soberton inc.

SP DYNAMIC SPEAKER UNIT

Acoustic Product Specification

Product Number: SP-2618L

Release | Revision: B/2018

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Dynamic Speaker Electroacoustic Characteristics

Sound Pressure Level

88±3dB SPL@2KHz 0.1W (Sine wave) 0.1M measured with baffler
Test set up: Measuring conditions and procedures shown in Figure.1

Frequency Response Curve

As shown in Figure 2

Frequency Range

F0 Hz ~ 6KHz

Response Frequency

700±20%Hz @ 1V (Without Baffler)

Input Power (Nominal and Maximum)

Rated Noise Power 0.7W
Short Term Max Power: 1.2W must be normal at a white noise (F0 ~ 20KHz) for one minute

Operation Test

Must be free audible noise (buzzes and rattles)
(F0 ~ 3400Hz frequency range ,input level up to 2.37Vrms)

Total Harmonic Distortion

Less than 10% @1KHz, 10cm, 0.1W

Polarity

When a positive D.C current is applied to terminal marked (+) diaphragm shall move forward.

General Specifications

Operating Temperature Range

-25℃~+65℃

Storage Temperature Range

-40℃~+75℃

Standard Test Conditions

Temperature 17℃ ~ 25℃
Relative Humidity 45% ~ 80% (RH)

AC Impedance

8±15%Ω(@2KHz 1V) without baffler.

Dimension

26.0 x 18.0 x H4.3mm WIRE 50mm（UL1571 / AWG32#）

IP Level

IP50

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Reliability Tests

Sound pressure level of speaker difference shall be within ±3dB after test @0.8, 1.0, 1.2 and 1.5KHz Average.

High Temperature Test

High Temperature +65±3℃

Duration 96 hours

Low Temperature Test

Low Temperature -20±3℃

Duration 96 hours

Heat Shock Test

High temperature +75±2℃

Low temperature -40±2℃

Changeover time <30 seconds

Duration: 1 hour

Cycle 10

Humidity Test

Temperature +40±2℃

Relative Humidity 90%~95%

Duration 96 hours

Temperature Cycle Test

Temperature -40℃ +75℃

Duration 45 minutes 45 minutes

Temperature gradient 1 ~ 3˚C/min

Cycle 10

Drop Test

Mounted with dummy set mass 100g

Height 1.5 m

Cycle 6 (1 each plain) onto the concrete board

Load Test

Speaker mode: White noise (EIA filter) for 96 hours @ 0.7W input power

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Measuring Method (Speaker Mode)

