

SPECIFICATION FOR APPROVAL

承 認 書

Description : Micro Dynamic Speaker

Kingstate Part No. : KDSG28008C-05A

Customer's Model No. : _____

Specification No. : DOD-6688

Number Of The Edition : 1.6

CUSTOMER'S APPROVED SIGNATURE

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Approved by	Checked by	Issued by

A. SCOPE 範疇

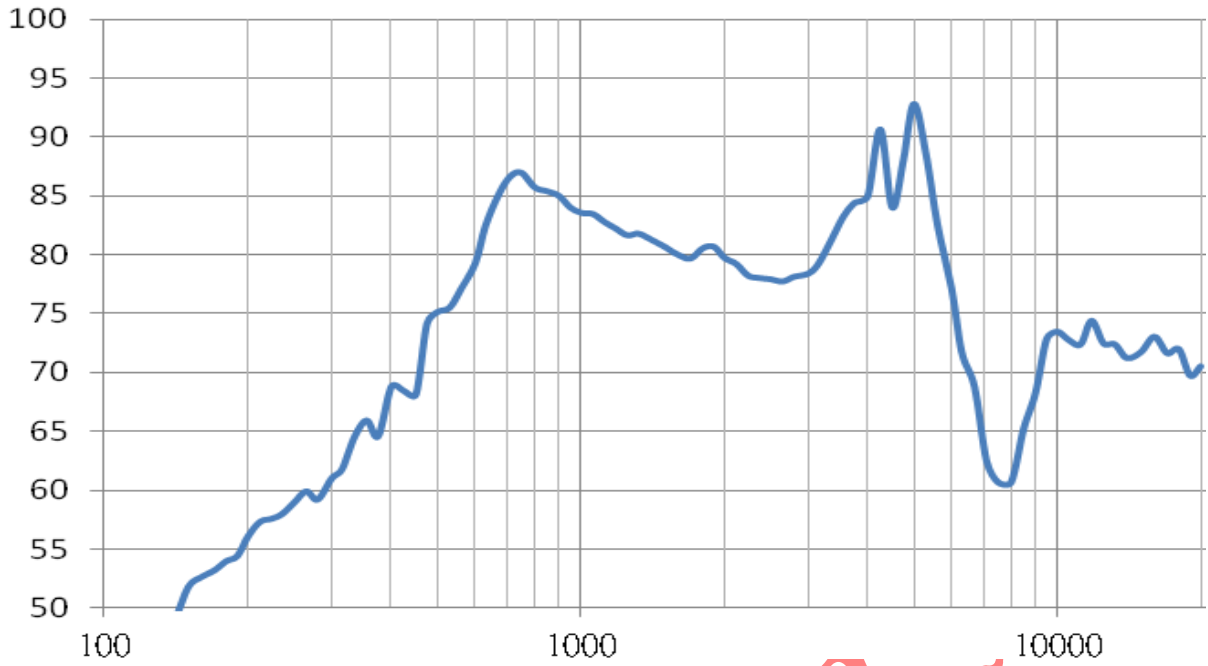
This specification applies speaker, **KDSG28008C-05A**

