

MESSRS.

SPECIFICATION FOR APPROVAL

承 認 書

Product	DYNAMIC SPEAKER
Part No.	AS-2850M08-A1C
Customer Approval	
Customer Part No.	

Approved By	Checked By	Made By
 <p>工程部 BOB CEN SEP-11-2017</p>	 <p>工程部 ZACK KUO SEP-11-2017</p>	 <p>工程部 MOOSE CHEN SEP-11-2017</p>

A&B

A & B Components

<http://www.speaker-tw.com>

1. SPECIFICATION

ITEM		SPECIFICATIONS	
01	Type	Dynamic speaker	
02	Dimension	External diameter 28 mm	
03	Rated Input Power	0.5 W	
04	Max. Input Power	1.0W for 1 minute	
05	Impedance	$8\Omega \pm 15\%$ at 2KHz 1V	
06	Resonance Frequency (Fo)	600Hz \pm 20% at Fo, 1V	
07	Sound pressure level	$94\text{dB}(0.5\text{W}/0.1\text{M}) \pm 3 \text{ dB}$	at AVE 0.8, 1.0, 1.2, 1.6 KHz.
08	Frequency Range	Fo – 20 K Hz	
09	Total Harmonics Distortion	Max 5 % at 1 KHz, 0.1W/0.89V.	
10	Magnet	Rare earth permanent (Nd-Fe-B) magnet $\Phi 9 \times 1.5$ mm	
11	Weight	$6.2\text{g} \pm 2\text{g}$	
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 0.5W	
14	Buzz, Rattle, etc.	Should not be audible at 2.0V 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 $+60^{\circ}\text{C}$ Storage temperature: -30°C to $+70^{\circ}\text{C}$	

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: 0.5 W (2.0 V)