Standard Test Condition

Temperature 15 ~ 25℃

Relative humidity 45% ~ 85%

Atmospheric pressure 86KPa ~ 106KPa

Standard Test Fixture

Input Power 0.1W

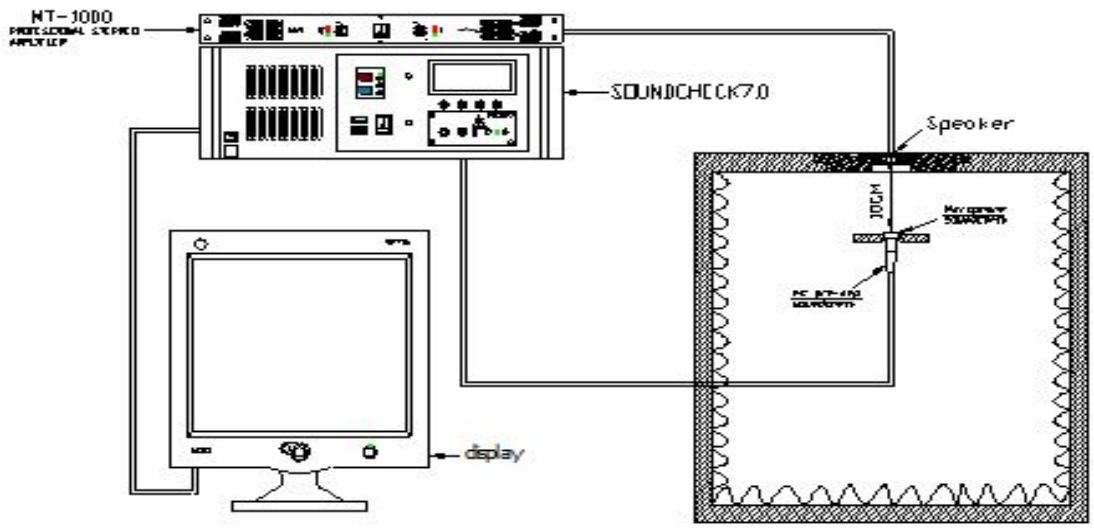
Zero Level -dB

Mode TSR

Potentiometer Range 50dB

Sweep Time 0.5sec

Standard Test Condition of Speaker (Fig. 1)



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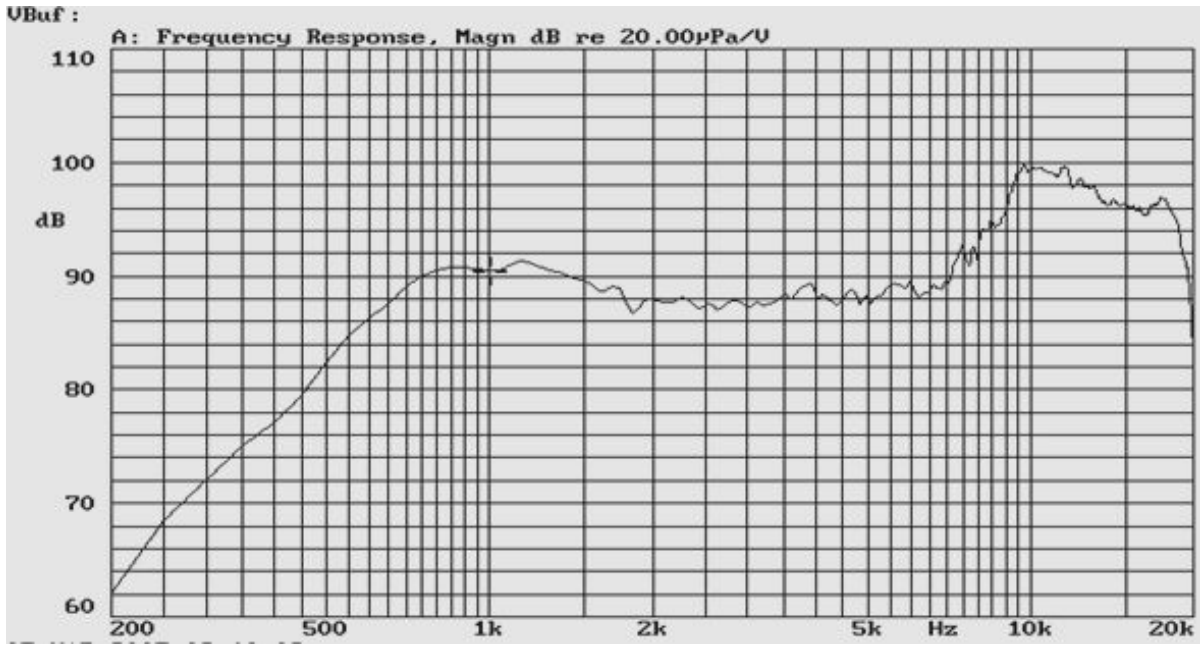
Frequency Response Curve (Fig. 2)

0.1W/10cm, in free air



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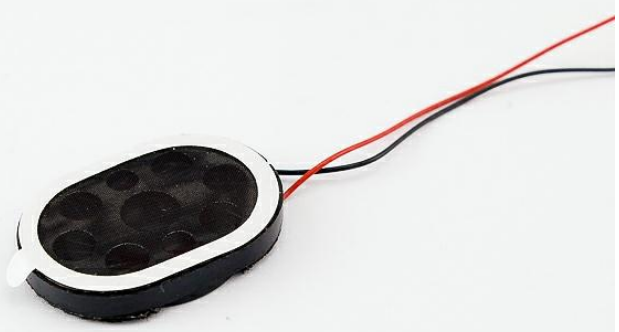

