Dynamic Speaker Electroacoustic Characteristics

Sound Pressure Level
88±3dB SPL @0.8, 1.0, 1.5 and 2.0KHz in average (0dB SPL=20μPa)
Measuring Condition: 0.1W(Sine wave) 10cm measured with baffler shown in Fig.1.

Frequency Response Curve
As shown in Figure 2

Response Frequency
1000±20%Hz @ 1V. (without baffler)

Input Power (Nominal and Maximum)
Rated Noise Power: 0.5W
Short Term Max Power: 0.8W must be normal at a white noise (1W, F0 ~ 20KHz) for one minute

Operation Test
Must be free audible noise (buzzes and rattles)
300 ~ 8KHz frequency range, input level up to 2.0Vrms

Distortion
Less than 10% @1KHz, 0.1M, 0.5W frequency range, input level up to 2.0Vrms

General Specifications

Operating Temperature Range
-20°C~+60°C

Standard Test Conditions
Temperature 17°C~25°C
Relative Humidity 45%~80%(RH)

AC Impedance
8±15%Ω (@ 1KHz 1V) without baffler

DC Resistance
30±15%Ω

Dimension
Ø16.0x4.7 mm WIRE 38mm (UL1571/AWG32#)

IP Level
IP50
Reliability Tests

The sound pressure as specified will neither deviate more than ±3dB from the initial value, nor have any significant damage after any of following testing.

High Temperature Test
- High Temperature: +60±2°C
- Duration: 96 hours

Low Temperature Test
- Low Temperature: -20±2°C
- Duration: 96 hours

Heat Shock Test
- High Temperature: +60±2°C
- Low Temperature: -20±2°C
- Changeover Time: <30 seconds
- Duration: 1 hour
- Cycle: 100

Humidity Test
- Temperature: +40±2°C
- Relative Humidity: 90%~95%
- Duration: 96 hours

Temperature Cycle Test
- Temperature: -20°C ~ 60°C
- Duration: 45 minutes 45 minutes
- Temperature gradient: 1~3°C/min
- Cycle: 25

Drop Test
- Mounted with dummy set mass: 100 g
- Height: 1.5 m
- Cycle: 6 (1 each plain) onto the concrete board

Load Test
- Speaker mode: White noise (EIA filter) for 96 hours @ 0.5W input power.
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Measuring Method (Speaker Mode)

Standard Test Condition
Temperature 15 ~ 35°C
Relative humidity 45% ~ 85%
Atmospheric pressure 860mbar to 1060mbar

Standard Test Fixture
Input Power 0.1W (0.89V)
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)

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**SP DYNAMIC SPEAKER UNIT**
Acoustic Product Specification

**Product Number: SP-1605**

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**Dimensions**
Tolerance: ±0.5 (unit: mm)

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**No.** | **Part Name** | **Material** | **Quantity**
---|---|---|---
1 | UL1571 AWG32# Wire Red/Black | 2
2 | PCB FR-4 | 1
3 | Frame PBT | 1
4 | Magnet Nd Fe B-N38 | 1
5 | Plate SPCC | 1
6 | Voice Coil Copper | 1
7 | Membrane PEN | 1
8 | Cap SUS 304 | 1
9 | Gasket Polyester fiber (black cloth) | 1
10 | Screen Black cloth | 1

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