




MESSRS. *Blume*

SPECIFICATION FOR APPROVAL

Product	DYNAMIC SPEAKER
Part No.	AKR-18130810-PM2
Customer Approval	
Customer Part No.	

Approved By	Checked By	Made By
		



Advanced Acoustic Technology Corporation



ISO 9001 Certified

ISO 14001 Certified

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RoHS

1. SPECIFICATION

AKR-18130810-PM2

ITEM		SPECIFICATIONS	
01	Type	Dynamic speaker	
02	Dimension	External diameter 18 x 13 mm	
03	Rated Input Power	1.0 W	
04	Max. Input Power	1.2 W for 1 minute	
05	Impedance	$8\Omega \pm 15\%$ at 2 KHz 1V	
06	Resonance Frequency (Fo)	1050 Hz \pm 20% at Fo, 1V	
07	Sound pressure level	101 dB(1.0W/0.1M) \pm 3 dB	at AVG 0.8, 1.0, 1.5, 2.0 KHz.
08	Frequency Range	Fo – 20 K Hz	
09	Total Harmonics Distortion	Max 10 % at 1 KHz, 1.0 W.	
10	Magnet	Rare earth permanent (NdFeB)	
11	Weight	3.5 g \pm 0.3 g	
12	Appearance	Should not exist any obstacle to be harmful to normal operation; damages, cracks, rusts and distortions, etc.	
13	Operation Test	Must be normal at program source 1.0 W	
14	Buzz, Rattle, etc.	Should not be audible at 2.83 V sine wave between Fo to 2KHz	
15	Polarity	When positive voltage is applied to the terminal marked (+), diaphragm should move to the front.	
16	Terminal Strength	Capable of withstand 1kg load for 15 seconds without resulting in any damage or rejection.	
17	Temperature	Operating temperature: -20°C to +70°C Storage temperature: -40°C to +85°C	

2. MEASURING METHOD

2-1 .Test Condition

STANDARD

Temperature : 15 ~ 35°C

Relative humidity: 45% ~ 85%,

Atmospheric pressure: 860mbar to 1060mbar.

JUDGEMENT

Temperature : 20±3°C

Relative humidity: 60% ~ 70%,

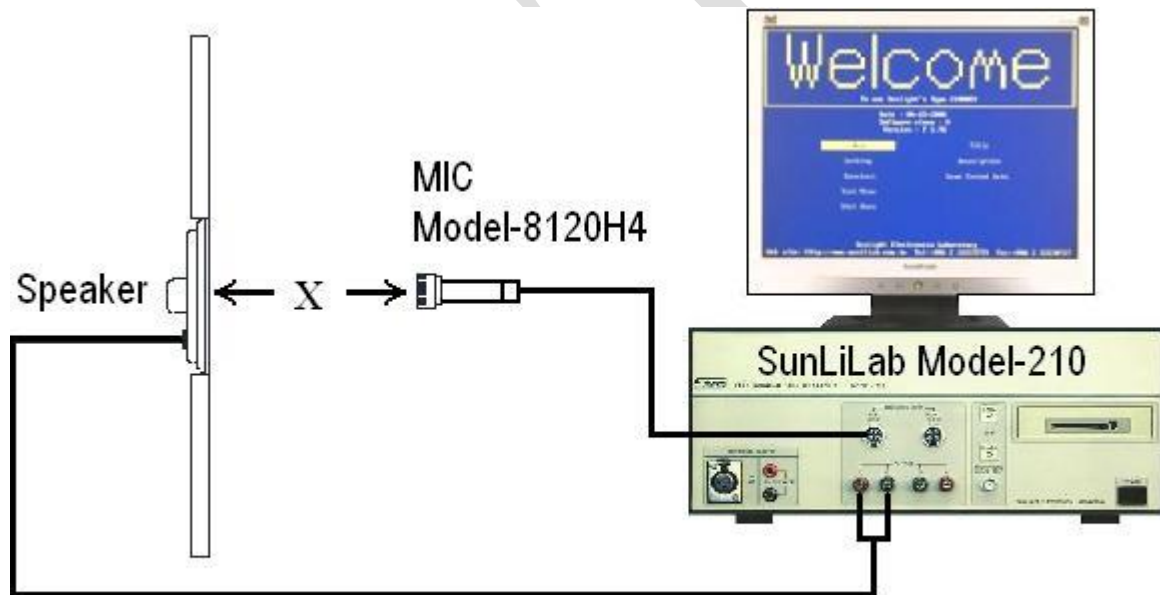
Atmospheric pressure: 860mbar to 1060mbar