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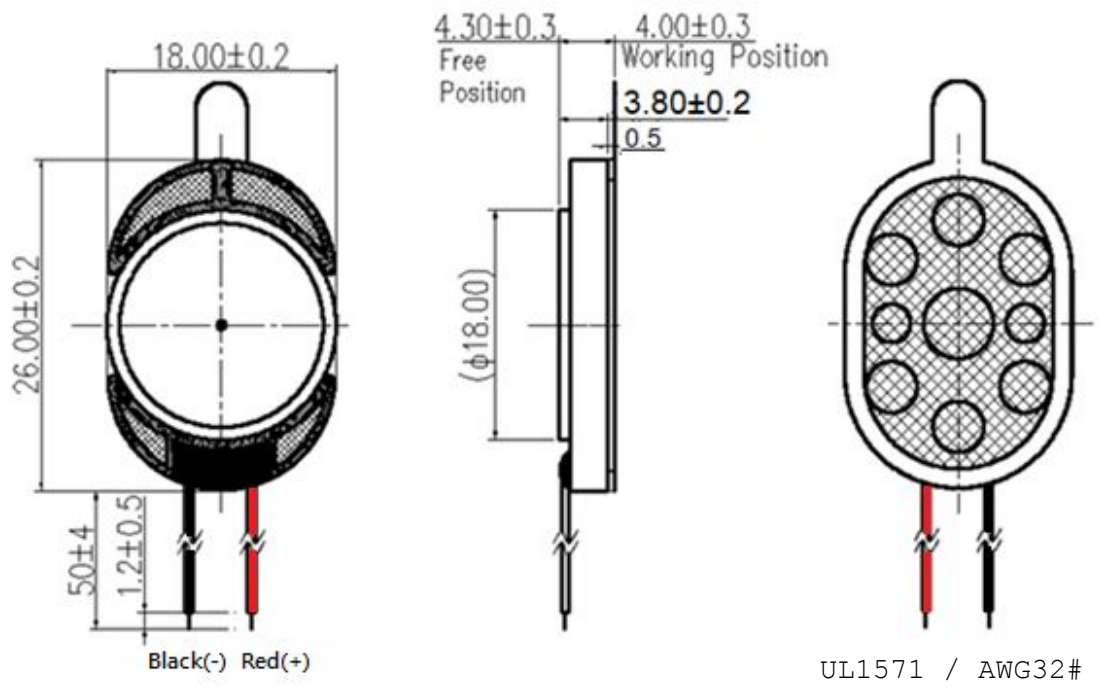
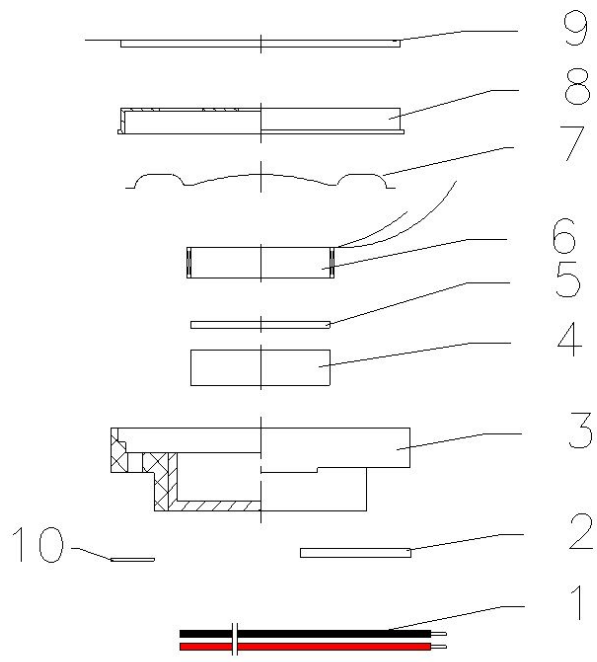
Dimensions

Tolerance: ±0.5 (unit: mm)





No.	Part Name	Material	Quantity
1	Wire (50mm)	UL1571 / AWG 32# 30V ø0.55mm	2
2	PCB	FR-4	1
3	Frame	PBT	1
4	Magnet	Nd Fe B	1
5	Plate	SPCC	1
6	Voice Coil	Copper	1
7	Membrane	PET	1
8	Cap	Stainless Steel	1
9	Gasket	Black Net	1
10	Screen	Black Net	1

