



**Dynamic loudspeaker  
With Three magnet  
& waterproof  
18×13×2.5 mm**

**CR1813L025UN8-2**

**Revision**

<b>Date</b>	<b>Version</b>	<b>Status</b>	<b>Changes</b>	<b>Approver</b>
2018/11/19	V0.1	Draft	First release	AX
2018/11/23	V0.2	Draft	Add waterproof level、 change THD & Frequency curve	AX
2019/01/17	V0.3	Draft	Add print code	AX
2019/02/19	V0.4	Draft	Add polarity and 0.7W/0.1m curves	AX
2019/2/22	V0.5	Draft	Update the frequency curves	AX

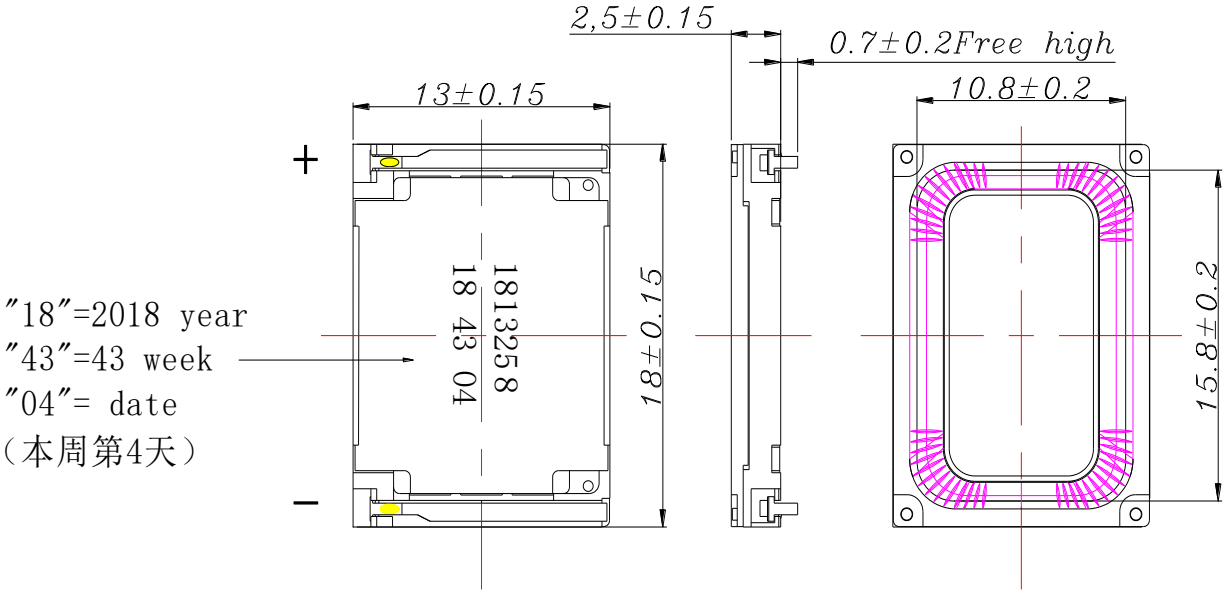
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Parameter	Conditions/Description	Values	Units
Rated Input Power	in 1cc closed box	0.7	W
Max Input Power	in 1cc closed box	1.0	W
Rated Impedance	at 1.5K Hz, 1V input	8±15%	Ω
Sound Pressure Level	0.7W/0.1M at 1.0K Hz, in 1cc closed box	93±3	dB
Resonant Frequency (Fo)	in free air	500±20%	Hz
	in 1.0cc closed box	800±20%	Hz
Frequency Range		Fo~20K	Hz
Distortion	at 1K Hz, input 0.1W, in 1cc box	< 5%	-
Magnet	NdFeB		
Buzz, Rattle, etc.	must be normal at sine wave between Fo ~ 20 kHz, in 1CC BOX	2.37	V
Polarity	cone will move forward with positive dc current to " + " terminal		
Weight		1.5	g
Operating		-20~+60	°C
Storage Temperature		-30~+70	°C
Waterproof Rating		IPX6	

Notes: All specifications measured at 5~35°C, humidity at 45~85%, under 86~106 kPa pressure, unless otherwise noted.

