

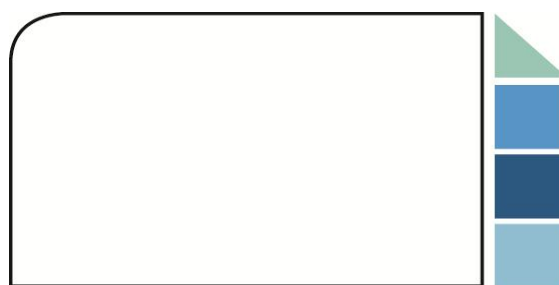
SPECIFICATION

Micro Dynamic Speaker

RoHS Compliance & Halogen Free

Product : **SPEAKER**
GETTOP P/N : SC400065WA01
Customer Code :
Version : **P/0**

Designed by	Checked by	DQA	Approved by	Released date
Wangji	Lihaiming			2024.12.30



CUSTOMER APPROVAL

ISO/TS 16949 : 2009
ISO 9001 : 2008
ISO 14001: 2004+Cor1 : 2009
BS OHSAS 18001 : 2007
QC080000 :2005



Revision History

Date	Version	Description	Controller
2024-12-30	P0	Initial Release	Wangjie

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1. Scope

Speaker

2. Product Type

Product number: SC400065WA01

Product description: Speaker

Test Condition: +20℃±2, 45%~85% RH, 86~106Kpa (unless specified differently)

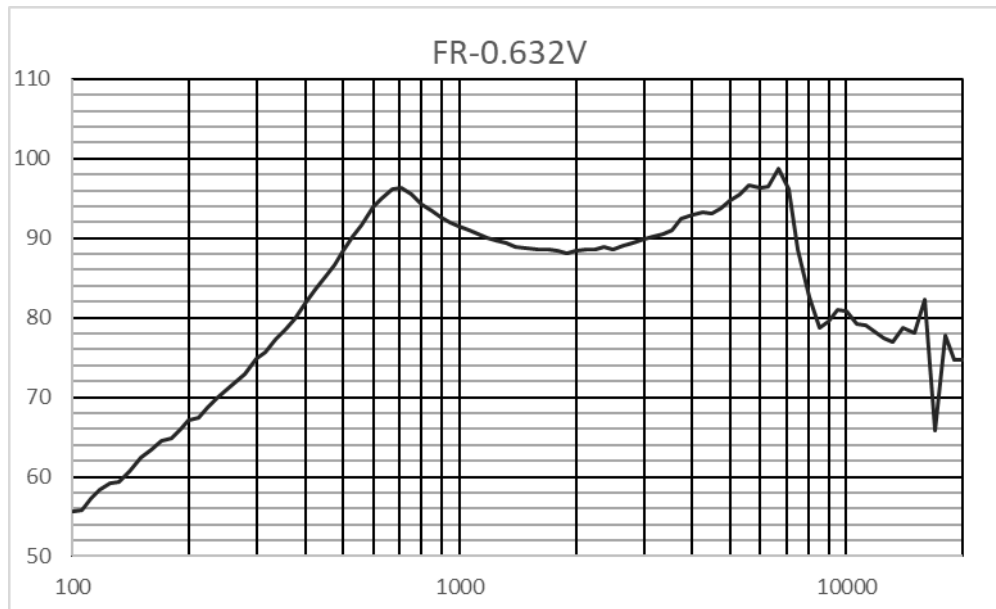
No.	Parameter	Technical Specifications	Conditions	Unit
3.1	Sound Pressure Level	92±3	0.632Vrms (0.1W) /10cm/on baffle @1KHz	dB
3.2	Rated Power	2	/	W
3.3	Max Power	2.2	/	W
3.4	DC Impedance	3.6±10%		
3.5	AC Impedance	4±15%	/	Ω
3.6	Resonance Frequency (Fo)	650± 20%	/	Hz
3.7	Typical Frequency Response	See Fig 4-1		/
3.8	Distortion	Max 10%	@1.0KHz/0.632Vrms/10cm/ on baffle	
3.9	Buzz, Rattle, etc.	Should not be audible at 2.83V sine Wave between Fo to10KHz		
3.10	Polarity	When positive voltage is applied to the terminal marked (+), diaphragm should move to the front.		/