2-2. Standard Test Fixture

1. Input Power: 1.0 W (2.83 V)

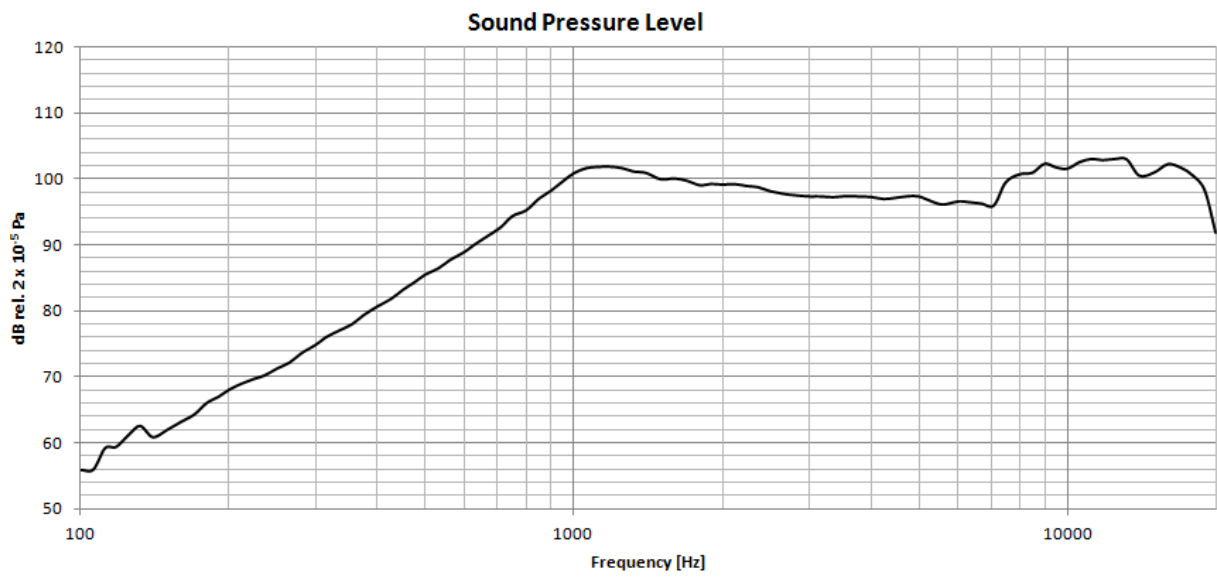
2. Mode: SPEAKER

3. Distance: X=10 cm

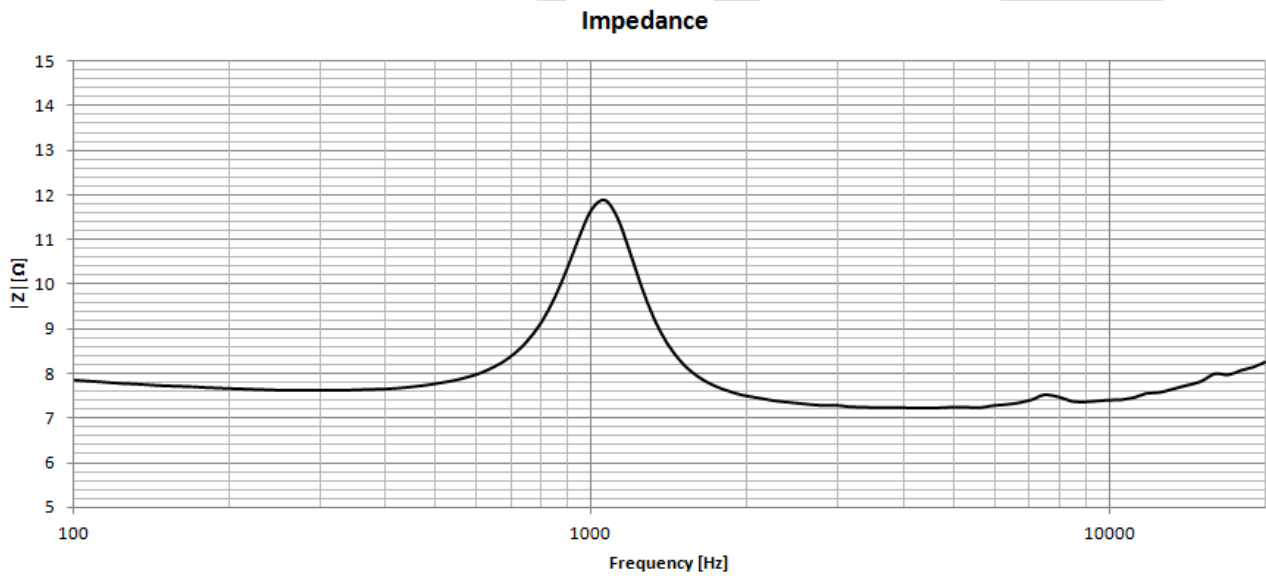


Standard Baffle Recommended
In IEC 268-5 Where (W) 1350mm x (H) 1650mm

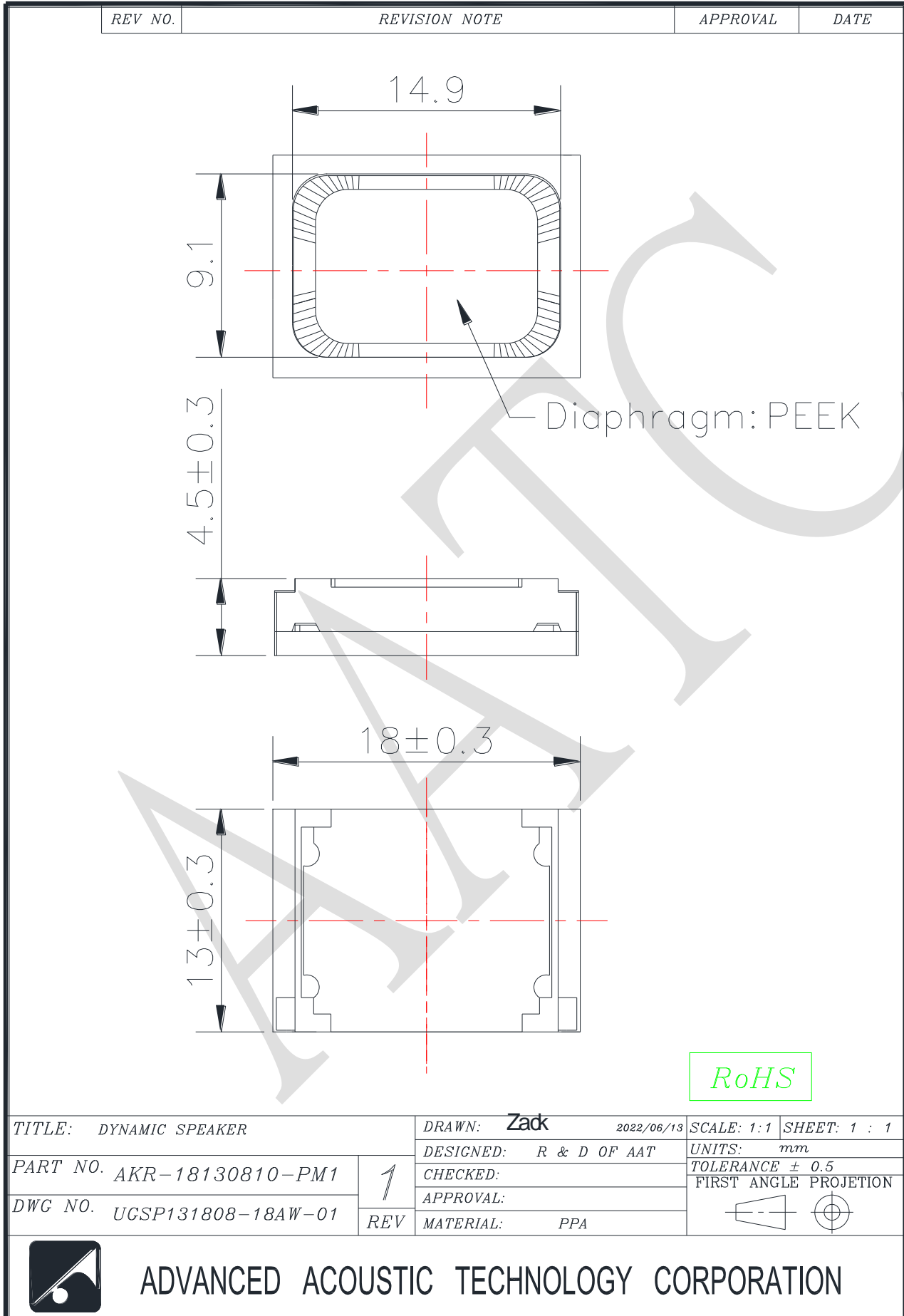
2-3. Frequency Response Curve



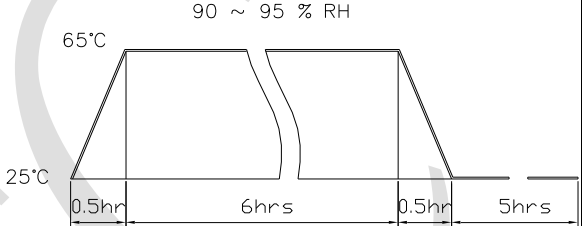
2-4. Impedance Curve



3. DIMENSIONS



4. RELIABILITY TESTS

Items.		Specifications
01	High temp. Test	Keep 96 hours at $+85^{\circ}\text{C} \pm 3^{\circ}\text{C}$ and leave 3 hours in normal temperature and then check