此規格書適用於喇叭, **KDSG28008C-05A**

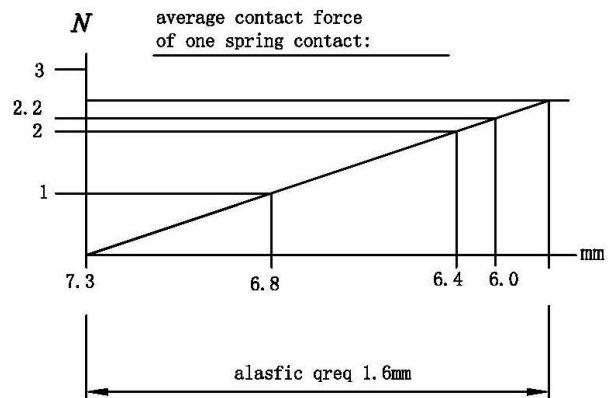
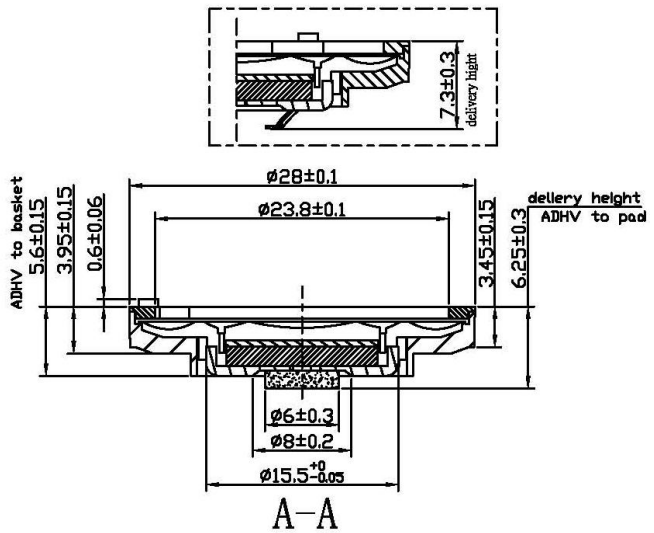
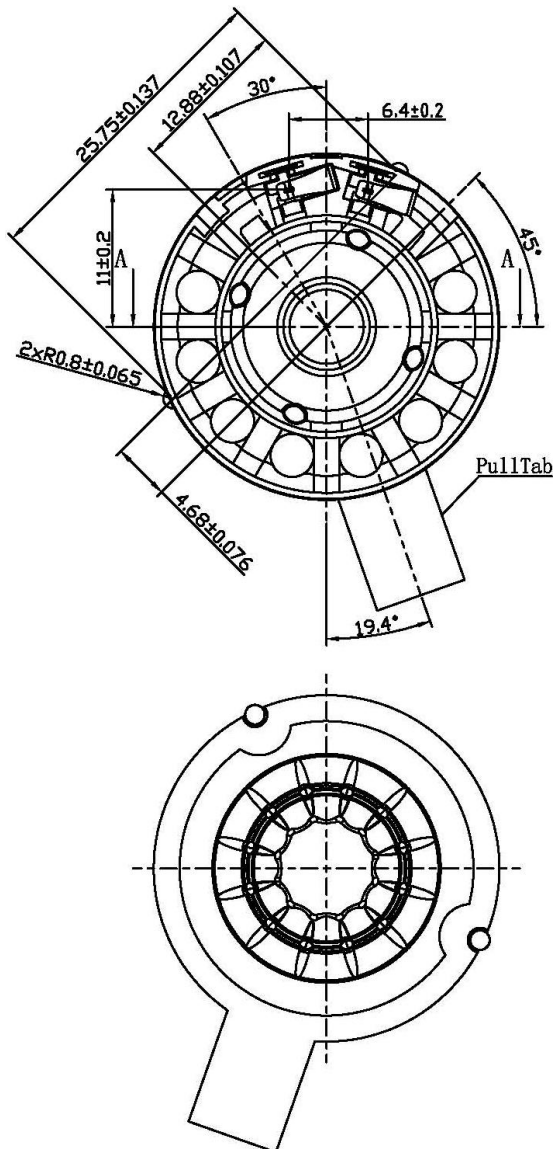
B. SPECIFICATION 規格

No.	Item	Symbol	Unit	Specification	Condition
1	Dimension 尺寸		mm	28*6.25	
2	Power Rating 功率		W	Rated. 0.5/ MAX.1.0	Maximum Power:IEC-60268-5 Filter 60s ON/120s Off 10 Cycles(Room Temp)
3	Impedance 阻抗	Ω	ohm	$8 \pm 15\%$	At 1.5KHz
4	Resonance Frequency 低音諧振	Fo	Hz	$700 \pm 15\%$ Hz	At 1.0V
5	Output S.P.L. 音壓位準		dB	83 ± 2 dB(0.5W/1m)	At 0.8K,1.0K 1.2K,1.5KHz (Average figures)
6	Frequency Rang 有效頻寬		Hz	500---6K	Average SPL -10db
7	Distortion 失真		%	15% Max.	at 700~3KHz ,0.5W
8	Diaphragm 振膜			N/A	PEI
9	Magnet 磁石		mm	N/A	Nd-Fe-B
10	Flux Density 磁通密度		Gauss	N/A	
11	Operating temp. 操作溫度		°C	-40 ~ +85	
12	Storage temp. 儲存溫度		°C	-40 ~ +85	
13	Buzze & Rattle 異常音				Not be audible at 2.0V sine wave between From Fo~20K 輸入2.0V正弦波從Fo到20K之間無異常音
14	Weight 重量		g	4.2±10%	
15	Material 材質			PBT+15%GF	
16	Environmental Protection Regulation 環保法規			HSF	