Fig. 3-1 Acoustic parameters

4. Typical Frequency Response , Total Harmonic Distortion

4.1 Typical Frequency Response

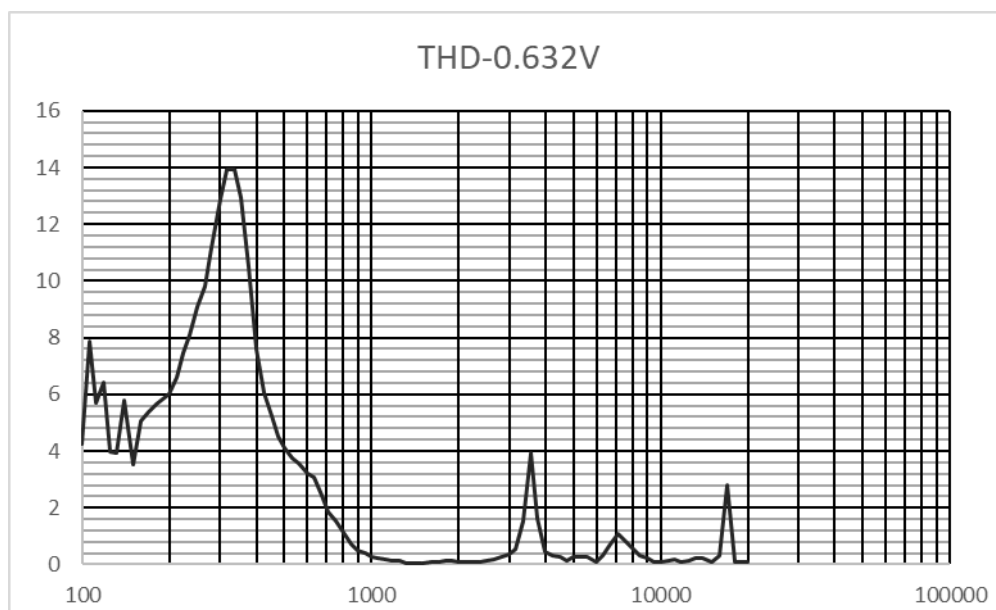
Test signal: Sine wave F0~20kHz、1/12 Oct、0.632Vrms 0. 1W



