

To:

Approval Sheet for Product Specification

请 承 认 书

PRODUCT NAME	SPEAKER
CUSTOMER PART NO.	
QINGLONG PART NO.	SP-3032B
DRAWWING NO.	
Issue Date	2009/04/25

APPROVAL SEAL :

DISCUSS		RESOLUTION		
QA	PURCHASE	ISSUED BY	CHECKED BY	APPROVED BY

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SIGNATURE	Issued by	Checked by	Approved by
	Gu Haiping	Ni Xihu	Lu Tianming

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1.REVISION

Revision	Date	Description	Reason	Page
0	2009-04-25	First issue	/	/

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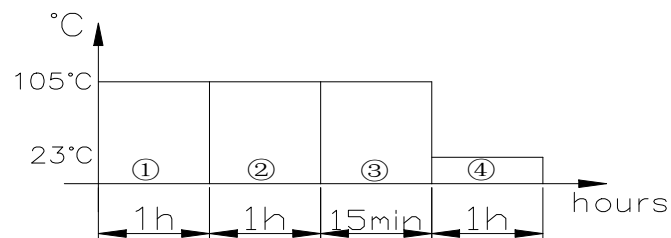
2. Electrical and Mechanical Characteristics

2.1	TYPE	Ø 30X12.8 mm
2.2	Nominal input Power	0.25W
2.3	Impedance	32 ohm ± 15% at 2 K Hz (DC Resistance 29Ω ± 10%)
2.4	Resonance Frequency	700Hz ± 20 %
2.5	Sensitivity (S.P.L)	>88DB at 1KHz 0.25W / distance 100mm
2.6	Frequency Range	450Hz ~ 4.0 KHz
2.7	Distortion	5% max at 2K Hz 0.1W
2.8	Max. Input power	0.5W
2.9	Net Weight	9 Gram
2.10	Temperature Range	-40~+105 (°C)
2.11	Chemical Management	Comply with ROHS

3. RELIABILITY TEST (SPEAKER MODE)

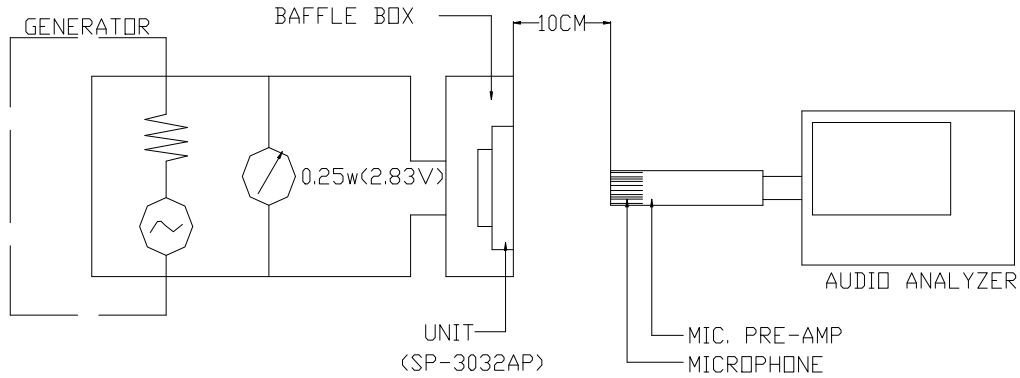
3.1 High Temperature Test

After having been in a test chamber for 1000 hours at the condition of +105±3°C, and cycles at 4 phases as follows, ① and ③ phases speaker is running, another two phases is not running, and then left on hour in a room should satisfy the test described under item 2.1~2.6.



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<p>3.2 Low Temperature Test After having been in a test chamber for 500hours at the condition of $-40 \pm 3^{\circ}\text{C}$, and then left an hour in a room should satisfy the test described under item 2.1~2.6</p> <p>3.3 Temperature shock test 100 cycles at $+105^{\circ}\text{C}$ / 1H and at -40°C /1H , and then left an hour in a room should satisfy the test described under item 2.1~2.6</p> <p>3.4 Humidity test Temperature: $+40 \pm 3^{\circ}\text{C}$ Relative humidity: 90% Duration: 1000 hours And then left on hour in a room should satisfy the test described under item 2.1~2.6</p> <p>3.5 Shock test Acceleration 100g Nominal shock duration 11ms Nominal shock shape half sine Number of shocks per axis(positive and negative) 3*6=18</p> <p>3.6 Terminal Strength Capable of withstand a (1 kgf) load for 15 sec. Without any damage or rejection</p> <p>3.7 Drop Test Drop 3 units unpacked onto a board of 20mm thick 54 times(3 units x 3 times x 6 surfaces) from a height of 1 M and then should satisfy the test described item 2.1~2.6</p>		