**MECHANICAL DRAWING**

Units: mm  
Tolerance: ±0.15mm



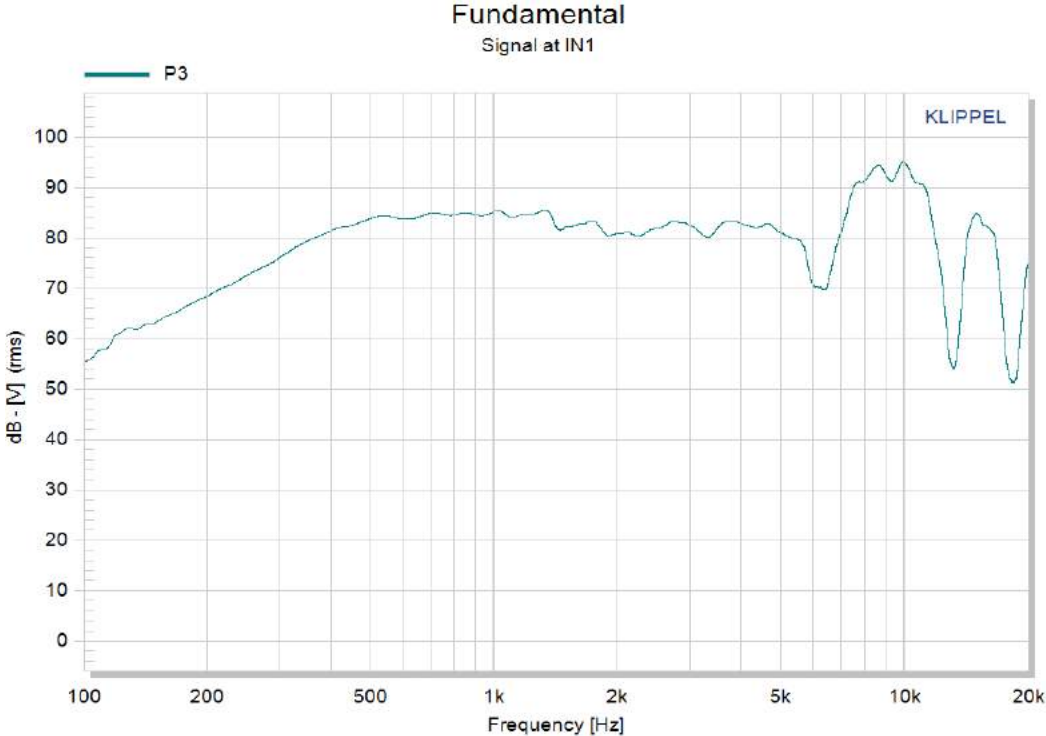
**CONSTRUCTION DETAIL**

8	弹片 SPRING TERMINAL	SUS	2	
7	前盖 FRONT CAP	PPA	1	
6	音圈 VOICE COIL	COPPER WIRE	1	
5	膜片 DIAPHRAGM	PEEK	1	
4	U 铁 U YOKE	SPCE	1	
3	极片 POLE PIECE	SPCC	1	
2	磁钢 MAGNET	N42	3	
1	主架 FRAME	PPA	1	
<b>编号 No.</b>	<b>零件名称 PART NAME</b>	<b>材料 MATERIAL</b>	<b>数量 Q'TY</b>	<b>备注 REMARK</b>

