Dynamic Loudspeaker

Ø36×4.8 mm

CC36S048BN8

Revision

Date	Version	Status	Changes	Approver
2023/6/9	V0.1	Draft	First release	AX

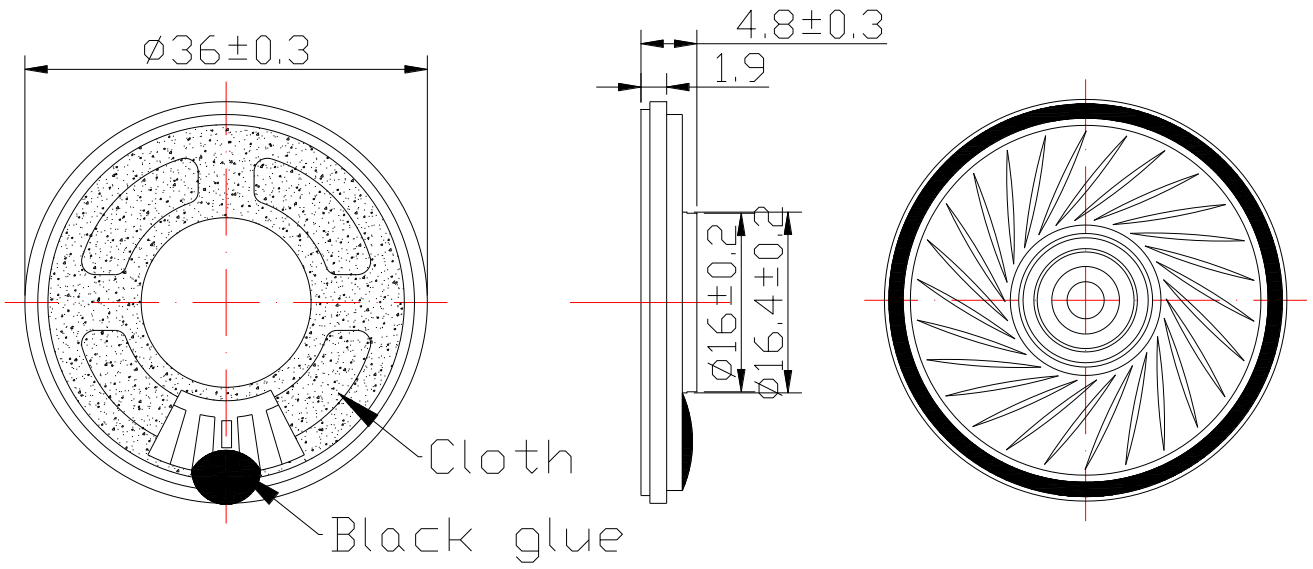
Parameter	Conditions/Description	Values	Units
Rated Input Power		1.0	W
Max Input Power		1.5	W
Rated Impedance	at 2.0 kHz	8±15%	Ω
Sound Pressure Level (S.P.L.)	at 0.8K 1.0K 1.2K 1.5KHz in 1.0W/0.1M average (0dB SPL=20μPa)	100±3	dB
Resonant Frequency (Fo)	at 1.0 V	570±20%	Hz
Frequency Range	Output S.P.L. -10dB	Fo~6K	Hz
Distortion	at 1K Hz, input 1.0W,	< 10%	-
Magnet	NdFeB	Φ12.5*1.5	mm
Buzz, Rattle, etc.	must be normal at sine wave between Fo ~ 5K Hz	2.83	V
Polarity	cone will move forward with positive dc current to"+" terminal		
Weight		8.8±5%	g
Operating Temperature		-40~+85	℃
Storage Temperature		-40~+85	℃
Waterproof		N/A	

Above Measuring condition under temperature : 15~35℃ R.H. 25 ~75%.86 kPa to 106 kPa (860 mbar to 1 060 mbar According to standard GB/T 9397—200X and IEC 60268-1