See Fig 4-1

4.2 Total Harmonic Distortion

Test signal: Sine wave F0~20kHz、1/12 Oct、0.632Vrms 0. 1W



See Fig 4-2

5. Measurement System Setup

Test signal: Sine wave, Sweep,

Frequency Range: F0-20kHz

Step: 1/12 octave

Test Distance: $d=10\text{cm}$

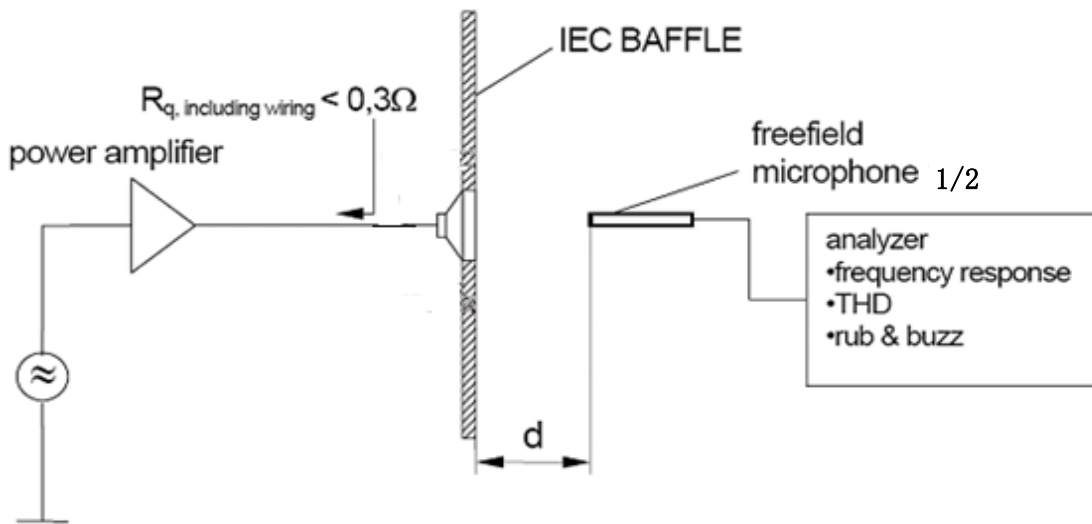


Fig. 5-1 Measurement System Setup

5.1 Test environment

Environmental temperature: $5^{\circ}\text{C} \sim 35^{\circ}\text{C}$,

Recommended value: $20^{\circ}\text{C} \pm 2^{\circ}$

Relative humidity: $60\% \sim 70\%$

5.2 Test Fixtures

The shape and outer diameter dimensions of the test fixtures shall be executed according to the customer's unified requirements;

The acoustic output hole of the test fixture shall be placed in the center, and the part of the fixture and the device's acoustic output hole shall be sealed with foam.

6. Mechanical layout and Dimensions

6.1 Dimensions

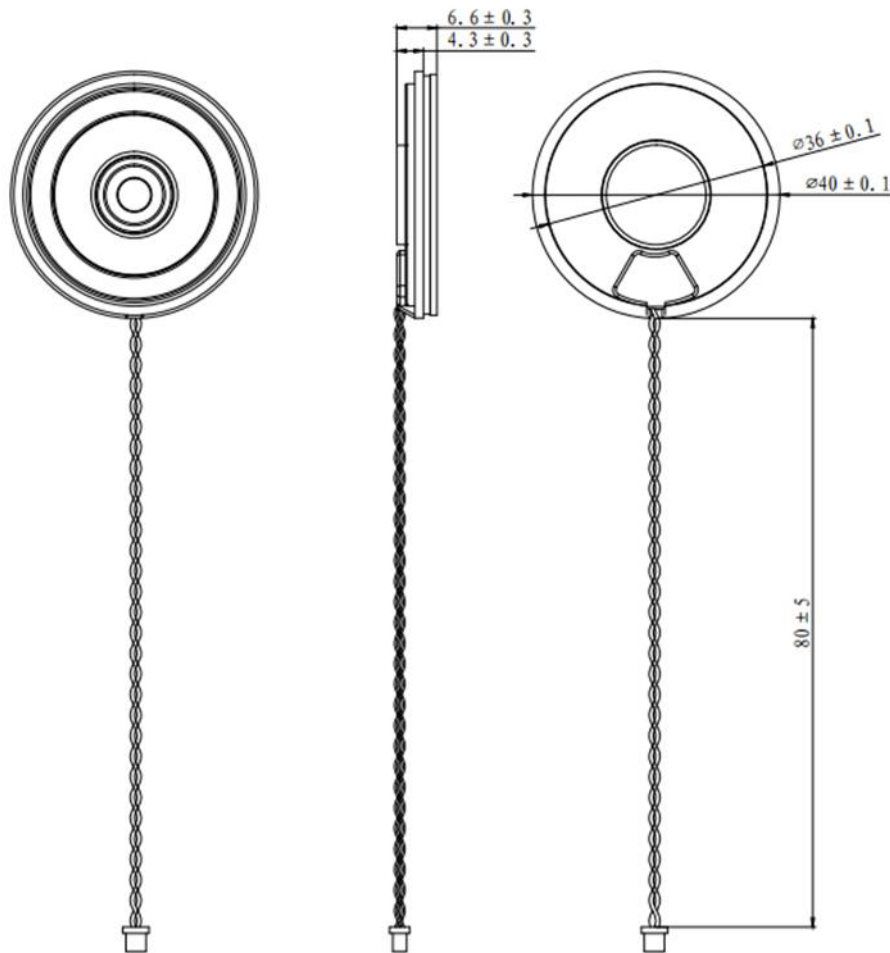


Fig. 6-1

Notes:

1. Unit: mm;
2. The 2D specification is only for measuring the incoming material dimensions; the appearance and auxiliary materials shall be based on the sealed sample;
3. Undesignated tolerance: ± 0.3 mm.

