PRODUCT SPECIFICATION NO.:Y100047-032-D-A

CUSTMOER	
CUSTOMER MODEL	
PART NAME	Y100047-032-D-A 10mm Dual Speaker
PART MODEL	Y100047-032-D-A

APPROVED BY	CHECKED BY	MADE BY

CUSTOMER APPROVAL		

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REVISION AND UPDATES				
REV	DATE	PAGE	DESCRIPTION	SIGN
A/0	2017-10-11	/	Original	Yang.Ding
REMARK:				

1. Product Outline

1.1 This specification is applied to Graphene Speaker unit.

1.2 Product dimensions is Φ10*4.7mm, Show in figure（1）

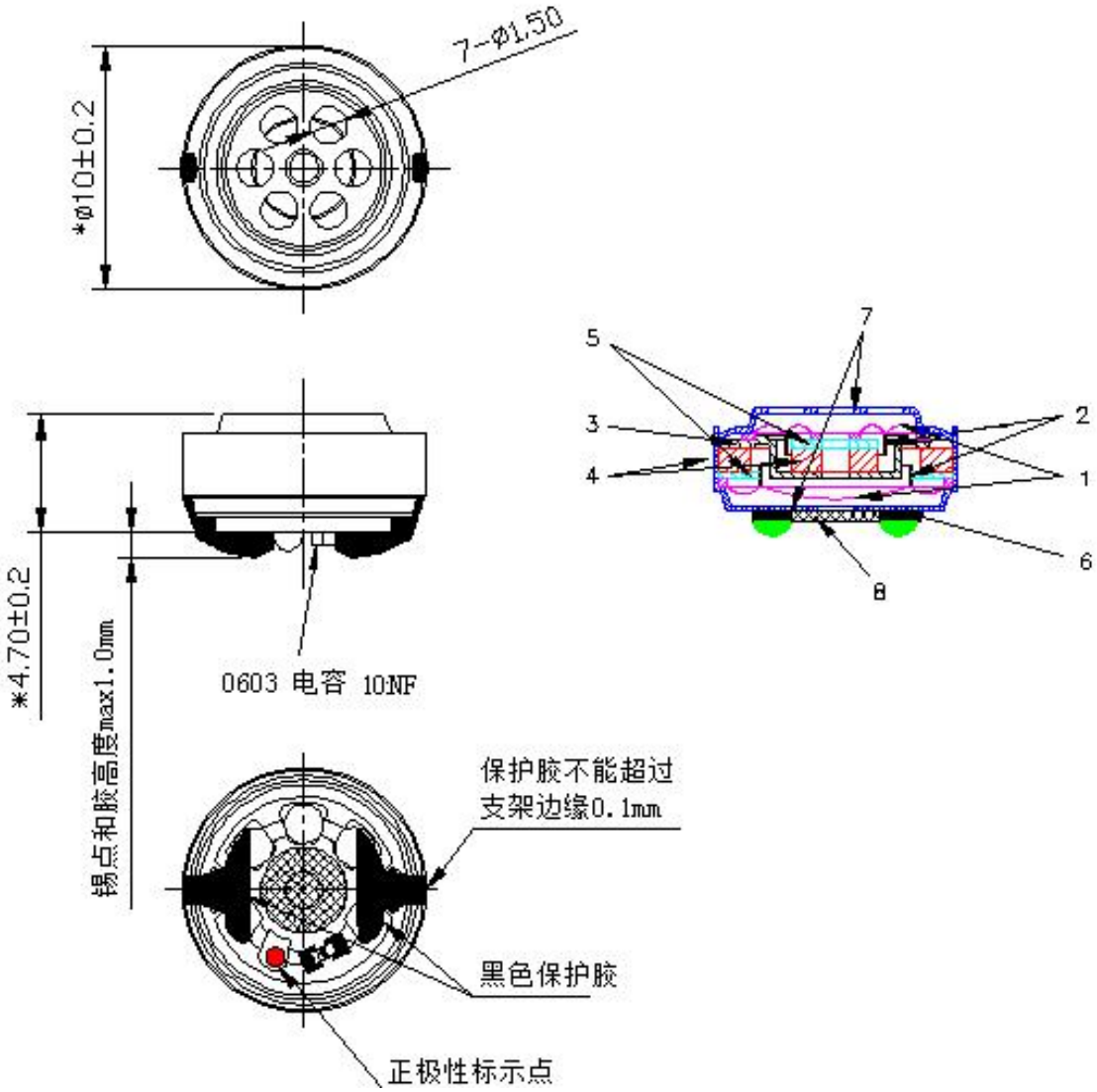


Figure (1) Dimension

2. Test Environment Requirements

2.1 The test conditions unless otherwise specified should be normal temperature 15 to 30℃, normal humidity 45 to 85% and normal atmospheric pressure 860 to 1060hPa.