C. SPEAKER CHARACTERISTICS 頻率響應曲線

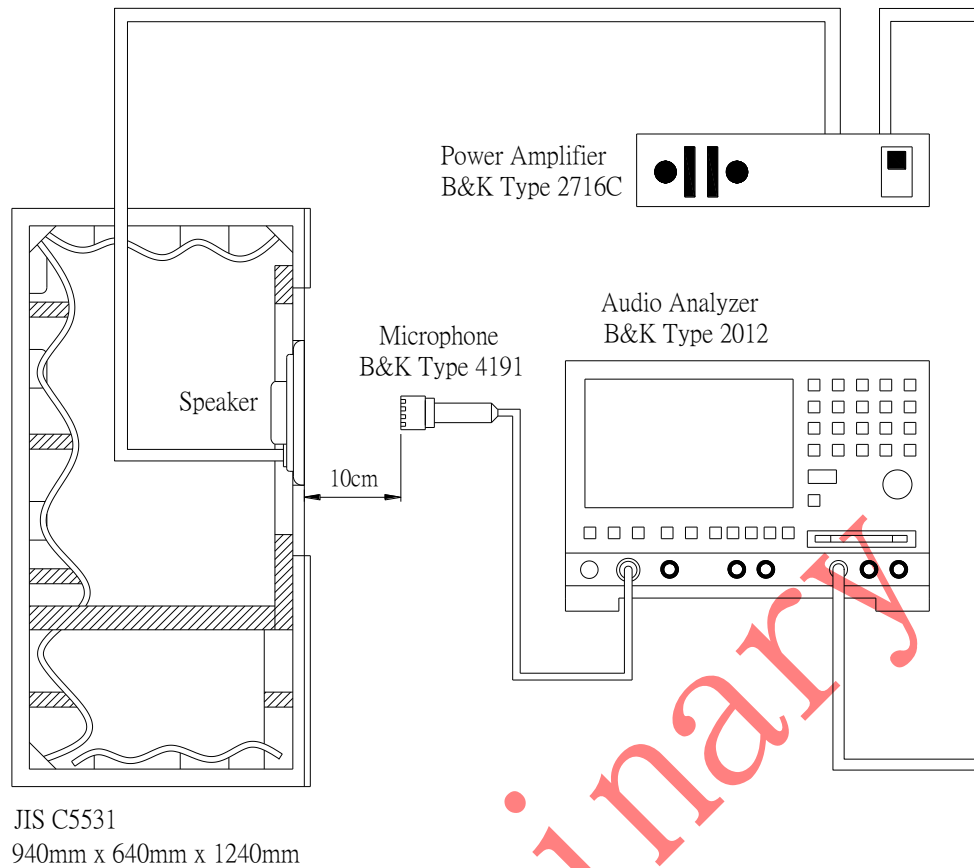


D. APPEARANCE DRAWING 外觀尺寸圖



Tol: ±0.2 Unit: mm

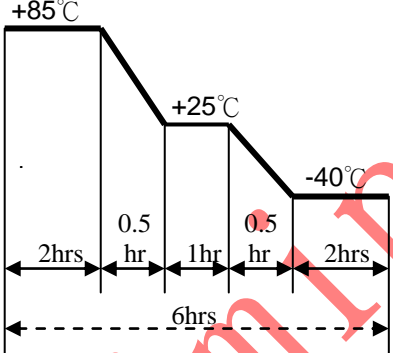
E. MEASUREMENT CIRCUIT 測量線路



F. MECHANICAL CHARACTERISTICS 機械特性

No.	Item	Test condition	Evaluation standard
1	Mechanical Shock test 机械冲击测试	10 shocks per axis and direction (60 total shocks) Peak acceleration= 500m/sec ² ; shock duration=6 ms 每軸每方向 10 次沖擊(共 60 次沖擊), 峰值加速度=500m/sec ² ; 沖擊持續時間= 6 ms	No obstacle to be harmful to normal operation; damages, cracks, rusts and distortions. Should not be audible at 2.0V sine wave between Fo ~20KHz.
2	Drop Test 落下測試	Drop the speakers contained in normal box onto the board 40mm thick 10 times from the height of 75cm 將揚聲器置於盒中, 自 75 公分高度落在 40mm 木板上共 10 次。	測試後無任何障礙防礙正常操作. 輸入 2.0V 正弦波從 Fo 到 20KHz 之間無異常音.