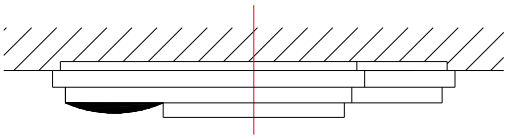
MECHANICAL DRAWING

Units: mm

Tolerance: ±0.5mm



over shoot MAX 1.0mm



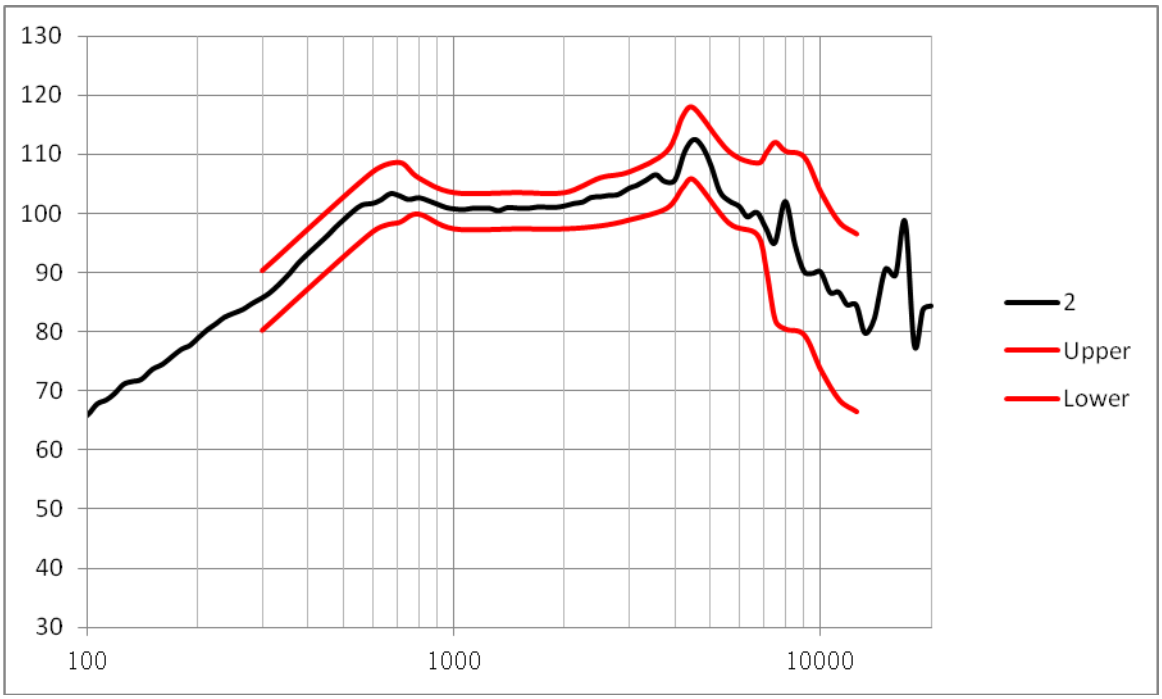
CONSTRUCTION DETAIL

NO.	PART NAME	Q'TY	MATERIAL	REMARK
1	Gasket	1	ABS	
2	Diaphragm	1	PEI	
3	VOICE COIL	1	KSV+Cu	
4	Plate	1	SPCC	
5	Magnet	1	NdFeB	
6	PCB Terminal	1	FR4	
7	Frame	1	SPCC	