2.2 if there arises a doubt in judgment, the test conditions shall be as follows: (1) Temperature 20±2℃;(2) Humidity60%~70%; (3) Atmosphere 860~1060hPa

2-1 Test set up	Hardware connection reference ： Hardware connection shown in figure （2）； Test Fixture schematic shown in figure （3）
2-2 Impedance	32Ω ± 15% Ohm ，at 1KHz，Input：0.179 VRms
2-3 Sound pressure level	93±3dB at 1KHz，Input：0.179 VRms ，IEC318Ear
2-4 Frequency response curve	shown in figure （4）
2-5 Rate power	3 mW
2-6 Max power	20 mW
2-7 THD	Input：0.179VRms ，IEC318Ear ； shown in figure （5）
2-8 Polarity	The Mark is Normal Polarity ("+")
2-8 Operating temperature	-20℃ to +70℃
2-9 Storage temperature	-40℃ to +70℃
2-10 BUZZE & RATTLES	Must be free audible noise From 50 Hz to 3KHz frequency range, Input：0.4VRms

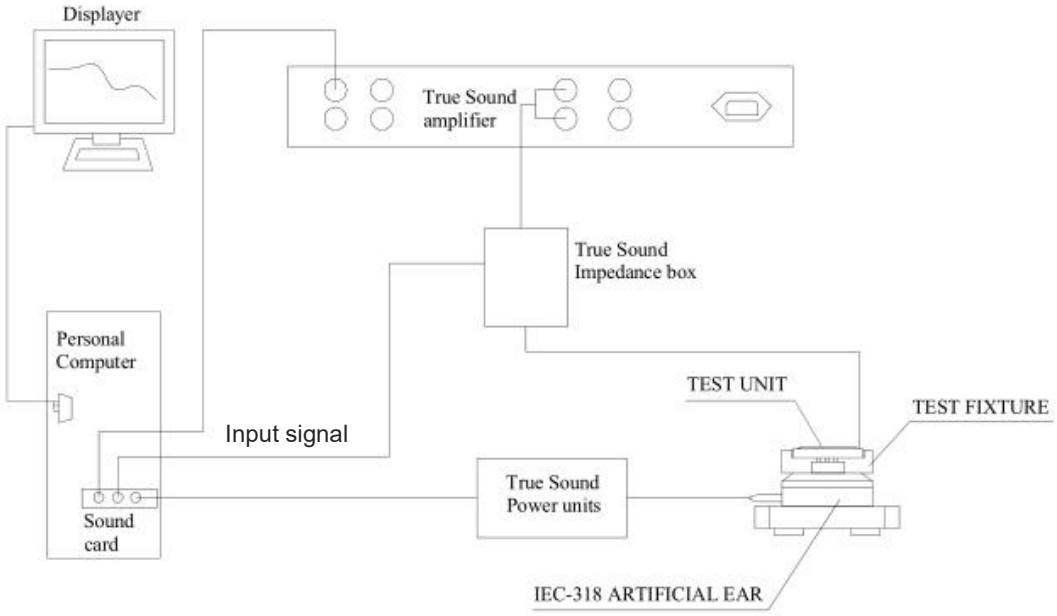


Figure (2) Hardware connection

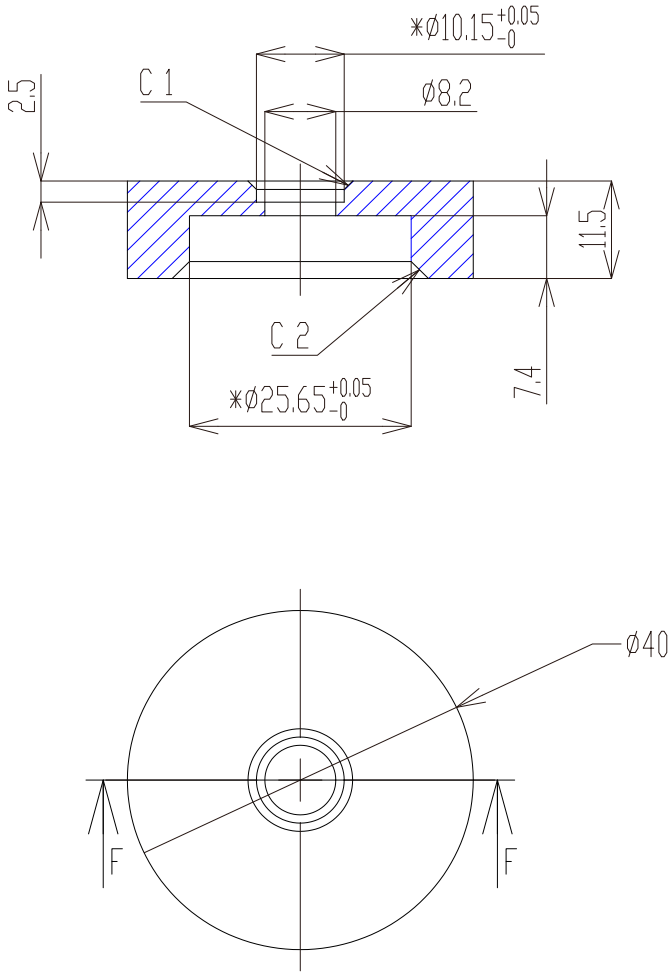
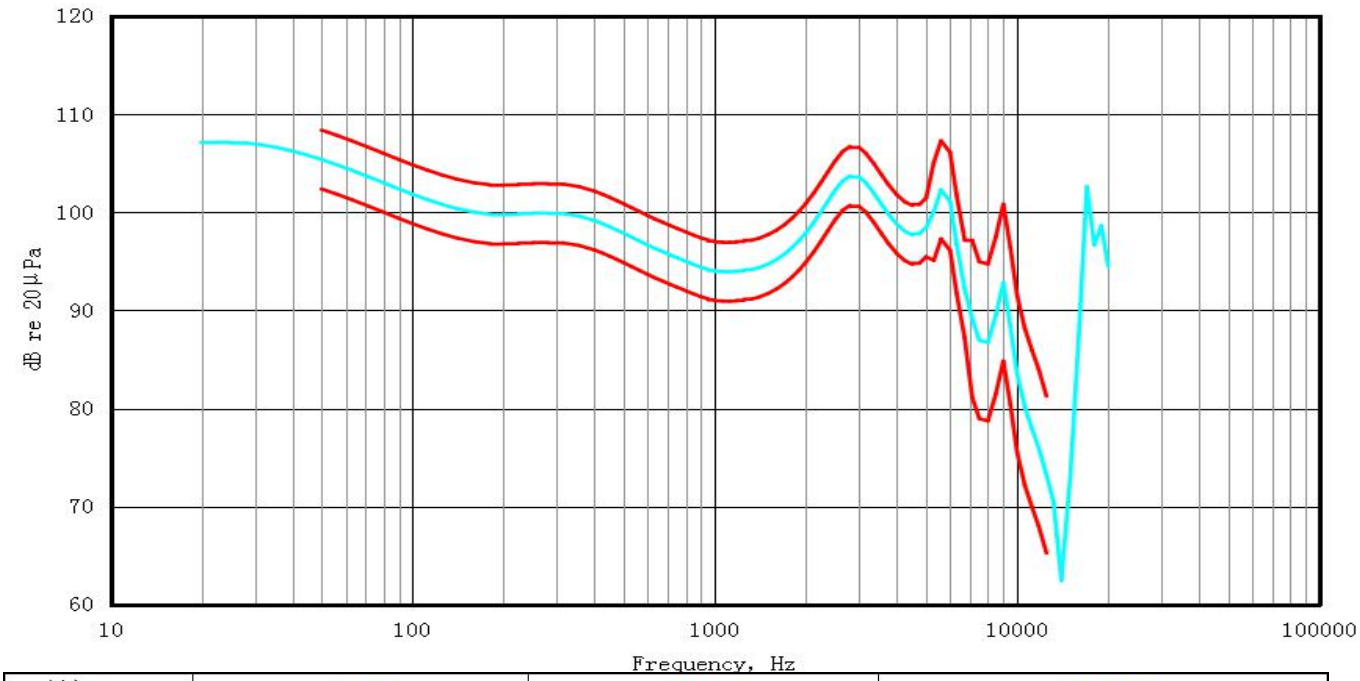


