

1. SPECIFICATION



AKB-1508A-P

ITEM		SPECIFICATIONS	
01	Type	Dynamic Speaker	
02	Dimension	External diameter 15 mm	
03	Rated Input Power	0.3 W	
04	Max. Input Power	0.5 W for 1 minute	
05	Impedance	$8\Omega \pm 15\%$ at 1 KHz 1V	
06	Resonance Frequency (Fo)	2000 Hz \pm 20% at Fo, 1V	
07	Sound pressure level	92 dB(0.3W/0.1M) \pm 3 dB	at AVE 2.0, 2.5, 3.0, 4.0 KHz.
08	Frequency Range	Fo – 20 K Hz	
09	Total Harmonics Distortion	Max 10 % at 2 KHz, 0.1W.	
10	Magnet	Rare earth permanent (NdFeB) magnet Φ 6.95 x 1.0 mm	
11	Weight	1.6 g \pm 0.2 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 0.3W	
14	Buzz, Rattle, etc.	Should not be audible at 1.55V 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 +60°C Storage temperature: -30°C to +70°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%,

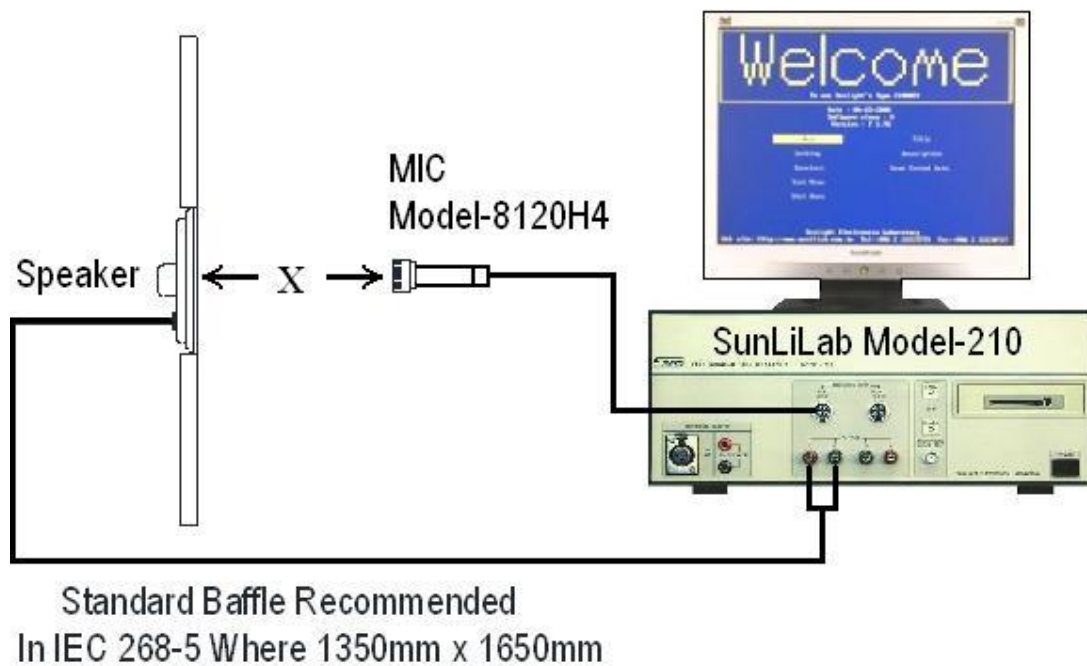
Atmospheric pressure: 860mbar to 1060mbar

