

SPECIFICATION

Micro Dynamic Speaker

RoHS Compliance & Halogen Free

Product : SPK BOX

GETTOP P/N : MF011100W020

Customer Code : /

Version : P/0

Designed by	Checked by	Confirmed by	Approved by	Released date
Elvis	Kevin	Karl	Ethan	2025.03.08



CUSTOMER APPROVAL

IATF 16949 : 2016

ISO 9001 : 2015

ISO 14001: 2015

ISO 45001 : 2018

QC080000 :2017



Revision History

Date	Version	Description	Controller
2025-03-08	P/0	Initial Release	Elvis

Contents

1. Scope	3
2. Product type	3
3. Electro-Acoustic Specifications	3
4. Typical curve	4
5. Test method	6
6. Structural dimension	7

1. Scope

Speaker BOX

2. Product type

Product number: MF011100W020

Product Description: Speaker BOX

3. Electro-Acoustic Specifications

Test Condition: 25±2°C, 25%~75% RH, 86~106kPa

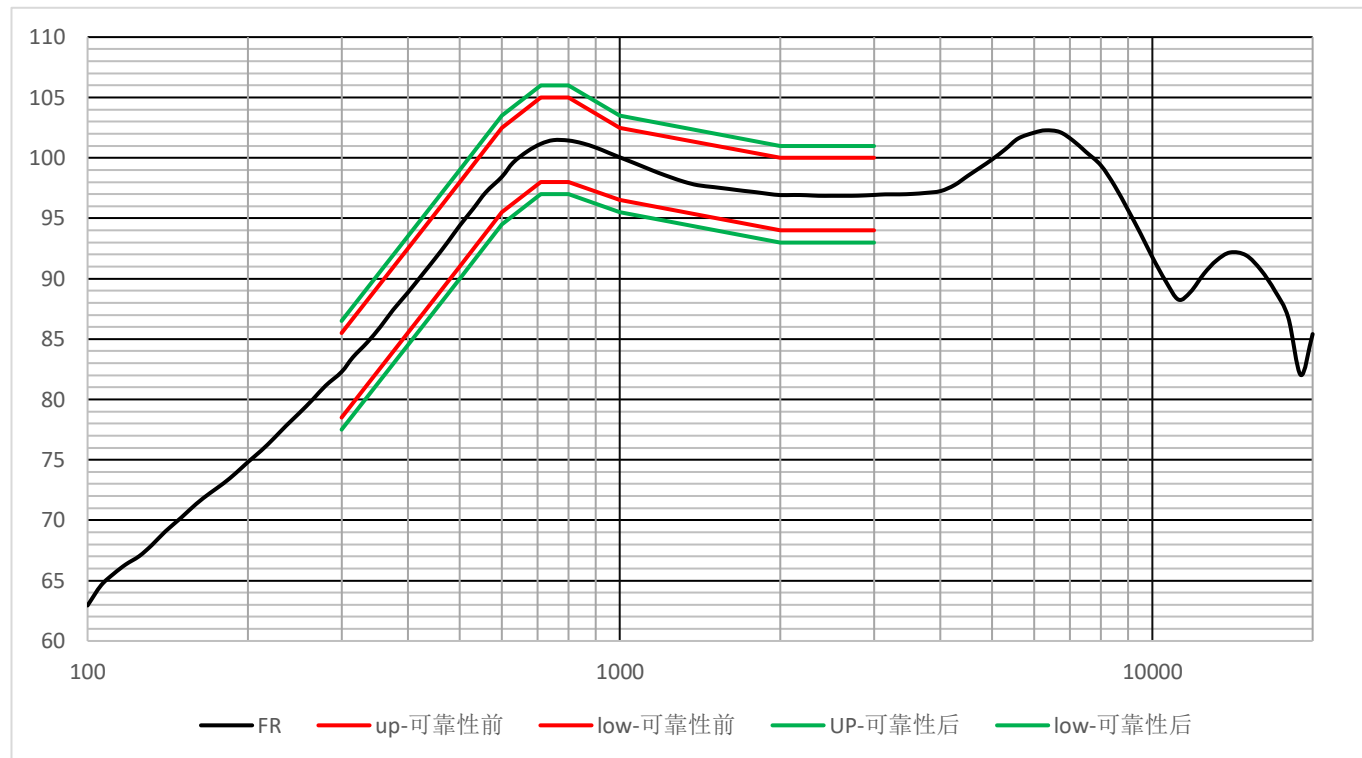
NO.	Parameter	Technical Specifications	Conditions	Unit
3.1	Sound Pressure Level	94.5±3.5dB@500Hz 100±3dB@1KHz	2.83Vrms/10cm/on baffle	dB
3.2	Maximum Continuous noise Power	1.5		W
3.3	Maximum Short Term Power	2		W
3.4	DC Resistance	3.8±0.8		Ω
3.5	Rated Impedance	4	2.83Vrms/2kHz/10cm/on baffle	Ω
3.6	Resonance Frequency	670±100Hz	2.83Vrms/10cm/on baffle	Hz
3.7	Typical Frequency	See Fig 4-1	2.83Vrms/10cm/on baffle	
3.8	Total Harmonic Distortion	See Fig 4-2	2.83Vrms/10cm/on baffle	
3.9	Listening condition	No noise	2.83Vrms, 100 - 2kHz Sine Wave, 2 cycles, single - sweep for 1 s, 10 - 15cm away from the human ear	
3.10	Polarity	When a DC source's "+"polarity is attached to speaker's "+"polarity, "-"polarity is attached speaker's "-"polarity, the membrane will move forward.		
3.11	Waterproof rating	IPX6 (diaphragm surface waterproof)		

