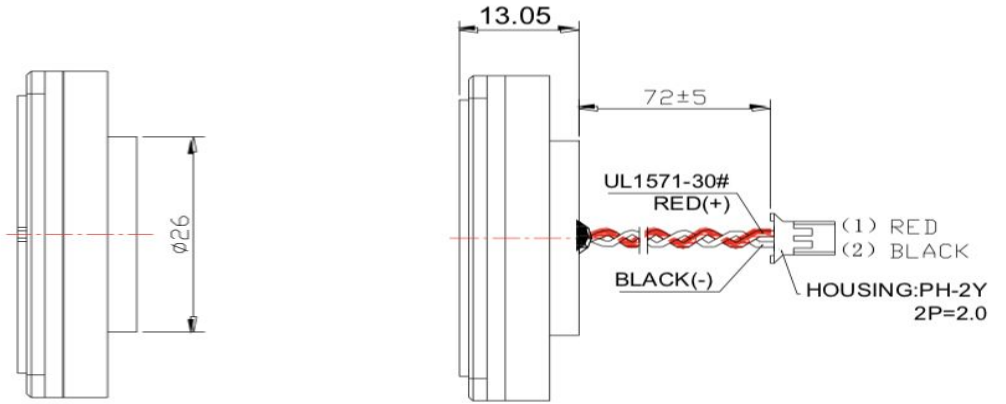
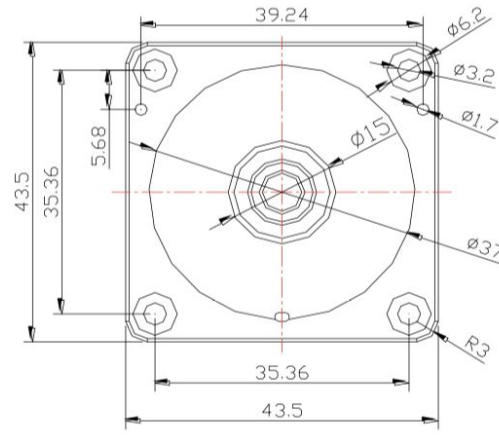
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Dimensions

Tolerance: ± 0.5 (unit: mm)



No.	Part Name	Material	Qty
1	Gasket	ABS	1
2	Diaphragm	PEN	1
3	Voice Coil	KSV + Cu	1
4	Plate 1	SPCC	1
5	Main Magnet	Nd Fe B	1
6	Frame	SPCC	1
7	PCB	FR-4	1
8	Wire (72mm)	UL1571 / AWG30#	2
	Connector	PH-2Y, 2P = 2.0	1
9	Cover	ABS	1
10	Permeability Film	White Cloth	1
11	Silk Screen	Black Cloth	1
12	Box	ABS	1



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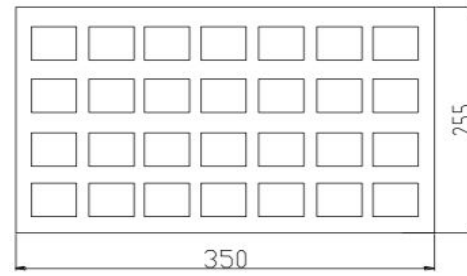
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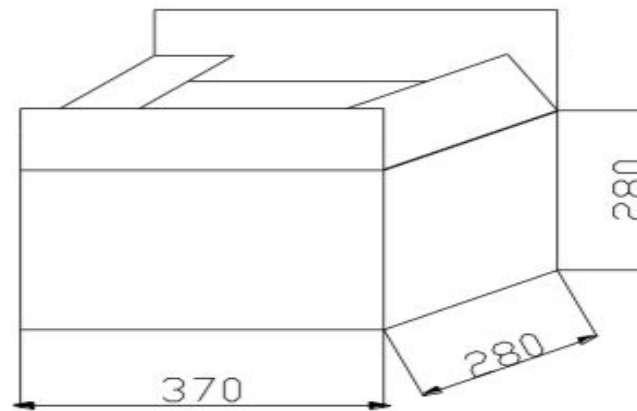
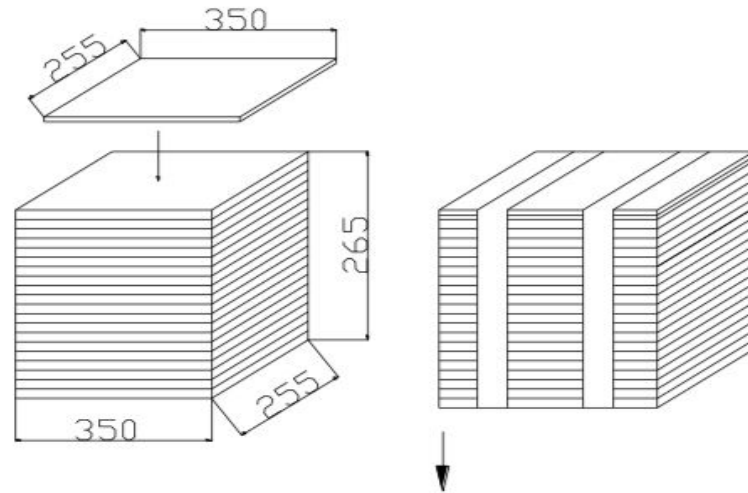
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Packing

4 x 7 = 28 pcs



28 pcs x 13 = 364 pcs



Packing Information

Per Tray: 28 pcs

Per Carton: 13 trays

Total: 364 pcs per carton

Carton Size: 370 x 280 x 280mm