Figure (3) Test fixture schematic

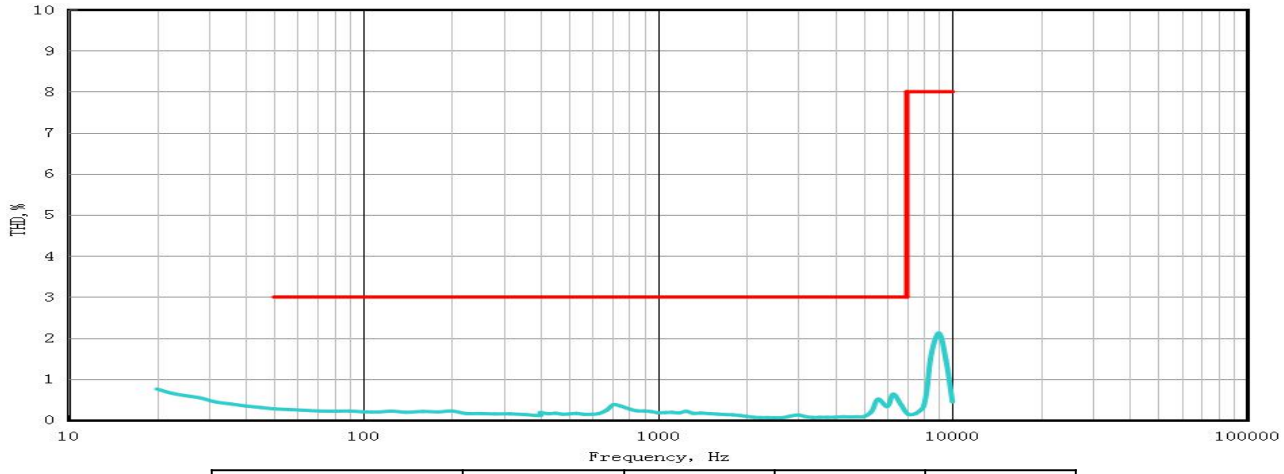
AMT Y100047-032-D-A Typical Response Curve



频率（Hz）	50-5000	5001-7000	7001-12000
上偏差（dB）	3	5	8
下偏差（dB）	-3	-5	-8
分档要求：按1KHZ处灵敏度以每3dB一档分两盘；按8.5KHZ处灵敏度每4dB一档分四盘。依灵敏度从低到高依次为A1、A2、A3...A8分档。			

Figure (4) Frequency Response curve

AMT Y100047-032-D-A Distortion Curve



频率	50	7000	7001	10000
套框上限（%）	3	3	8	8

Figure (5) THD curve

3. Reliability test

3.1 Continues power on test

Condition: 5mw Pink noise
Approximate test time 96h
Sample Qty:10pcs
Pass/fail criteria: Unaffected performance after the test.

3.2 Short time power on and off test

Condition:10mw
Model of operation: Power on 60s and off, total 60 cycle
Sample Qty:10pcs
Pass/fail criteria: Unaffected performance after the test.

3.3 Free fall test

Condition: 1m (To Hard wood)
Model of operation: Power off
Approximate test time : total 10 times
Sample Qty:10pcs
Pass/fail criteria: Unaffected performance after the test.

3.4 Temperature cycling, non-operational

Condition: Temperature:-40℃~70℃
Model of operation: Power off
Approximate test time : Low temperature 30Min and High temperature 30Min, total 24cycle
Sample Qty:10pcs
Pass/fail criteria: Unaffected performance after the test(At room temperature for 4H).

3.5 Cold, non-operational

Condition: Temperature:-40℃
Model of operation: Power off
Approximate test time 96 h
Sample Qty:10pcs
Pass/fail criteria: Unaffected performance after the test(At room temperature for 4H).

3.6 Heat, non-operational

Condition: Temperature:+70℃
Model of operation: Power off
Approximate test time 96 h
Sample Qty:10pcs
Pass/fail criteria: Unaffected performance after the test(At room temperature for 4H).

3.7 Temperature and humidity cycling, non-operational

Condition: Temperature:-30℃~70℃, 90%RH
Model of operation: Power off
Approximate test time : 4H/cycle, total 15 cycle
Sample Qty:10pcs
Pass/fail criteria: Unaffected performance after the test(At room temperature for 4H).