Table 3-1 Electro-Acoustic Specifications

4. Typical curve

4.1 Typical Frequency Response

Test condition: sine wave, 100Hz~20KHz、1/12 Oct、2.83Vrms

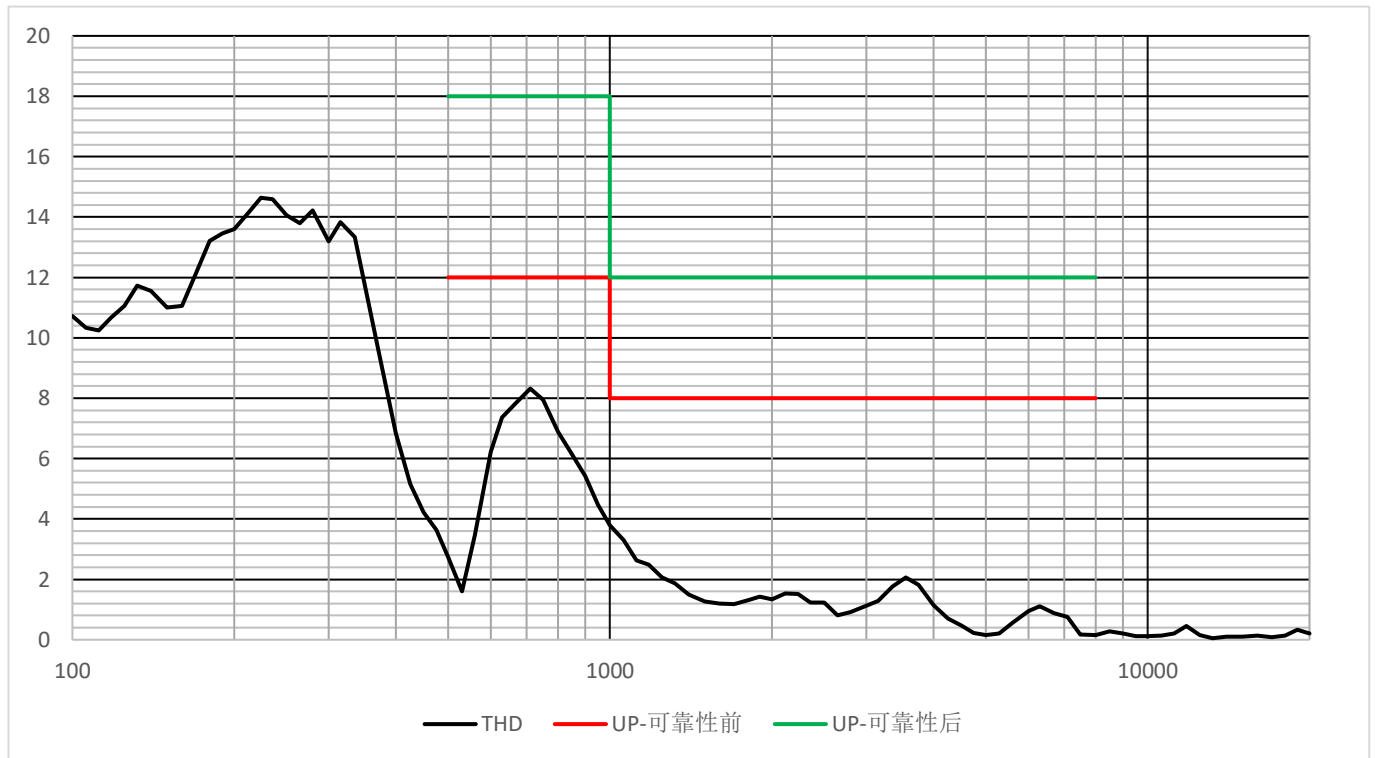


Frequency	300	500	750	900	1000	1700	6000	7100	8000
Lower-Before reliability	75.5	87	97	100.5	101	98.5	99	98	97
Lower-After reliability	74.5	86	96	99.5	100	97.5	98	97	96
Frequency	300	500	750	900	1000	1700	6000	7100	8000
Upper- Before reliability	86.5	97	107	109.5	110	106	109	108	107
Upper- After reliability	87.5	98	108	110.5	111	107	110	109	108

