



INTERNATIONAL COMPONENTS

CORPORATION

Approval Sheet

Model Number: S350SF-M-16W-IP65

Reference Number: 5-002

Date: 07 Dec 2017

Prepared by: Nelson Lee

Approved by: Joey Lin

Approval by

Company Name:

Sign by:

Title:

Date:

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1. Purpose and the scope

This document contains the specific specifications (electrical and mechanical), inspection standard and the reliability standard for the purpose of the customer's approval.

2. Description

Mylar Speaker.

3. Applications

Feature Telephone, Cordless Phone, Computer, Instrument etc.

4. Product origin

In China

5. Test conditions

Test should be made under the conditions of room temperature ($20 \pm 10^\circ \text{C}$) normal humidity ($60 \pm 20\%$) and normal atmospheric pressure. In the case, however, that the judgment is questionable the test conditions are to be changed to room temperature $20 \pm 2^\circ \text{C}$, relative humidity $60 \sim 70\%$ and normal atmospheric pressure..

6. Ozone guarantee

Certificate on the elimination of ozone layer destroying substances such as Freon.

7. Quality protection

This model is guaranteed to the specifications and conditions stated within this document.

8. Warranty

The warranty period will commence upon the date of the receipt of the parts from ICC and the period shall be 6 months.



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9. Soldering conditions

The speaker should not be exposed to extremely high temperatures for prolonged periods of time. As excessive heat will degrade the internal structure of the unit, soldering should be conducted as quickly as possible.

Recommended temperature and time for soldering

Hand soldering (for ABS, Hi-Temp ABS, FR ABS, Nylon)

300 ° C Thermal iron 2 seconds

10. Washing conditions

The products mentioned with "remove after washing" are suitable for washing with our recommended solvent.

11. Flux removing solvents

In the view of the recent requirement for total elimination of ozone-depleting chemicals, we have decided to recommend our customers to use deionized water for their cleaning process at the condition given below, instead of "CFC" that was conventionally used.

Cleaning solvent : deionized water

Solvent temperature : 55 ± 5 ° C

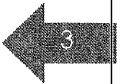
Immersion time : 5 ± 0.5 minutes

12. Signal input polarity

When a positive dc voltage is applied to the terminal marked (+) or red the diaphragm should move to the front.

13. Operation test

Must be normal at program source same as the power rating.



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14. Specification

Items	Specifications	Conditions
Size	87.0 x 87.0 x 31.0 (mm)	
Rated Input Power	10.0 W	
Maximum Input Power	16.0 W	
Impedance	8.0 Ω	\pm 15.0 % at 1000.0 Hz 1.0 V
Resonant Frequency (f_0)	500.0 Hz	\pm 20.0 % at 1.0 V
Sound Pressure Level	95.0 dB	\pm 3.0 dB / 0.1 W power / measuring distance at 600.0 , 800.0 , 1000.0 , 1200.0 Hz average
Measuring Distance	10.0 cm	
Frequency Range	f_0 ~ 5.0 KHz	Output S.P.L. -10.0 dB
Distortion	< 5.0 %	At 1000.0 Hz input 0.1 W
Magnet	\varnothing 60.0 x 32.0 x 10.0 mm	Ferrite
Housing Material	Metal	
Diaphragm Material	Mylar	PET
Waterproof Rating	IP65	
Weight	233.0 g	
Operating Temperature	- 20.0 ~ + 60.0 ° C	
Storage Temperature	- 30.0 ~ + 70.0 ° C	
Buzzing and Rattles	8.0 V	Must be normal at sine wave between F0 ~ 4.0 K Hz
Polarity	Cone will move forward with positive dc current to " + " terminal	