6.2 BOM

No.	Part Name	Material	Quantity	Remarks
1	Bracket	SPCC	1	/
2	Diaphragm	PEN	1	/
3	Voice Coil	Copper Wire	1	/
4	Magnet Steel	Galvanized	1	/
5	Pole Piece	SPCC	1	/
6	Cable	PVC	1	/
7	PCB	FR-4	1	/
8	Mesh Cloth	Mesh + Adhesive	1	/
9	Spacer Ring	Plastic	1	/

7. General Reliability

7.1	Maximum Power Impact	After the test, check after 3 hours of room temperature recovery. Apply maximum power pink noise signal, 60 seconds on, 120 seconds off, 10 cycles	All performance indicators meet specification requirements	10 pcs
7.2	Drop Test	Fix the product in a fixture and drop it from a height of 0.75 m onto a wooden floor, a total of 10 drops	No abnormal noise, distortion, or silence after 2 hours at room temperature; no loose or detached internal components, no unusual noise when shaken	10 pcs

7.3	High-Temperature Storage	Place test samples in testing equipment at $70^{\circ}\text{C} \pm 2^{\circ}\text{C}$ for 96 hours. After removal, recover at room temperature for 6 hours before testing	All performance indicators meet specification requirements	10 pcs
7.4	Low-Temperature Storage	Place test samples in testing equipment at $-30^{\circ}\text{C} \pm 2^{\circ}\text{C}$ for 96 hours. After removal, recover at room temperature for 6 hours before testing	All performance indicators meet specification requirements	10 pcs
7.5	Humidity Storage	Place test samples in testing equipment at 93%-95% RH humidity and $40^{\circ}\text{C} \pm 2^{\circ}\text{C}$ for 96 hours. After removal, recover at room temperature for 6 hours before testing	All performance indicators meet specification requirements	10 pcs
7.6	High-Temperature Operation	Test under power/operation using standard pink noise signal at rated power voltage, at $65^{\circ}\text{C} \pm 2^{\circ}\text{C}$ for 96 hours. Check after 6 hours of room temperature recovery	All performance indicators meet specification requirements	10 pcs
7.7	Low-Temperature Operation	Test under power/operation using standard pink noise signal at rated power voltage, at $-30^{\circ}\text{C} \pm 2^{\circ}\text{C}$ for 96 hours. Check after 3 hours of room temperature recovery	All performance indicators meet specification requirements	10 pcs
7.8	Temperature Cycling	Place products in a temperature chamber: hold at $70^{\circ}\text{C} \pm 2^{\circ}\text{C}$ for 2 hours, then decrease temperature at $1^{\circ}\text{C}/\text{min}$ to $20^{\circ}\text{C} \pm 2^{\circ}\text{C}$ and hold for 1 hour, then decrease at $1^{\circ}\text{C}/\text{min}$ to	All performance indicators meet specification requirements	10 pcs

		-30°C ± 2°C and hold for 2 hours (1 cycle). Repeat for 6 cycles. Test after 6 hours at room temperature		
7.9	Cable Tensile Test	Apply 3 N force horizontally and 2 N force vertically to dual cables for 30 seconds each direction	All performance indicators meet specification requirements	10 pcs
7.10	Salt Spray Test	Salt solution: 5% ± 1% NaCl, pH 6.5-7.2, at 35°C ± 2°C for 72 hours	No oxidation or other defects; no rust or coating peeling on product pads (no listening test required)	10 pcs
7.11	Waterproof Test	Submerge in 1 m of water for 30 minutes	All performance indicators meet specification requirements; diaphragm can rebound	10 pcs

8. Packing

TBD

Environmental Conditions

Storage Condition: -30°C~+65°C

Operation Condition: -20°C~+60°C

Arbitration Condition: 25°C±1°C, R.H. 63%~67%, Air pressure: 86~106KPa