02	Low temp. Test	Keep 96 hours at $-40^{\circ}\text{C} \pm 3^{\circ}\text{C}$ and leave 3 hours in normal temperature and then check
03	Humidity test	Keep 96 hours at $+40^{\circ}\text{C} \pm 3^{\circ}\text{C}$ relative humidity 95% and leave 3 hours in normal temperature and then checked.
04	Temp./Humidity cycle	The part shall be subjected 5 cycles. One cycle shall be 12 hours. 
05	Thermal cycle test.	Low temperature: $-20^{\circ}\text{C} \pm 3^{\circ}\text{C}$, temperature: $+70^{\circ}\text{C} \pm 3^{\circ}\text{C}$, cycle: 1 hour/cycle each, and then keep 5 cycles in a room.
06	Vibration	10~55~10Hz sin-wave sweep 15min. 5G(constant) X, Y, Z 3 direction. 2 hours each, total 6 hours.
07	Free drop test	Free drop from 100cm height to the concrete floor X, Y, Z 6 direction. 1 time each, total 6 times.
08	Load test	Rated power white noise is applied for 96 hours
09	Max Power test	Max power 1 min. on - 2 min. off 10 cycles.
10	Terminal strength test	Capable of withstand 1kg load for 15 seconds without resulting in any damage or rejection.