RESPONSE CURVES

Frequency Response Curve

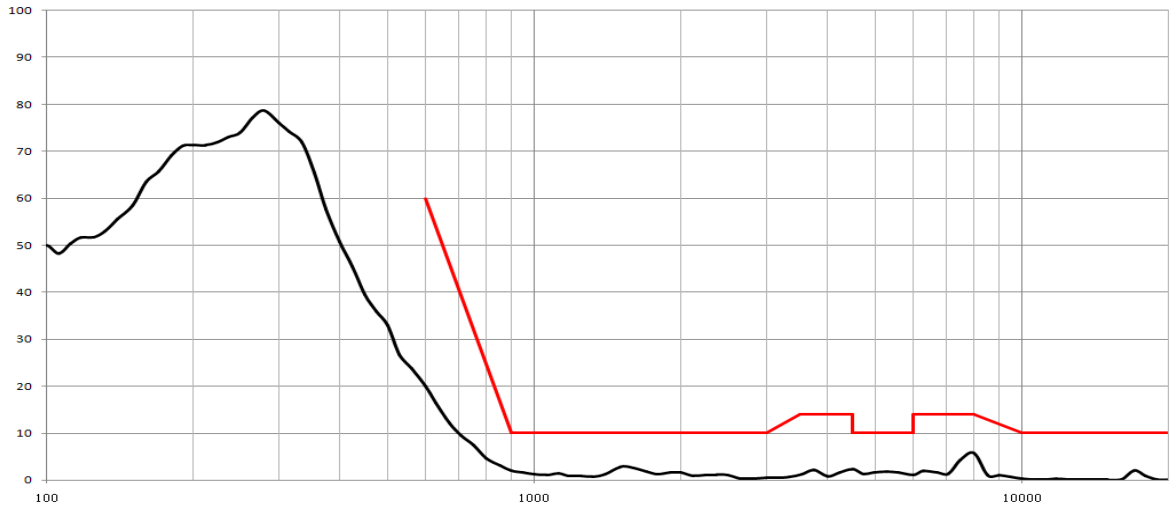
Test condition: 1.0W/0.1M,



Frequency(Hz)	300-600	800-2K	2.5K-4.0K	4.2K-7K	7.1K-12K
Upper limit	+5	+3	+4	+6	+15
Lower limit	-5	-3	-4	-6	-15