2-2. Standard Test Fixture

1. Input Power: 0.3 W (1.55 V)

2. Mode: SPEAKER

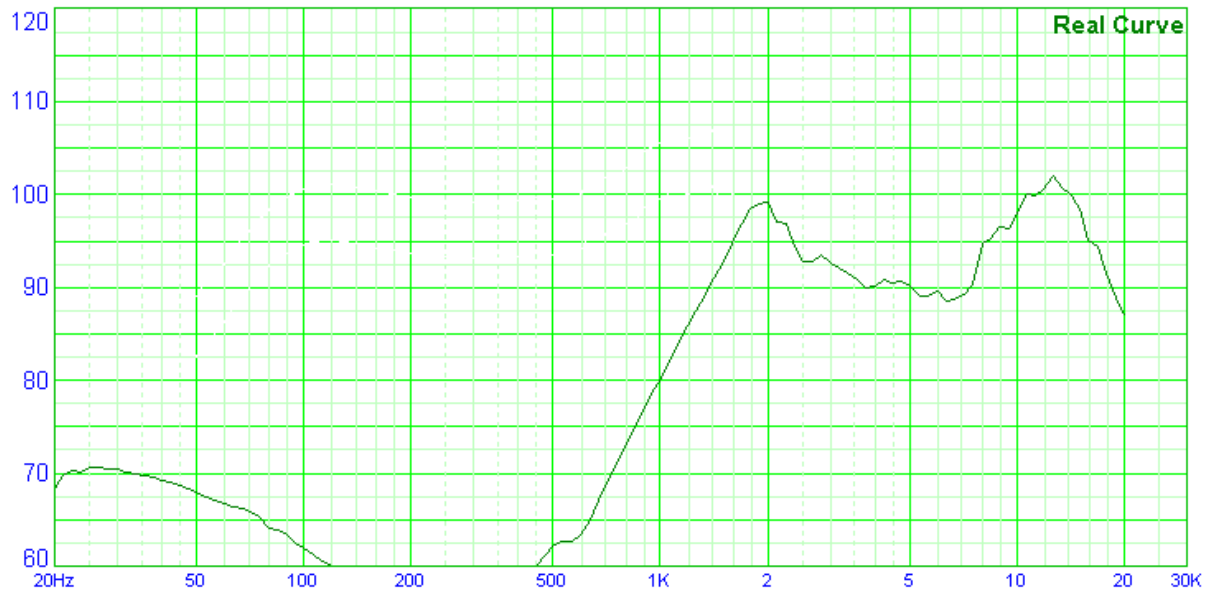
3. Distance: X=10 cm



2-3. Frequency Response Curve

Type 2100S [Test Menu] Frequency Response Curve Test (Left)
Firm:AATC Object:155 2100S F 2.40 03-29-2019 00:30:04
1000Hz Sens.= 80.3dB SPL Pass F.R.: Pass DCR: 7.62 Ω Pass
RLR = 24.8dB Pass Avg.= 93.4dB SPL Pass (2000Hz- 4000Hz) Step Size:1/12 Oct.

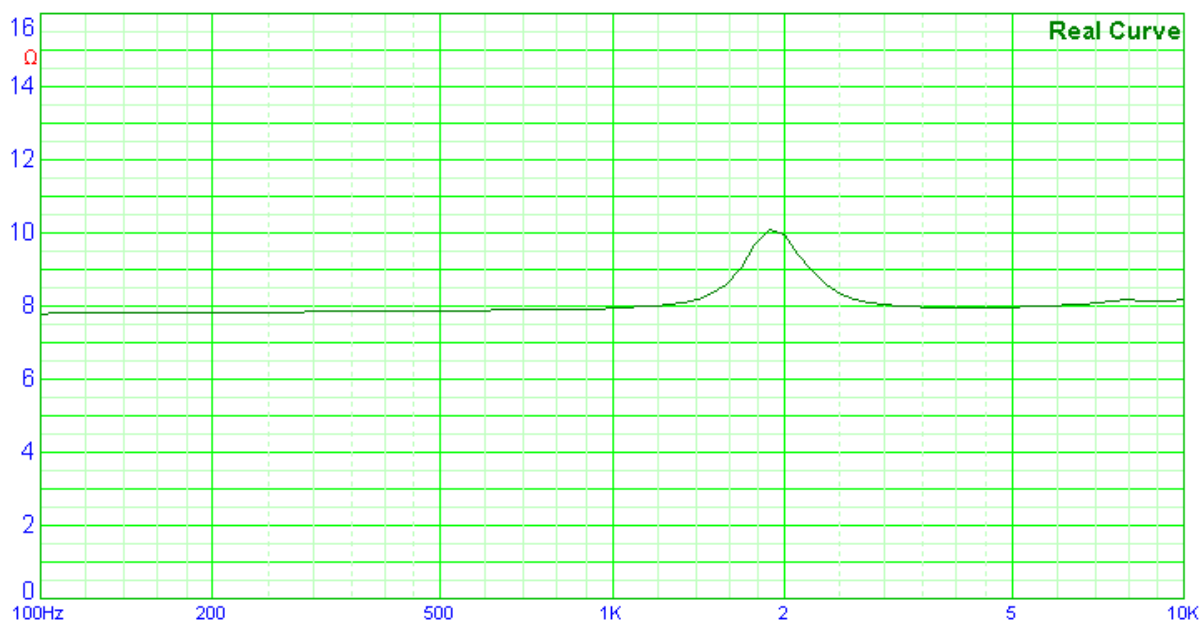
Frequency Response Test Att. @ +0dB
Voltage applied for F.R. =1550.0mV Start F. = 20Hz Test distance : .10M
F.R. check: None Stop F. =20000Hz



