Dynamic Speaker Electroacoustic Characteristics

Sound Pressure Level
90±3dB SPL @ 0.6, 0.8, 1.0, 1.2, 1.5 and 2.0KHz in average (0dB SPL=20μPa)
Measuring Condition: 0.1W (Sine wave) 10cm measured with baffler shown in Fig.1

AC Impedance
8±15%Ω (@ 2 KHz 1V) without baffler

Frequency Response Curve
As shown in Figure 2

Response Frequency
550 ± 20%Hz @ 1V. (Without Baffler)

Input Power (Nominal and Maximum)
Rated Noise Power: 1.0W
Short Term Max Power: 1.5W must be normal at a white noise (1W, F0 ~ 20KHz) for one minute

Operation Test
Must be free audible noise (buzzes and rattles)
300 ~ 5KHz frequency range, input level up to 2.83Vrms

Distortion
Less than 5% @1KHz , 0.1M , 0.1W frequency range, input level up to 0.1W

General Specifications

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

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

Dimension
Ø 36 x 5.0mm WIRE 65mm UL1571/AWG28# +
Connector equ. to JST-SHR-02V-S-B (2P=1.0mm)

IP Level
No rating
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 1 hour @1.0W input power
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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No. | Part Name | Material | Quantity
--- | --- | --- | ---
1 | PCB | FR-4 | 1
2 | Frame | SPCC | 1
3 | Magnet | φ12.5*1.5-N38Nd Fe B | 1
4 | Plate | φ12.7*0.8SPCC | 1
5 | Voice Coil | 13.3-2.4-7.4Ω | 1
6 | Diaphragm | Black PET | 1
7 | Gasket | Black paper | 1
8 | Silk Screen | Black cloth | 1
9 | Wire | UL1571/AWG28# | 2
10 | Connector | equ. to JST-SHR-02V-S-B (2P=1.0mm) | 1

Dimensions
Tolerance: ±0.5 (unit: mm)
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