Figure 4-1 Frequency Response and Frequency Response Limit Template

4.2 Total Harmonic Distortion

Test condition: sine wave, 100Hz~20KHz、1/12 Oct、2.83Vrms 2-5 harmonic



	500	1000	1000	8000
Lower-Before reliability	12	12	8	8
Lower-After reliability	18	18	12	12

Figure 4-2: Total Harmonic Distortion and THD Limit Template

5. Test method

5.1 Test condition

Test signal: Sine wave, Sweep

Frequency Range: 100Hz~20KHz

Test Step: 1/12 Octave

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

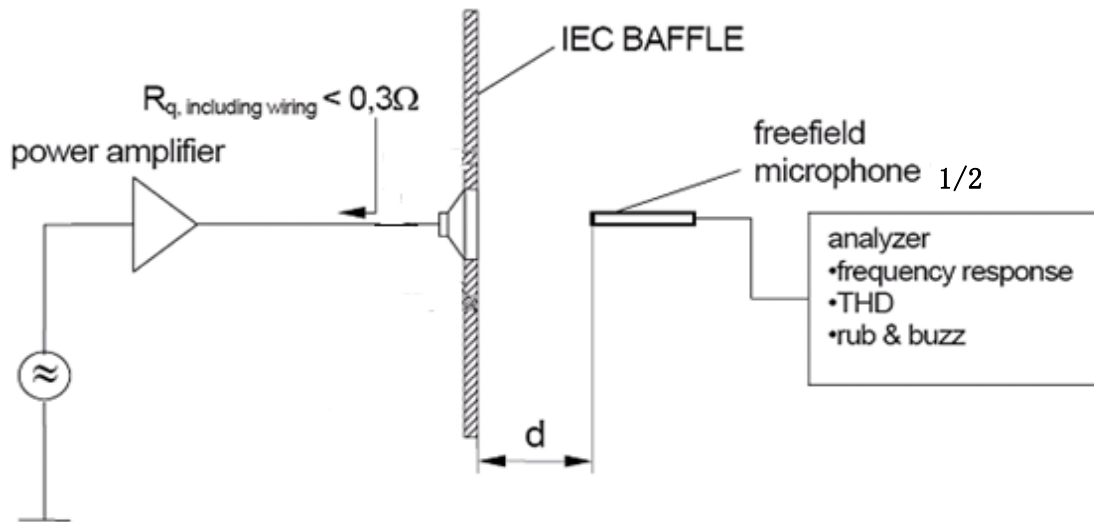


Figure 5-1 Test condition

5.2 Test environment

Environment temperature: $15^\circ\text{C} \sim 35^\circ\text{C}$, Arbitration Condition: $23^\circ\text{C} \pm 1^\circ\text{C}$

Relative humidity: $25\% \sim 75\%$

Air pressure: $86\text{kPa} \sim 106\text{kPa}$

5.3 Test fixture

The shape and dimension of test fixture shall be in accordance with unified requirements of the customer

The sound hole of the test fixture is located in the center, and the sound hole between the fixture and the device is sealed with foam.

6. Structural dimension

6.1 2D Drawing

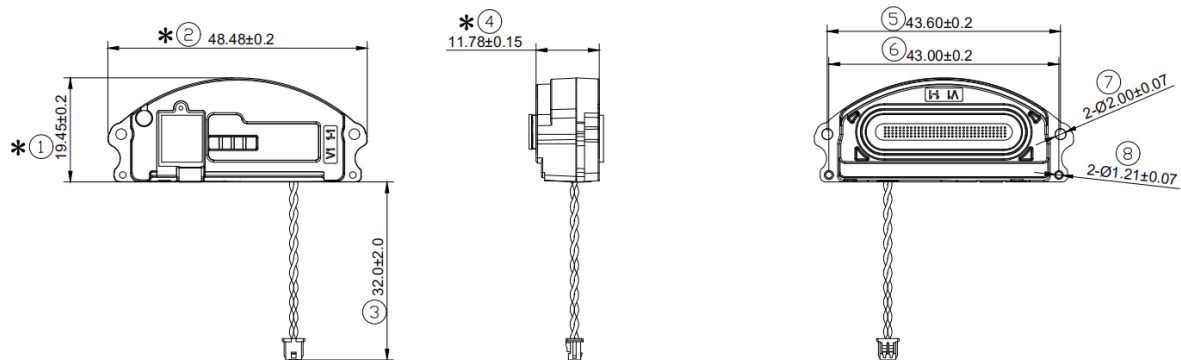


Figure 6-1: 2D Drawing

Remark:

1. In the drawing, the mark "*" denotes critical dimensions, and "***" denotes CPK dimensions, with $CPK \geq 1.33$. Unit: mm;

2. The 2D specification is only used for dimension measurement of incoming materials; the external shape and auxiliary materials shall be subject to the sealed sample;

3. The gate position refers to the above drawing; the external shape shall be subject to the sealed sample.