3.8 Salt spray test

Environment condition :temperature: 30℃, ≥70% RH;
Test box condition: Test box and salt water temperature: 35℃, pressure air temperature: 47℃
Salt water: JIS-S-8150 NaCl concentration: 5+/-1%, PH 6.5-7.2
Model of operation: Power off
Approximate test time : 24h Sample Qty:10pcs with fixture
Pass/fail criteria: Unaffected performance after the test.

4. PACKING

Protection use Carton + EPE + Bubble Box，shown in figure(6)

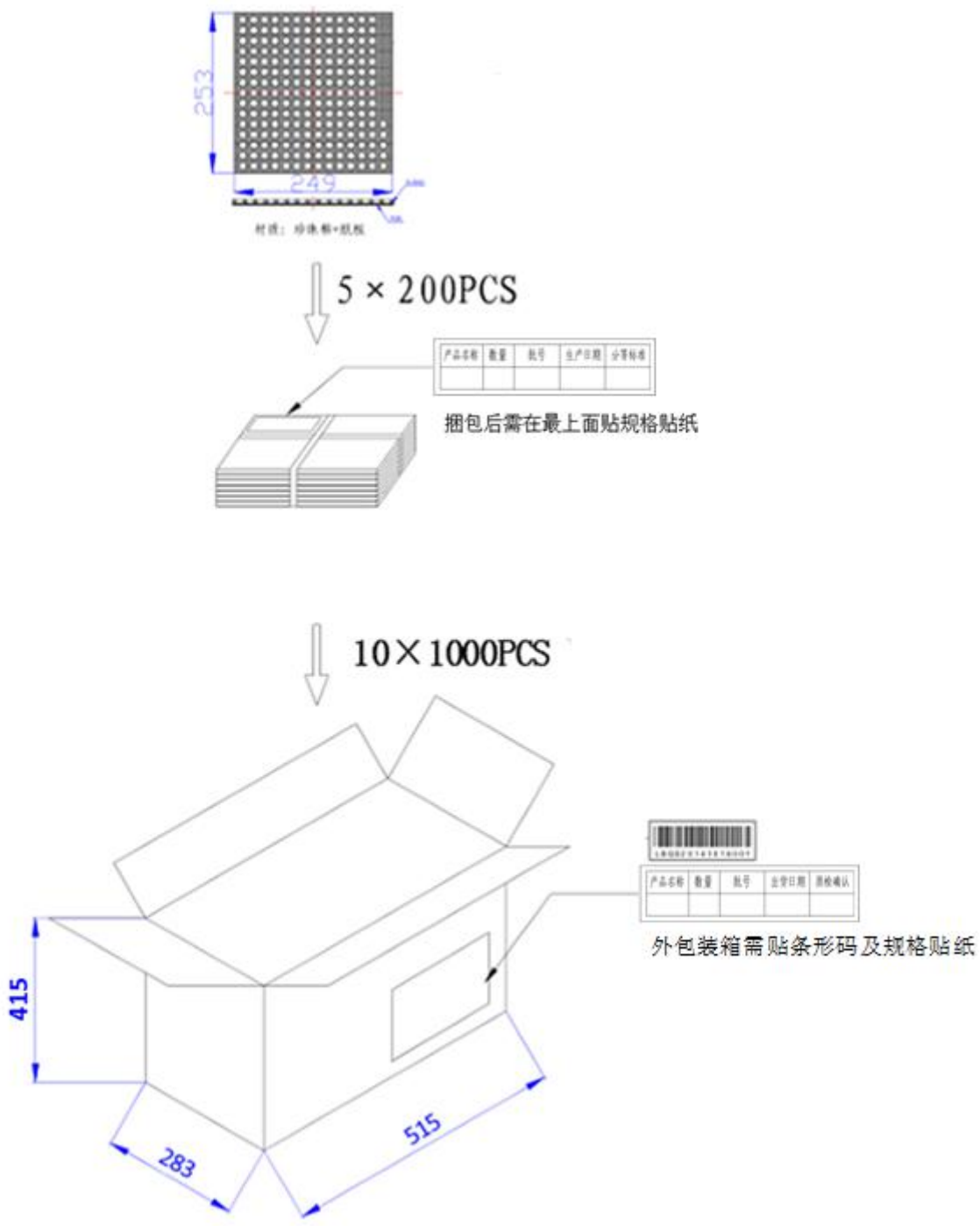


Figure (6) Packing