# RESPONSE CURVES

## Frequency Response Curve

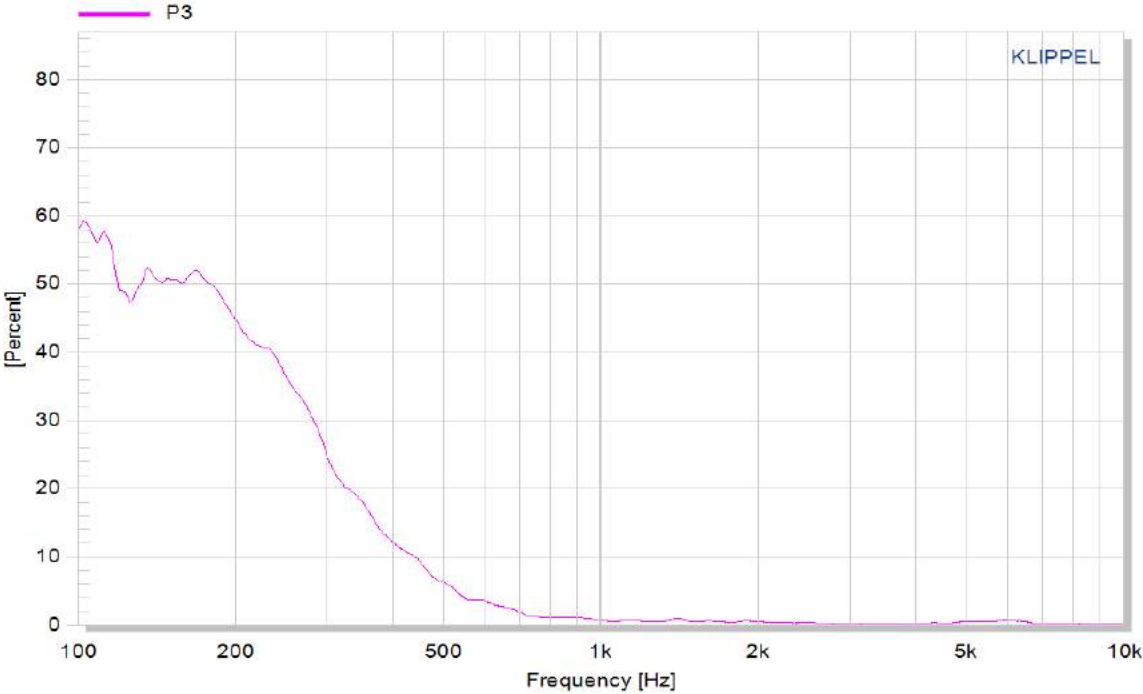
Test condition: 0.1W/0.1M, in Free air



## THD

Harmonic distortion (relative)