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15. Inspection Standard



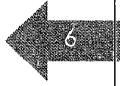
Item tested	Sym	Standard	AQL	Level	Inspection by means of	Remarks
Sound Pressure Level		Should be within 95.0 ± 3.0 dB	1	II	Audio analyzer	0.1 W power / measuring distance at 600.0 , 800.0 , 1000.0 , 1200.0 Hz average
Impedance		8.0 Ω	0.65	I	Impedance Meter	± 15.0% measured at 1000.0 Hz
Outer Diameter		87.0 x 87.0 ± 0.5 (mm)	1.5	S-3	Electronic Calipers	To be measured at the maximum dia.
Height		32.0 ± 1.0 (mm)	1.5	S-3	Electronic Calipers	To be measured at the maximum height on the body only.
Rust			1	II	Visual	Any rust should not be accepted.
Stain			1.5	II	Visual	There should be no remarkable stains.
Adhesion			1.5	II	Visual	Adhesion should be made sufficiently and there should be no outflow of adhesive agent.
Other Appearance			1.5	II	Visual	

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16. Reliability T



Item	Method of the test
High Temperature Test	96.0 hours at +70.0 ± 3.0 °C
Low Temperature Test	96.0 hours at -30.0 ± 3.0 °C
Humidity Test	96.0 hours at +30.0 ± 3.0 °C, 92.0 – 95.0 % RH
Temperature / Humidity Cycle	<p>The part shall be subjected 5.0 cycles. One cycle shall be 6.0 hours and consist of</p>
Vibration	<p>Frequency : 10.0 ~ 55.0 ~ 10.0 Hz Oct/min Amplitude : 1.5 mm</p> <p>Duration : 2.0 hours each of 3.0 perpendicular directions</p>
Drop Test	Drop the speaker contained in normal box onto the surface of 40.0 mm thick board 10.0 times from the height of 75.0 cm
Operation Life Test	Must perform normal with program White-Noise source at Rated Power for 96.0 Hours
Termination Strength	<p>Apply 3.0 N (0.306 kg) to each terminal in horizontal direction for 30.0 seconds.</p> <p>Apply 2.0 N (0.204 kg) to each terminal in vertical direction for 30.0 seconds.</p>
Reliability Test Performance	After any following test, parts should conform to original performance within ±3.0 dB tested with Rated Power, after 6.0 hours of recovery period

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17. Equipment List

Name	Model
Audio Analyzer	Bruel & kjaer
Acoustic Chamber	Bruel & kjaer
Audio Calibrator	Bruel & kjaer
Amplifier	Bruel & kjaer

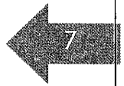
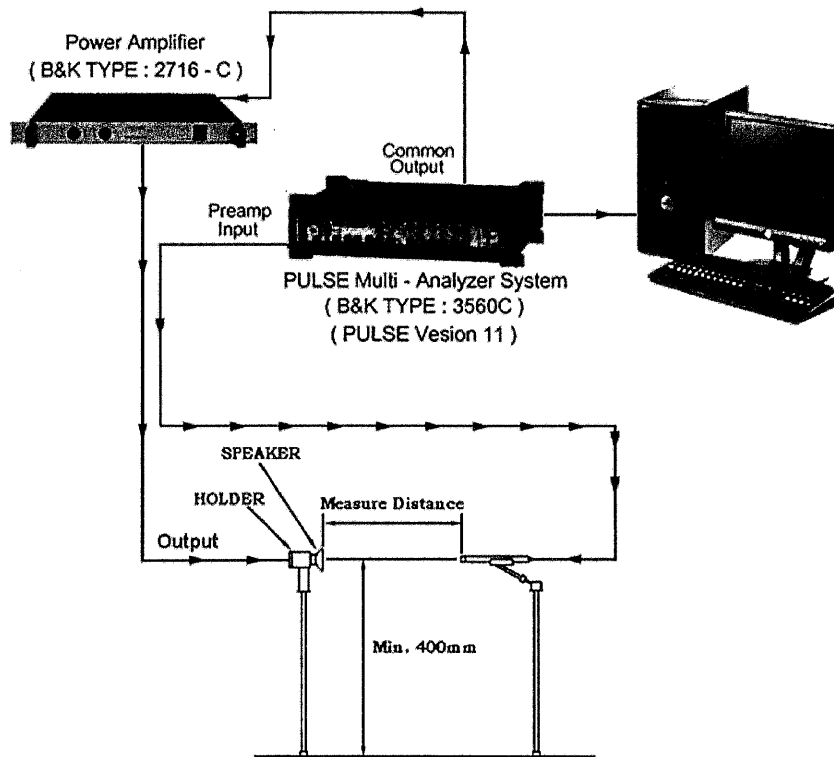