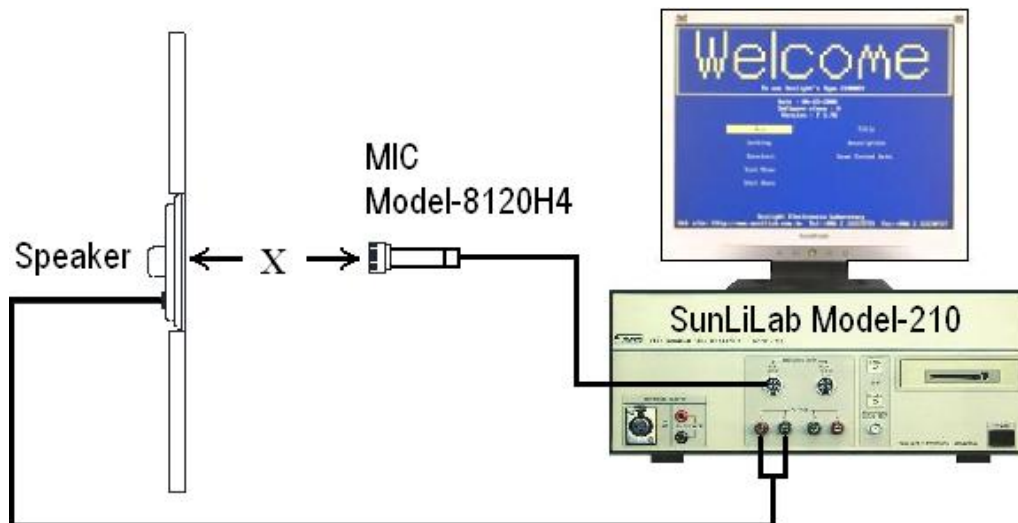
2. Zero Level : -dB

3. Mode: SPEAKER

4. Potentiometer Range: 50dB

5. Sweep Time: 0.5sec

6. Distance: X=10 cm

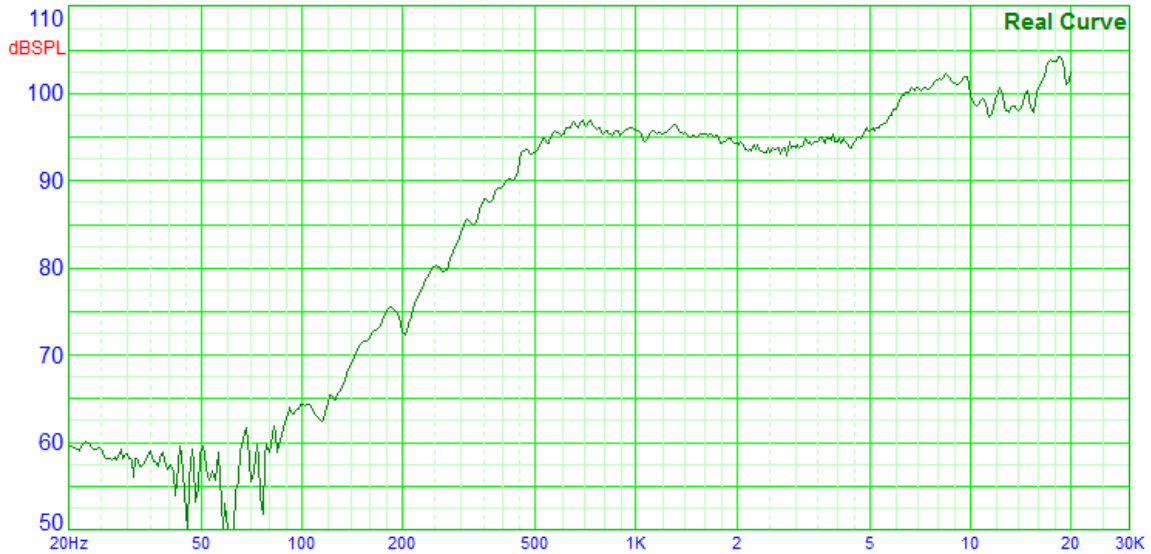


Standard Baffle Recommended
In IEC 268-5 Where 1350mm x 1650mm

2-3. Frequency Response Curve

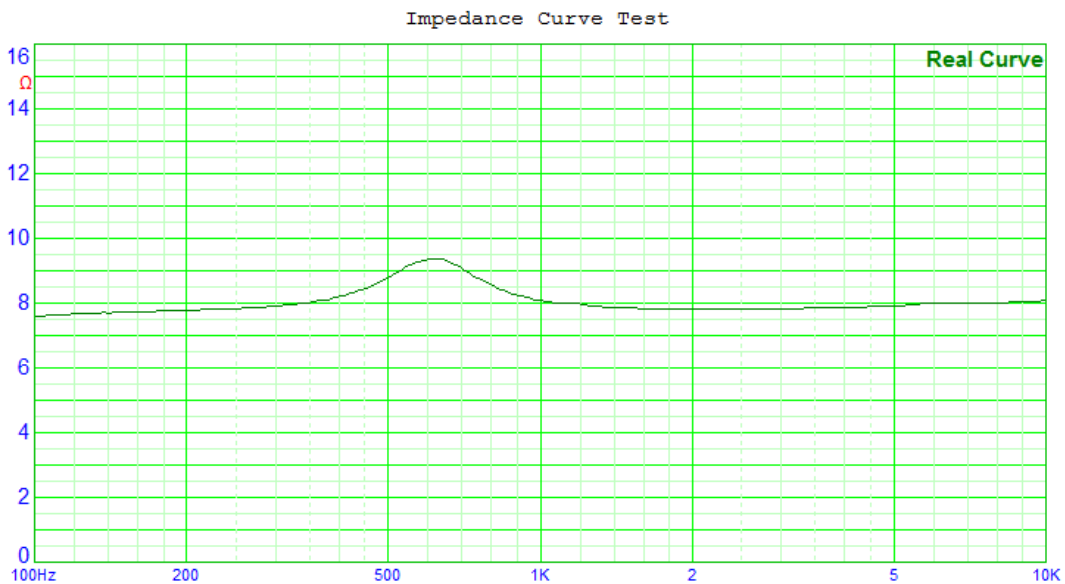
Type 2100S [Test Menu] Frequency Response Curve Test (Left)
Firm:001 Object:TESTSPK 2100S F 2.40 08-23-2016 14:00:48
1000Hz Sens.= 95.8dB SPL Pass F.R.: Pass DCR: 7.97Ω Pass
Step Size:1/48 Oct.