4. MEASURING CIRCUIT (SPEAKER MODE)

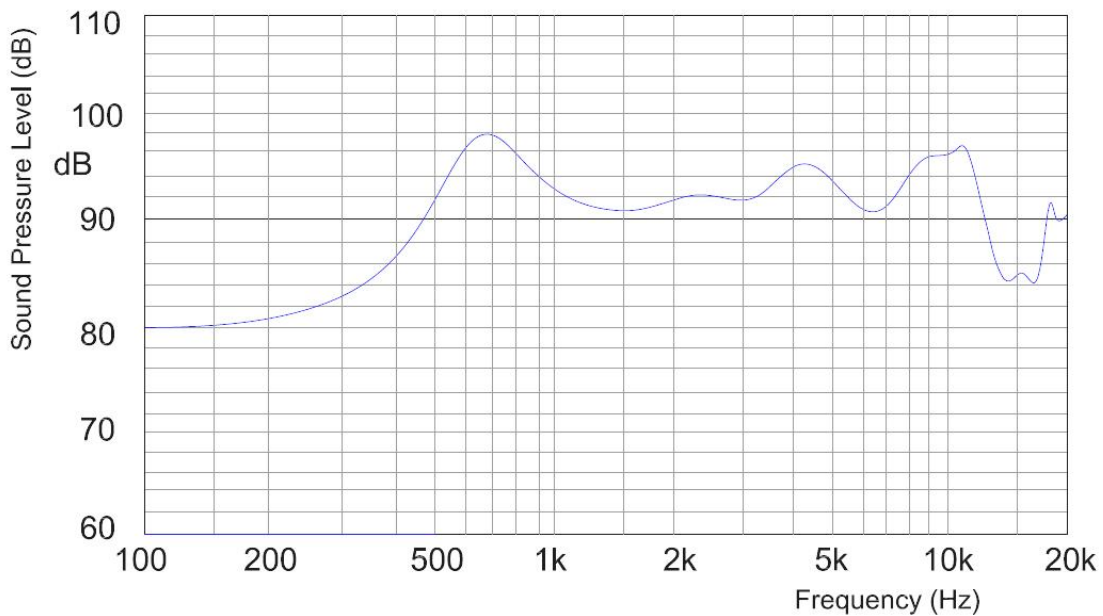


Testing Conditions.

- Anechoic Chamber
- Test Signal Input Power : 0.25W (2.83Vrms)
- Measured distance : 0.1m / on the Axis of speaker
- Measuring equipment : 6160S
- Test Environment : 25°C ± 5°C, R.H.93% ± 5%