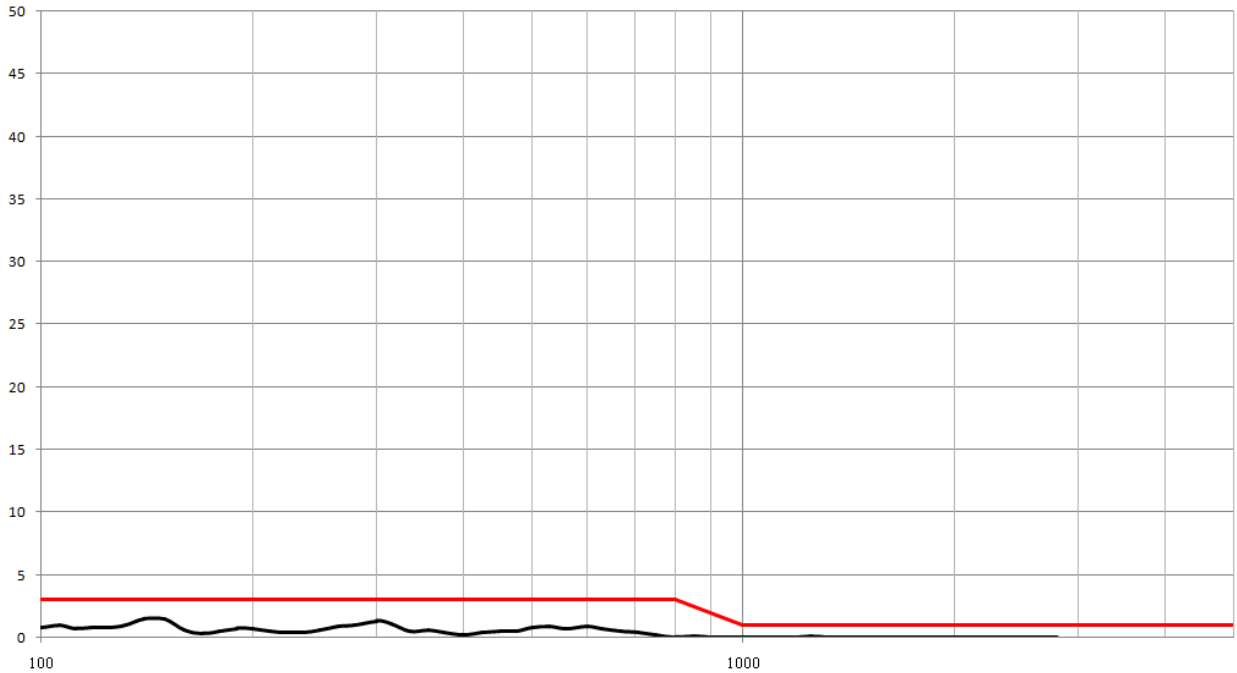
Total Harmonic Distortion Curve

Test condition: 1.0W/0.1M,



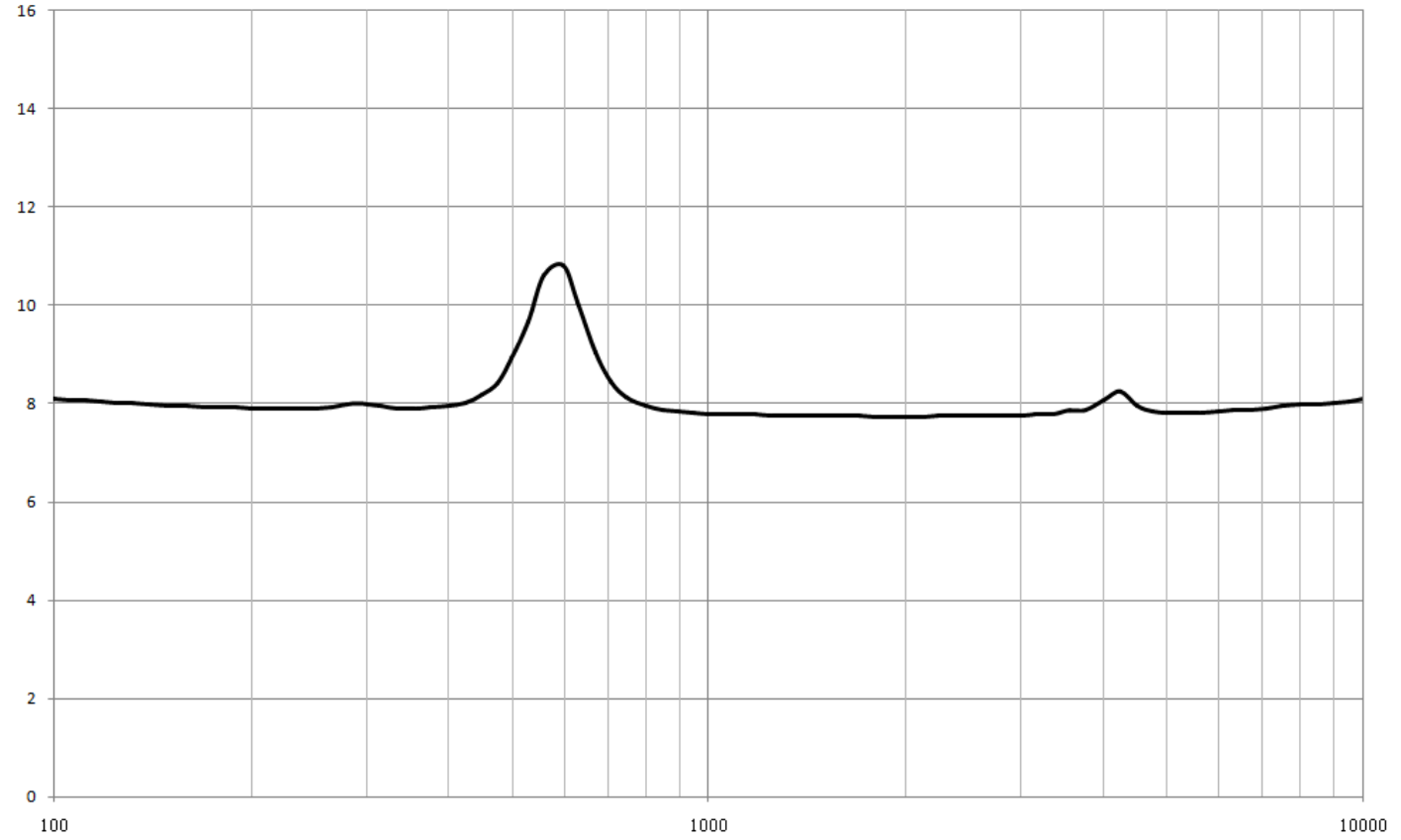
Frequency(Hz)	600	900-3K	3.5K-4.5k	4.5K-6K	6K-8K	10K-20K
limit(%)	60	10	14	10	14	10