Criterion :

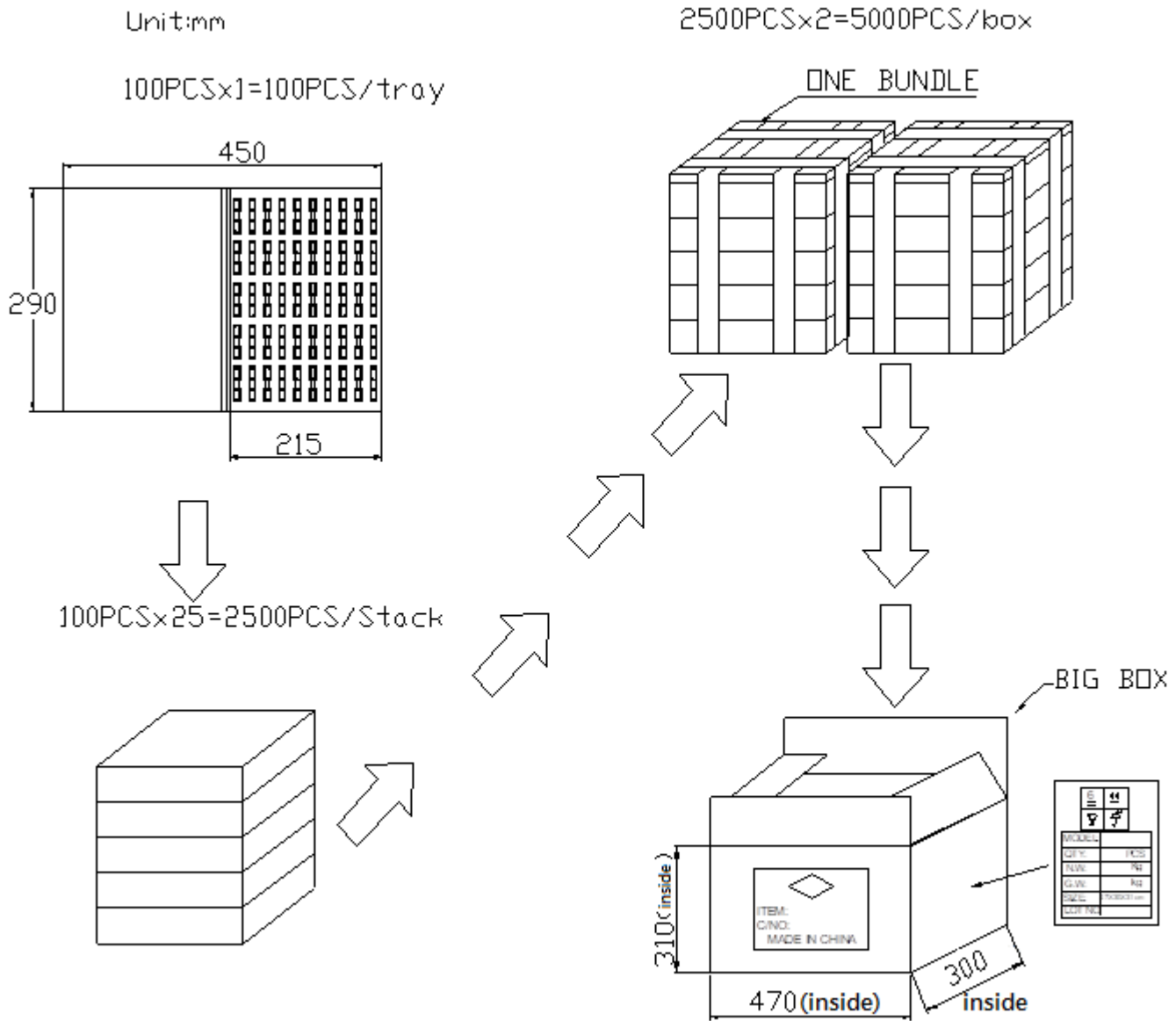
1. **After testing any of the above reliability test items, the change of S.P.L shall be within ± 3 dB.**
2. **AATC reserves the right to change product material without prior notice, guaranteeing the same specification. Materials are subject to change due to environmental regulations, sourcing, and process improvements.**
3. **If you need more information, please contact our technology department, thank you.**

SOLDERING CONDITION

Recommend using constant searing-iron in temperature range $360 \pm 5^{\circ}\text{C}$.

Soldering time 2 seconds.

5. PACKING



Unless otherwise specified, tolerance: ±10(unit:mm)