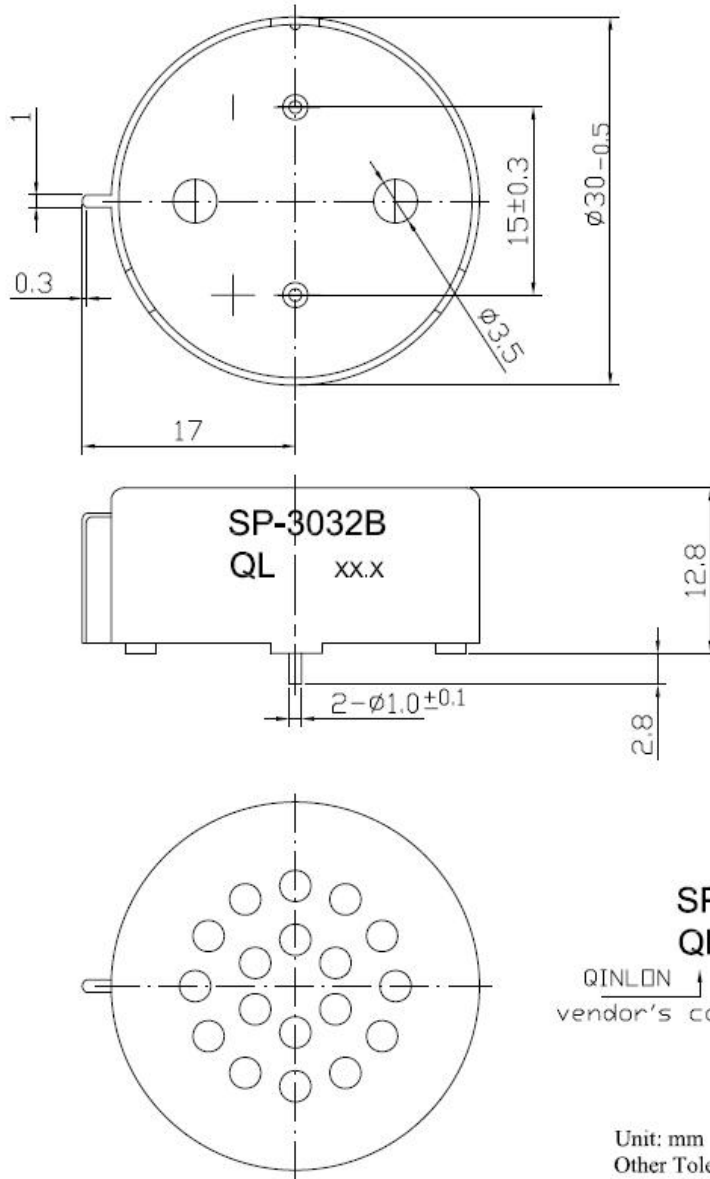
5 FREQUENCY RESPONSE CURVE

Test Signal Input Power : 0.25W (2.83Vrms)



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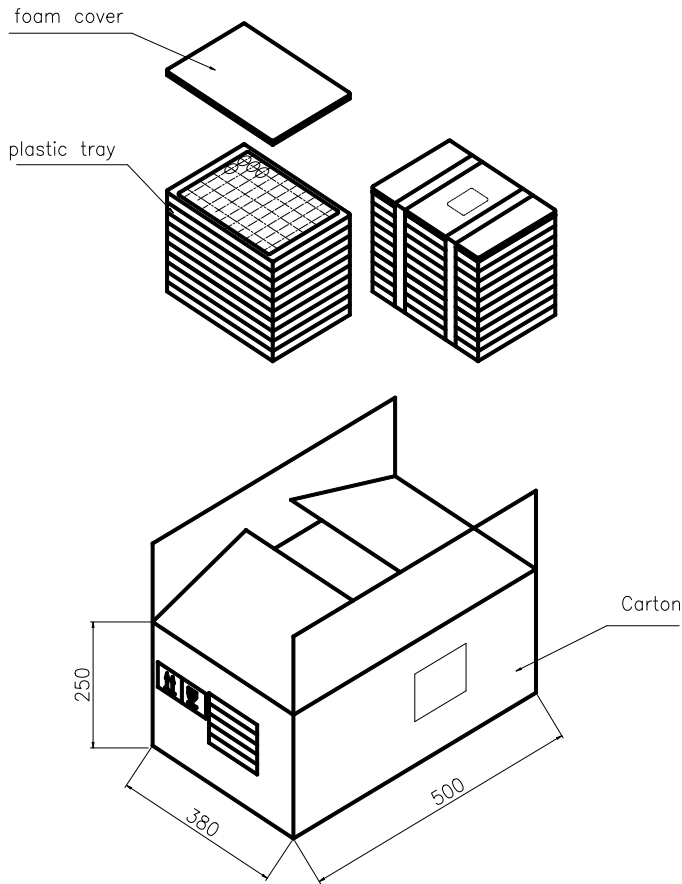
6. DIMENSION



SP-3032B
QL xx.x
QINLON Monthly code
vendor's code Year

Unit: mm
Other Tolerance: xx.x ± 0.5
 x.x ± 0.3

7.PACKING METHOD



- Notes:
- 1, 50 pcs per tray
 - 2, 20 traies per carton
 - 3, Total: 1000 pcs per carton , 11 Kg