Rub&Buzz



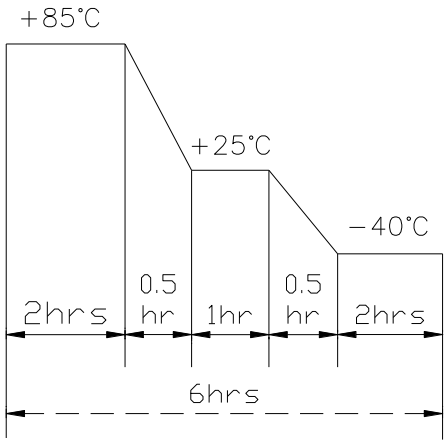
Frequency(Hz)	100-800	1K-5K
limit(%)	3	1

Impedance



F0(Hz)	570±20%（456-684 Hz）
Impedance （Ω）	8±15%（6.8-9.2Ω）

RELIABLITY TEST

1	Reliability Test Performance	After any following test, parts should conform to original performance within ±3 dB tested with Rated Power, after 6 hours of recovery period.
2	High Temperature Operation and Storage	+ 85 ± 2 °C Humidity Random for 96 Hours. (GB/T 9397—200X)
3	Low Temperature Operation and Storage	− 40 ± 2 °C Humidity Random for 96 Hours. (GB/T 9397—200X)
4	Humidity Test	+40℃±2℃ Relative Humidity(RH)90~95% 48 Hours
5	Temp Cycle	The part shall be subjected 4cycles. One cycle shall be 6 hours and consist of (GB5170.18-87) 
6	Vibration Test	Frequency 30 ± 15 Hz, Amplitude 1.5 mm for 3 Hours. (GB11606.8-89)
7	Drop Test	75 CM free falling on Concrete floor, 10 times. (GB2423. 8-81)
8	Load test	Must perform normal with program White-Noise source at Rated Power for 96 Hours(GB/T 9397—200X)
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;
10	Long-term rated power test	Input rated power pink noise to the speaker, low temperature (-20±2°) for 24hrs, then raising temperature to (40±2°) for 96hrs

11	Long-term temperature cycling test	Input rated power pink noise to the speaker Temperature range: -20°C~40°C Temperature change rate is 5~10°C/min, 15min at -20°C and 40°C, cycling 50 times.
12	Long-term high temperature and high humidity test	Input rated power pink noise to the speaker Temperature 40°C,humidity 95%RH for 96hrs.
13	Short-term maximum power test	Room temperature 25℃ Input 1sec Max power pink noise to the speaker, idle for 59sec, cycling 30 times.
14	Voice coil destructive test	Room temperature 25℃ Input Max power DC signal for 30sec. 5Pcs for normal connection(Power+→Speaker+, Power-→Speaker-) 5Pcs for inverse connection(Power+→Speaker-, Power-→Speaker+)
15	Voice coil destructive test Ⅱ	Room temperature 25℃ Input Max power sweep signal to the speaker. Sweep frequency range: 300Hz to 20kHz Cycle time: 2Sec for one cycle, cycling for 8 hrs.
16	Salt mist test	Salt mist concentration: 5% NaCl PH: 6.5~7.2 solution, which was continuously sprayed at 40 ° C for 48 hours.