G. ENVIRONMENTAL TEST 環境試驗

No.	Item	Test conditions	Evaluation standard
1	Storage Test (High Temperature) 高溫儲存測試	After being placed in a chamber at +95°C for 48 hours. 置於+95°C環境中 48 小時	
2	Low temp. Test 低溫測試	After being placed in a chamber at -40°C for 96hours. 置於-40°C環境中 96 小時	
3	Humidity test 相對濕度測試	After being placed in a chamber at +40°C and 90~95% RH relative humidity for 96hours. 置於+40°C, 相對濕度 90~95%環境中 96 小時	Being placed for 6 hours at +25°C, speaker shall be measured. No obstacle to be harmful to normal operation; damages, cracks, rusts, etc.
4	Temp. cycle test 溫度循環測試	<p>The part shall be subjected to 5 cycles. One cycle shall be consist of: 單體承受溫度循環測試 5 次, 其循環內容如圖示:</p>  <p>The diagram illustrates a temperature cycle test profile. It starts at +85°C for 2 hours. Then, it ramps down to +25°C over 0.5 hours. It stays at +25°C for 1 hour. Then, it ramps down to -40°C over 0.5 hours. Finally, it stays at -40°C for 2 hours. The total duration of one cycle is 6 hours.</p>	Should not be audible at 2.0V sine wave between Fo to 20K. Fo should meet initial one. S.P.L. deviation of unit should be within ±3dB 經測試後, 靜置於+25°C (室溫)環境中 6 小時後, 測試後無任何障礙防礙正常操作.輸入 2.0V 正弦波從 Fo 到 20K 之間無異常音. Fo 與原規格值相同,輸出音壓變化量在±3dB 內.
5	Thermal Shock Test (TS) 溫度冲击測試	Tmin = -40°C, Tmax = +85°C, Soak time = 20 min. Number of cycles = 300 置於-40°C 的最低溫度環境中 20 分鐘, 然後置于+85°C 的最高溫度環境中 20 分鐘, 共 300 個循環。	

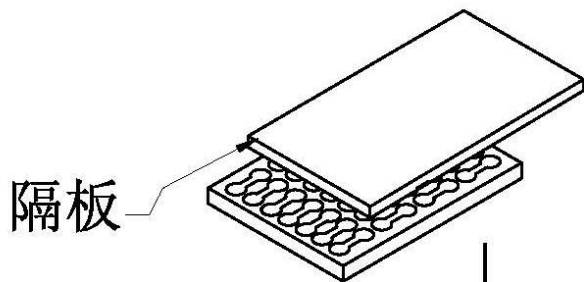
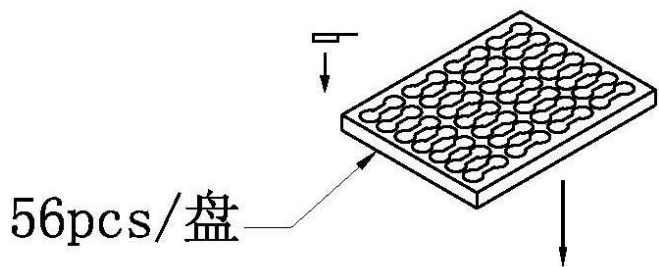
H. RELIABILITY TEST 信賴性試驗