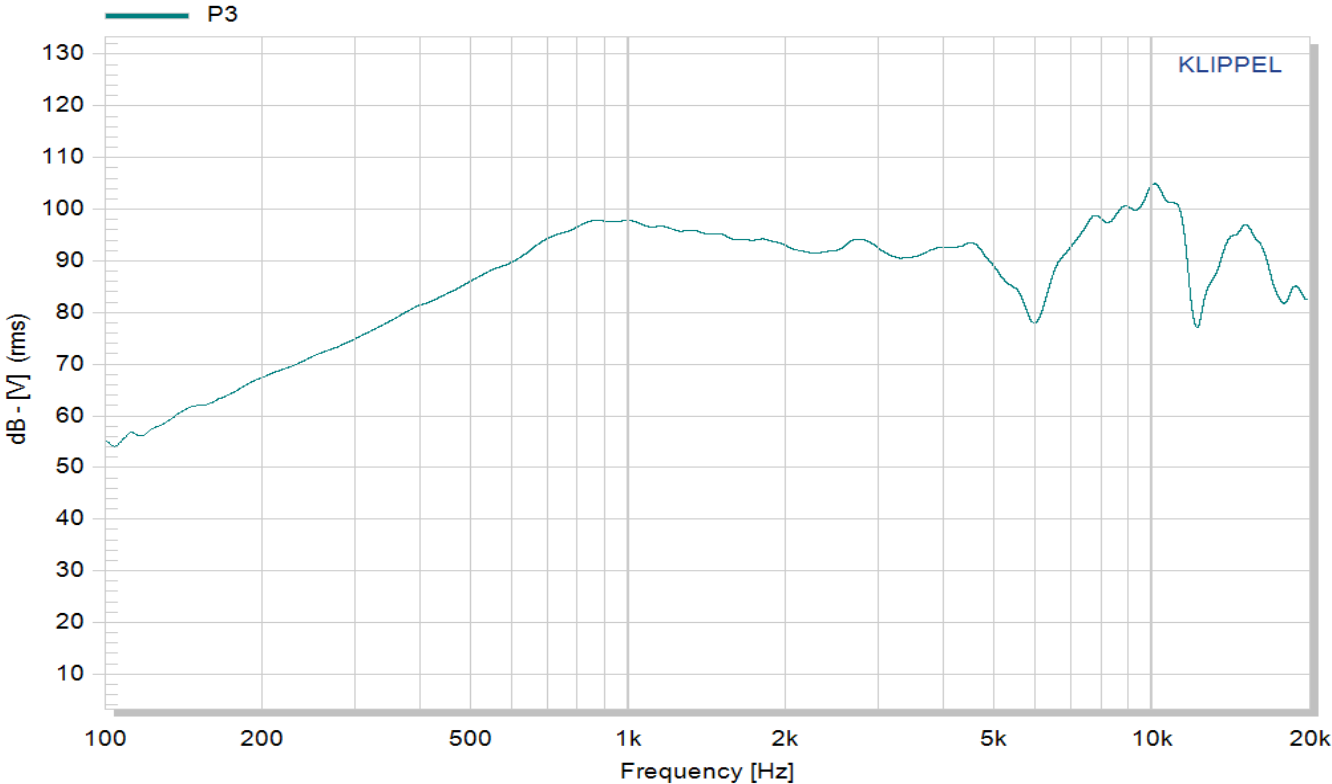
Signal at IN1



Test condition: 0.7W/0.1M, in 1cc box

Fundamental

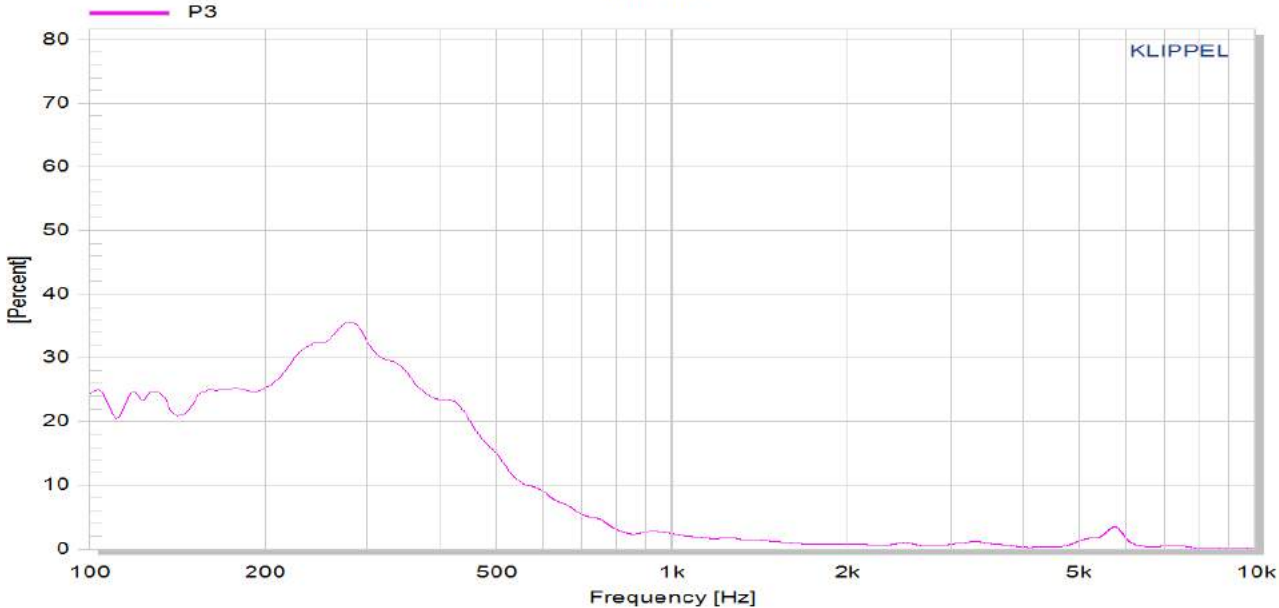
Signal at IN1



THD

Harmonic distortion (relative)

Signal at IN1



## RELIABILITY TEST

1	Reliability Test Performance	After any following test, parts should conform to original performance within $\pm 3$ dB tested with Rated Power, after 6 hours of recovery period.
2	High Temperature Test	96 hours at $+70^{\circ}\text{C}\pm 3^{\circ}\text{C}$
3	Low Temperature Test	96 hours at $-30^{\circ}\text{C}\pm 3^{\circ}\text{C}$
4	Humidity Test	96 hours at $+30^{\circ}\text{C}\pm 3^{\circ}\text{C}$ , 92-95% RH
5	Temp./Humidity Cycle	<p>The part shall be subjected 5 cycles. One cycle shall be 6 hours and consist of</p> <p style="text-align: center;">90 ~ 95 % RH</p> <p style="text-align: center;">65°C</p> <p style="text-align: center;">25°C</p> <p style="text-align: center;">0.5hr      6hrs      0.5hr      5hrs</p>
6	Vibration Test	<p>Frequency: 10~55~10Hz Oct/min      Amplitude: 1.5mm</p> <p>Duration: 2 hours each of 3 perpendicular directions</p>
7	Drop Test	Drop the speaker contained in normal box onto the surface of 40mm thick board 10 times from the height of 75cm
8	Operation Life Test	Must perform normal with program Pink-Noise source at Rated Power for 96 Hours
9	Termination Strength	Apply 3.0N(0.306kg) to each terminal in horizontal direction for 30 seconds; Apply 2.0N(0.204kg) to each terminal in vertical direction for 30 seconds;