MEASURING METHOD

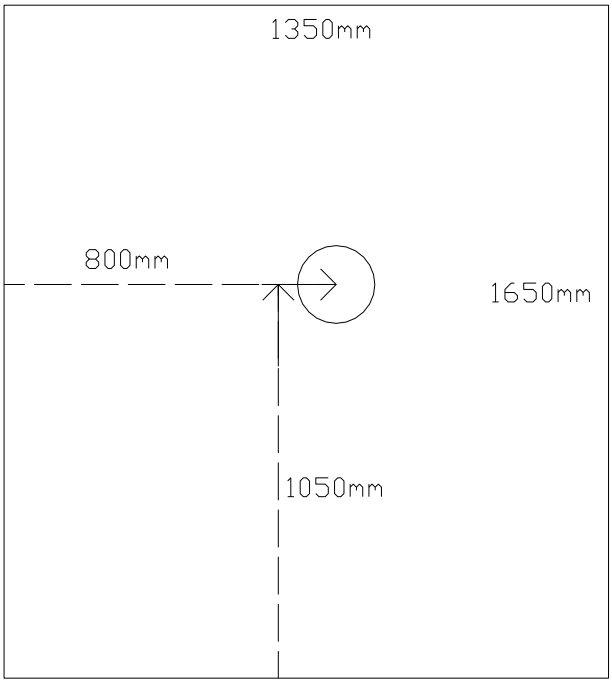
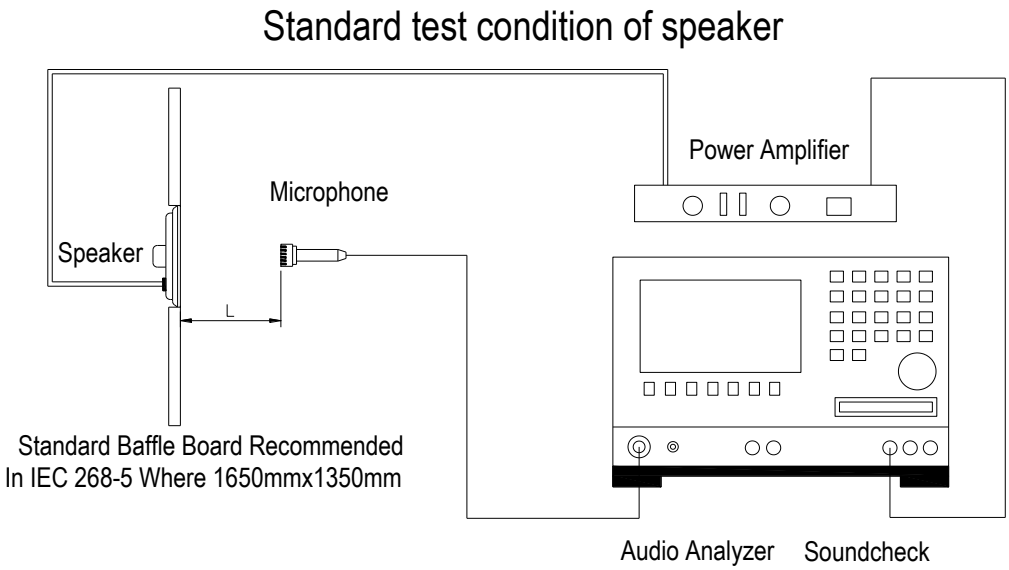