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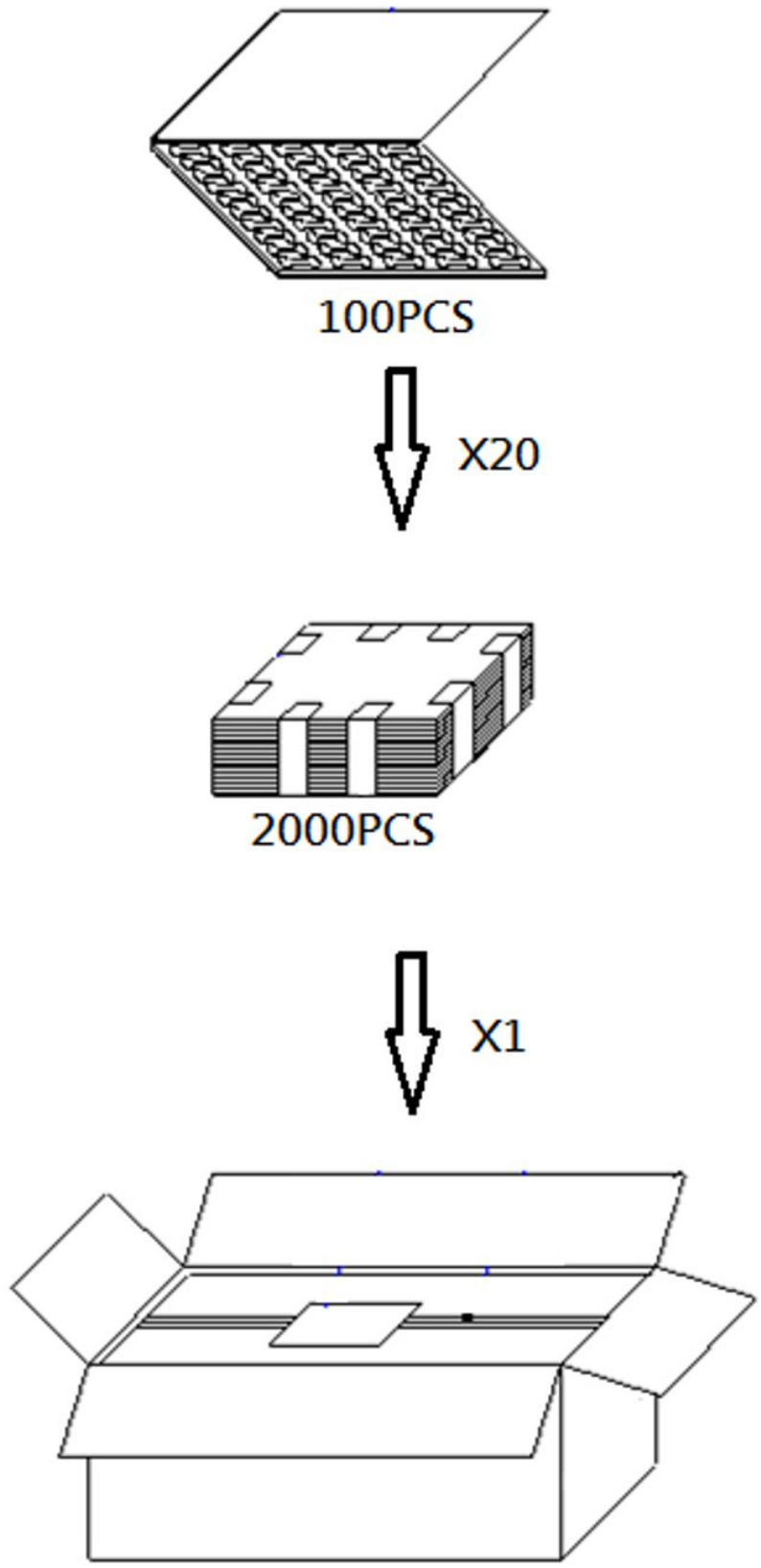

Remarks

100 pcs per box

20 units per box

Total:2000 pcs per box

Size:34×24×20.5cm