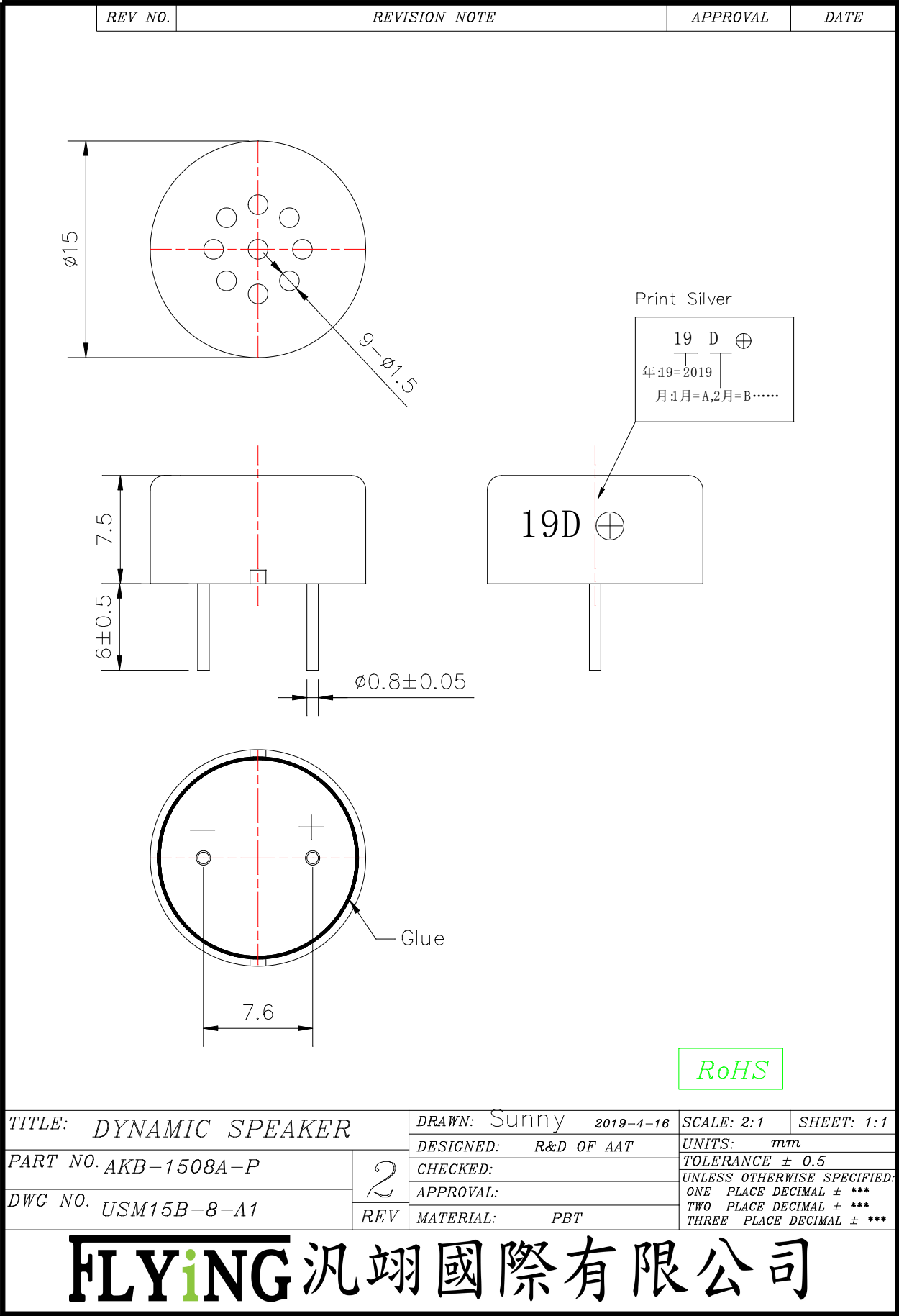
2-4. Impedance Curve

Type 2100S [Test Menu] Impedance Curve Test (Left)
Firm:AATC Object:155 2100S F 2.40 03-29-2019 00:21:41
Start Freq. = 100Hz Stop Freq. = 10000Hz Sweep Speed: 1/12 Oct.
ACV = 1000.0mV ACZ = 7.94 Ω @ 1000Hz. (Real)
Fo = 1947Hz; Qm = 4.39; Qe =11.23; Qt = 3.16; DCR = 7.58 Ω .

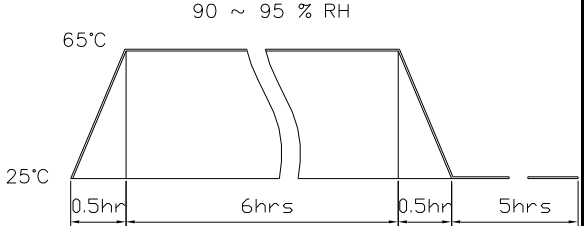
Impedance Curve Test



3. DIMENSIONS



4. RELIABILITY TESTS

Items.		Specifications
01	High temp. Test	Keep 96 hours at $+70^{\circ}\text{C} \pm 3^{\circ}\text{C}$ and leave 3 hours in normal temperature and then check
02	Low temp. Test	Keep 96 hours at $-30^{\circ}\text{C} \pm 3^{\circ}\text{C}$ 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	<p>The part shall be subjected 5 cycles. One cycle shall be 12 hours and consist of</p> 
05	Thermal cycle test.	Low temperature: $-30^{\circ}\text{C} \pm 3^{\circ}\text{C}$, 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.

在測試上述任何可靠性測試項目後，S.P.L 的變化應在 ± 3 dB 內。

2. FLYING 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.

材料可能由於環境法規，物料及製程工藝精進而發生變動，FLYING保證相同的規格，並有權保留更改產品材料的權利，恕不另行通知。

3. If you need more information, please contact our technology department, thank you.

如您需要更多信息，請聯繫我們的技術部門，謝謝。

SOLDERING CONDITION

Recommend using constant searing-iron in temperature range **360±5°C**.

Soldering time **2** seconds.