Fig. 1 Block Diagram for Measurement Method



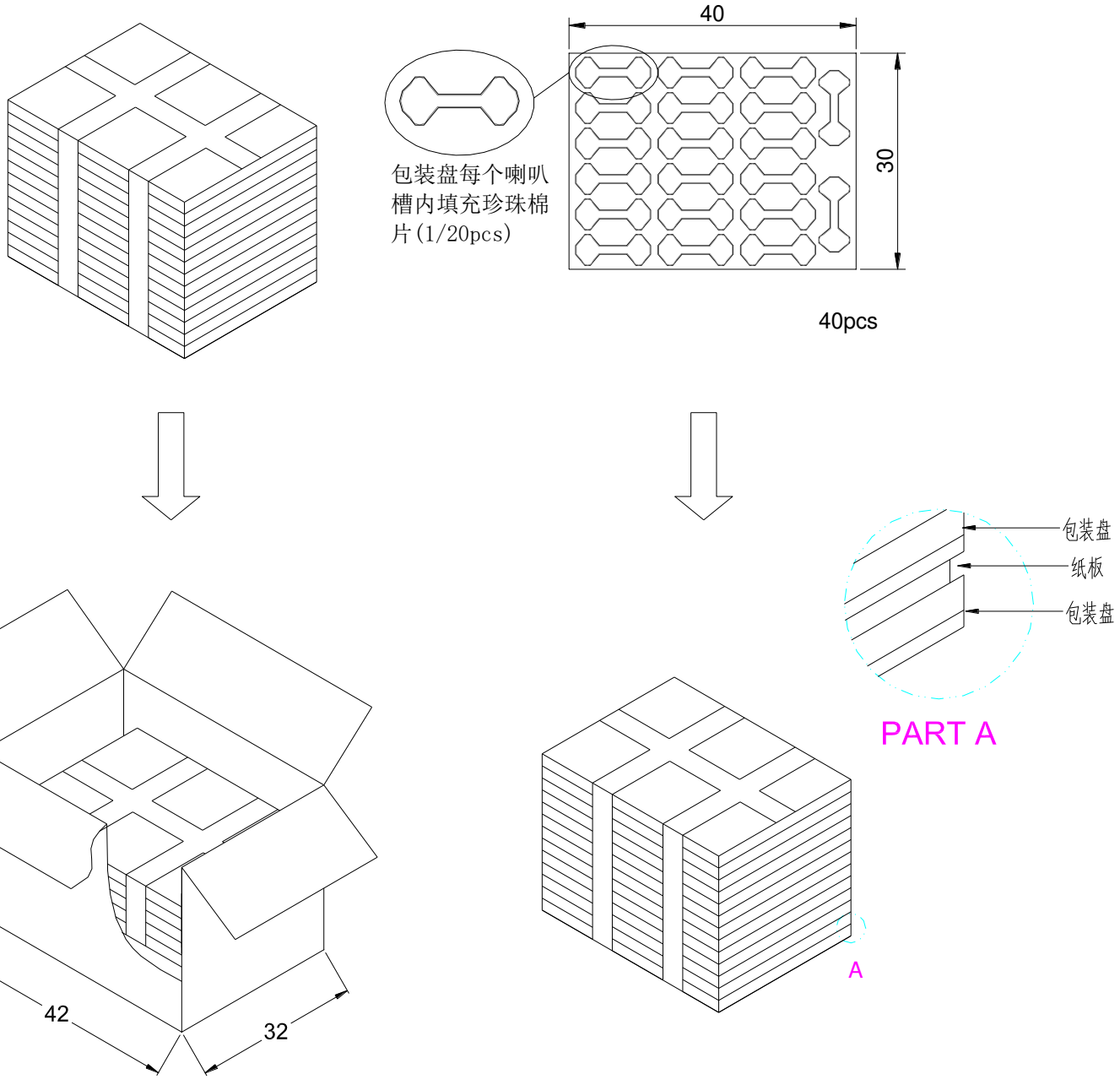
L=10cm

Fig. 2 Speaker Test Condition

PACKAGING

Storage conditions:
Speakers should be well packed.
The temperature should be as stable as possible and between -10° C and +40° C.
The relative humidity should be below 90%.
There should be no acid or other harmful gases in the surrounding air (GB/T 9397—200X)

Unit:cm



units: cm
Remark:
40pcs per tray

9trays for unit，2units per carton

Total:720 pcs per box
Size:42*32*35cm