Frequency Response Test Att. @ +0dB
Voltage applied for F.R. =2000.0mV Start F. = 20Hz Test distance : .10M
F.R. check: None Stop F. =20000Hz

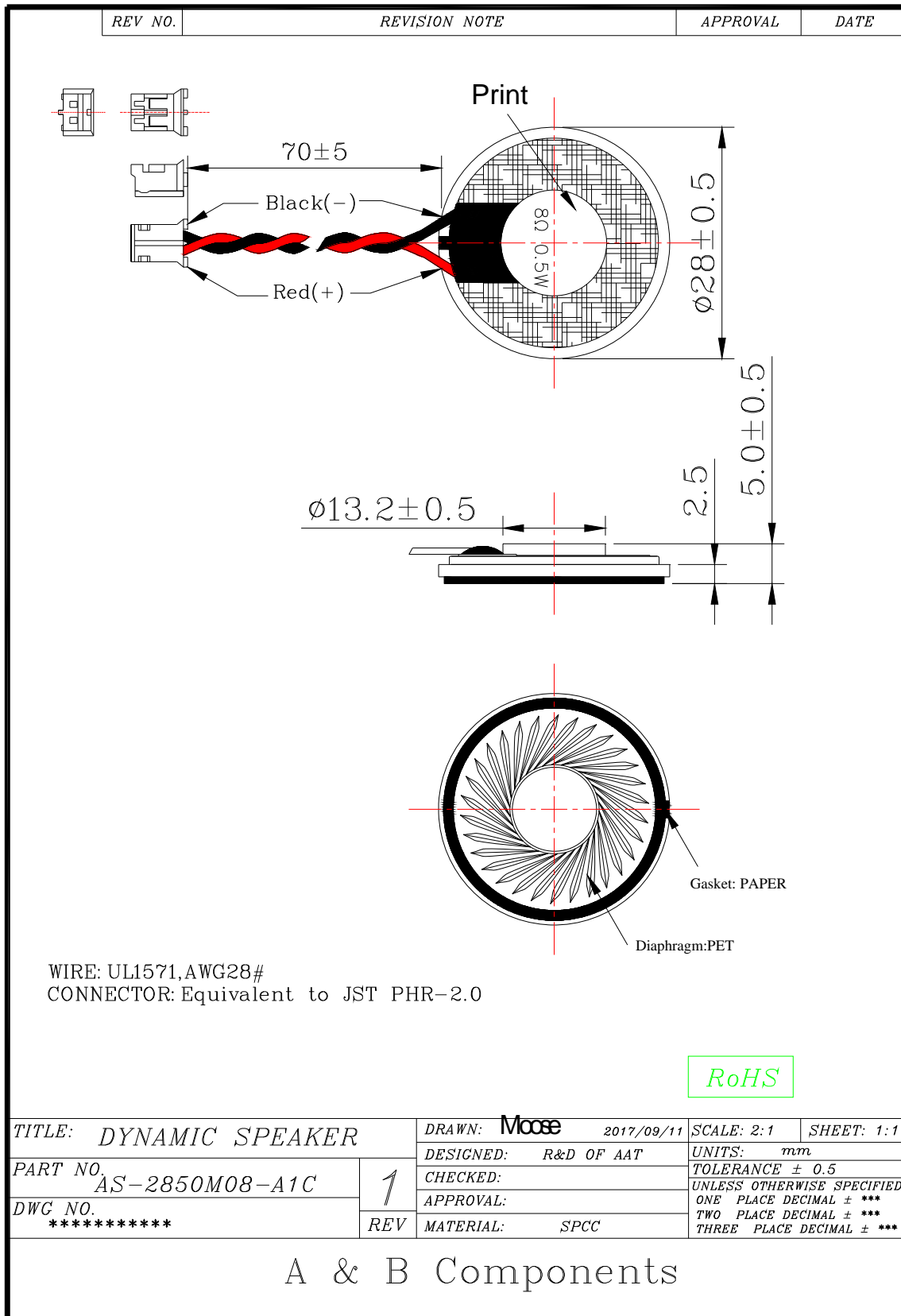


2-4. Impedance Curve

Type 2100S [Test Menu] Impedance Curve Test (Left)
Firm:001 Object:TESTSPK 2100S F 2.40 08-23-2016 14:20:14
Start Freq. = 100Hz Stop Freq. = 10000Hz Sweep Speed: 1/48 Oct.
ACV = 1000.0mV ACZ = 8.06 Ω @ 1000Hz. (Real)
Fo = 616Hz; Qm = 1.64; Qe = 6.13; Qt = 1.29; DCR = 7.44Ω.



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: $-20^{\circ}\text{C} \pm 3^{\circ}\text{C}$, temperature: $+60^{\circ}\text{C} \pm 3^{\circ}\text{C}$, 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. If you need more information, please contact our technology department, thank you.