Fig.1 Measuring Method



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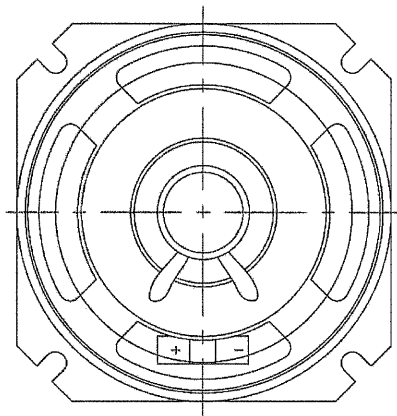
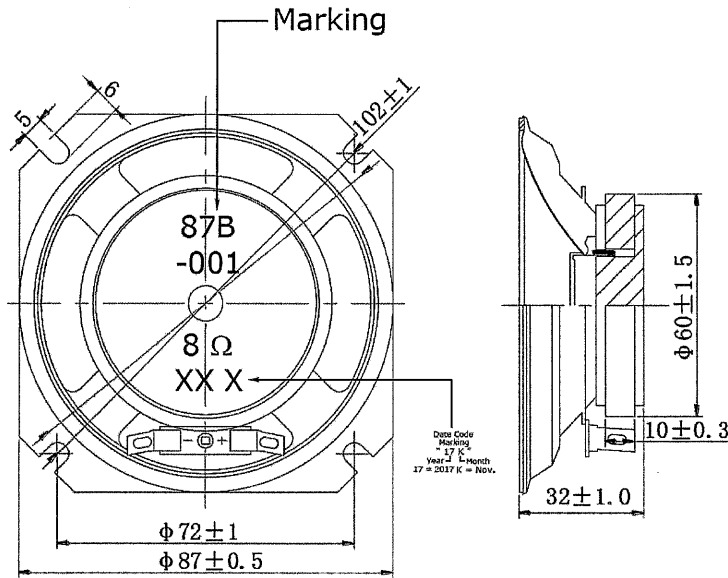
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18. Mechanical Draw