# MEASURING METHOD

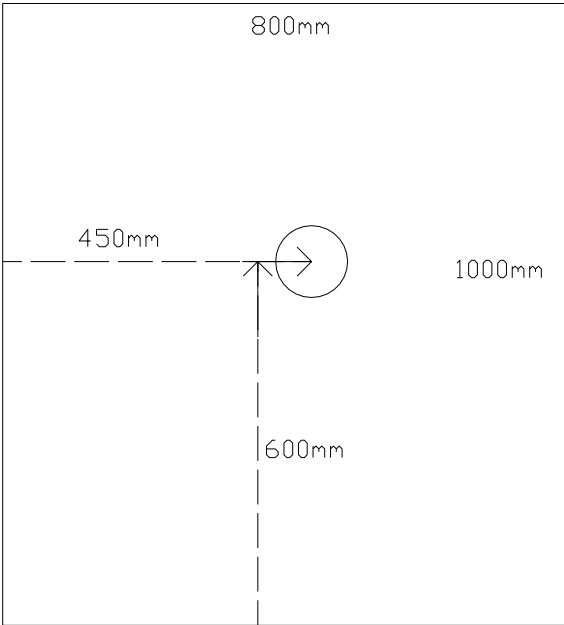


Fig. 1 Block Diagram for Measurement Method

## Standard test condition of speaker

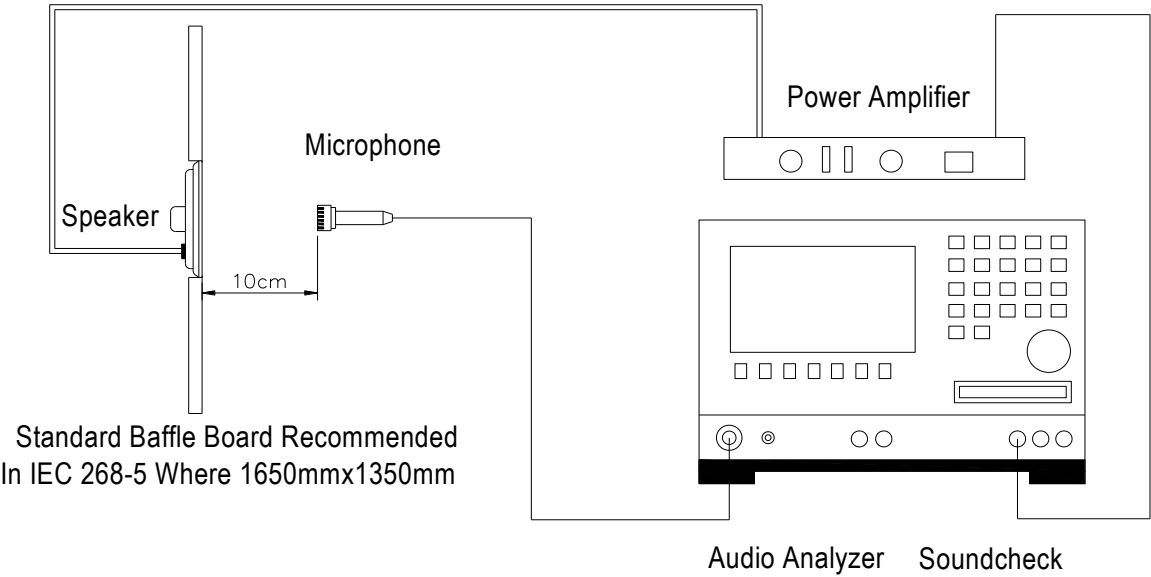


Fig. 2 Speaker Test Condition

# PACKAGING

units: mm

100pcs of speaker in each tray

20 trays in one carton

Total:2000 pcs / 1 carton

Gross Weight: 4.5 KGS

Net Weight: 3.0 KGS