No.	Item	Test conditions	Evaluation standard
1	High Temp Operating Endurance (HTOE) 耐高温操作测试	Tmax= +85°C ·Cyclic: 5 secs OFF / 5 secs ON (1W max power driving conditions, Apply square wave at frequency from 600HZ to 2KHZ), Test duration=300 hours 在+85°C最大溫度下，輸入最大功率1W，方波訊號（600HZ-2KHZ）5秒開，5秒關為一個循環。測試持續300小時	Being placed for 1 hours at +25°C, speaker shall be measured. No obstacle to be harmful to normal operation; damages, cracks, rusts, etc. Should not be audible at 2.0V sine wave between Fo 到 20K . Fo should meet initial one . S.P.L. deviation of unit should be within ±3dB 經測試後，靜置於+25°C（室溫）環境中 1 小時後，測試後無任何障礙防礙正常操作。輸入 2.0V 正弦波從 Fo 到 20K 之間無異常音。Fo 與原規格值相同，輸出音壓變化量在±3dB 內。
2	High Temperature and High Humidity test (HTHE) 高温高湿测试	T = 85°C ·RH = 85% · under 1W max power driving conditions, apply square wave at frequency from 600HZ to 2KHZ; (23h: OFF , 1h: cyclic 5 secs OFF / 5 secs ON ,) , Test duration=500 hours 在溫度為+85°C，相對濕度為85%環境中，輸入最大功率1W，方波訊號（600HZ-2KHZ）；每天測試時間為1小時開啟，23小時關閉；在測試的1小時中，5秒開，5秒關為一個循環。測試時間共計500小時	
3	Mechanical Random Vibration test 機械隨機振動測試	Random vibrations profile according to below reference standard: 1W max power driving conditions, apply square wave at frequency from 600HZ to 2KHZ. r.m.s. : 181 m/sec ² Test Duration: 22h for each vibration axis. Cyclic: 5 secs OFF / 5 secs ON 根據以下參考標準，進行機械隨機振動測試：輸入最大功率1W，方波訊號（600HZ-2KHZ）；振動速度為181 m/sec ² ；5秒開，5秒關為一個循環，每個軸振動22小時。	
4	Repeated start-up cycles test 重複啟動循環測試	Under 1W Max power driving condition, apply white noise signal; Cyclic: 1 secs ON, 2 secs OFF, total 80,000 cycles driving component with circuit scheme. 輸入最大功率1W，白雜訊號，一個循環為1秒開，2秒關共80000次循環。	

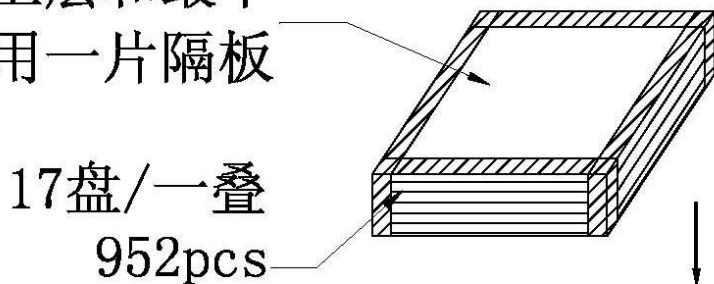
TEST CONDITION.

Standard Test Condition :	a) Temperature : +15 ~ +35°C	b) Humidity : 45-85%	c) Pressure : 860-1060mbar
一般測試條件 :	a) 溫度 : +15 ~ +35°C	b) 濕度 : 45-85%	c) 氣壓 : 860-1060mbar
Judgement Test Condition	a) Temperature : +20 ± 3°C	b) Humidity : 60-70%	c) Pressure : 860-1060mbar
爭議時測試條件:	a) 溫度 : +20 ± 3°C	b) 濕度 : 60-70%	c) 氣壓 : 860-1060mbar

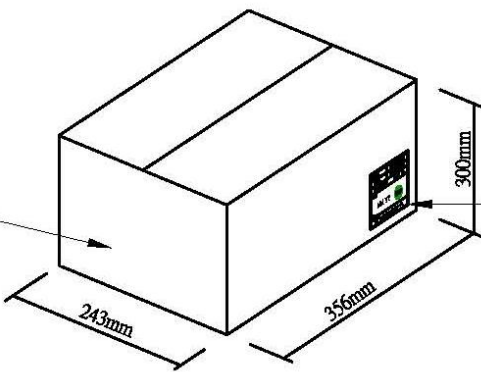
I.PACKING STANDARD 包裝規格


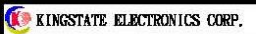


每疊最上层和最下
用一片隔板



1內箱/1疊
952pcs



Lot No.	XXXXXXXXXX
Part No.	XXXXXXXXXXXXXX
Quantity	XXX Pcs
Date:	MM YY 
	

Tray	348mmx236mmx16mm	1x56PCS=56PCS
Carton Box	356mmx243mmx300mm	56PCSx17=952PCS