BOTTOM VIEW

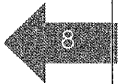
SIDE VIEW



TOP VIEW

Unit: mm

Tolerance: ± 0.5 mm

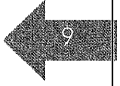
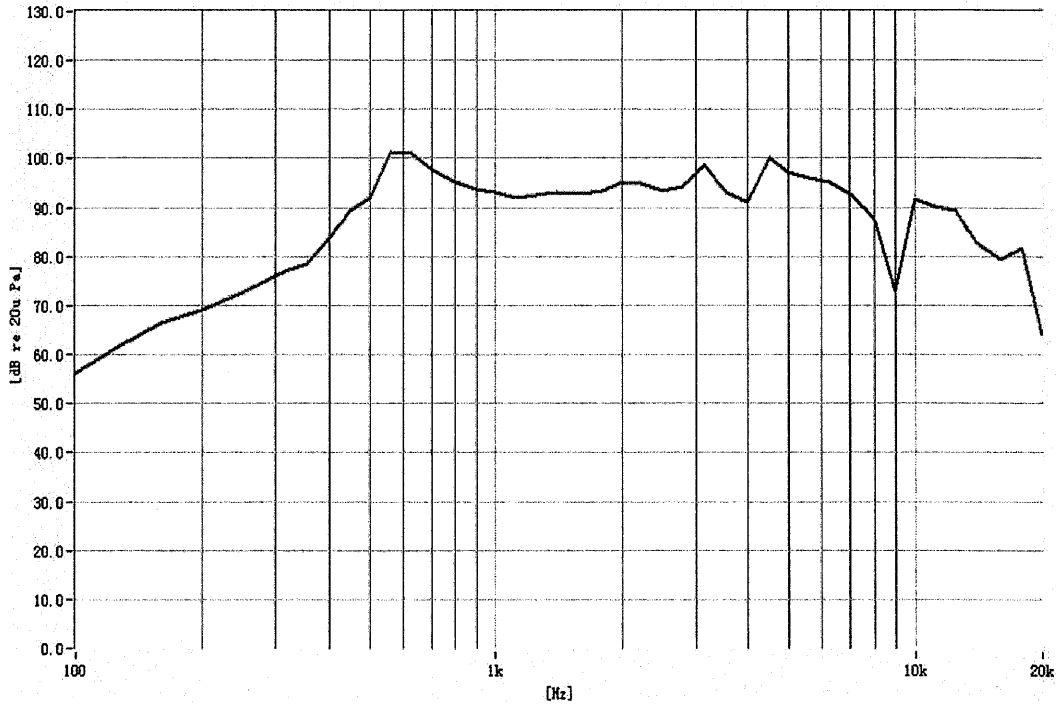


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19. Frequency Response

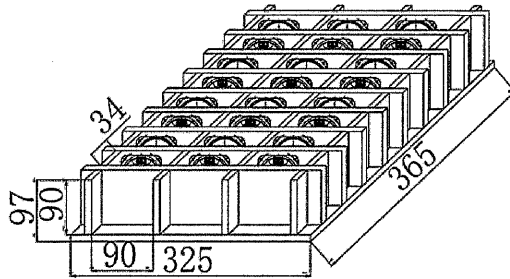


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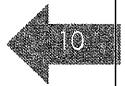
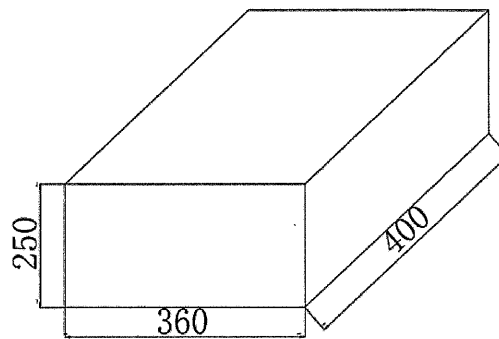
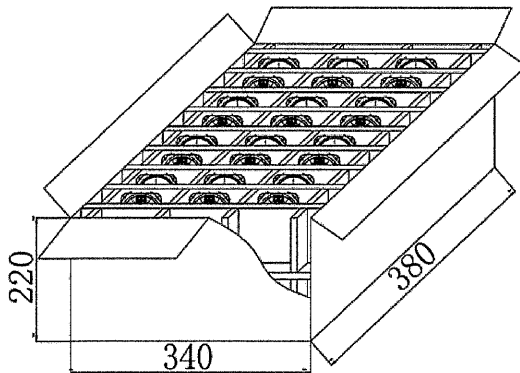
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20. Packing Information



1. Each clapboard 24pcs,
each carton 2 clapboards,
48pcs/carton
N.W: 11.7KG, G.W:14.7 KG
2. Corrugated paper: 365*325mm 1 pcs
3. Carton box size:380*340*220mm 1 pcs
4. Carton box 400*360*250mm 1 pcs



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21. Change History

Version	Date	Description	Approved
5-001	28 Nov 2017	New	JL
5-002	07 Dec 2017	1) Height: 31 ± 1 mm change to 32 ± 1 mm. 2) Modify 18. Mechanical Draw "	JL

