

SPECIFICATION FOR APPROVAL

承 認 書

Description : **Micro Dynamic Speaker**

Kingstate Part No. : **KDSG28008C-20**

Customer's Model No. :

Specification No. : **DOD-3121**

Number Of The Edition : **1.2**

CUSTOMER'S APPROVED SIGNATURE



KINGSTATE

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Approved by	Checked by	Issued by
		<i>WLO</i>

RELEASE HISTORY 發行歷史

Version	Date	Description	Remark
1.1	3/26/16	Creation	
1.2	5/18/17	F0 改為 300Hz	

Preliminary

A.SCOPE 範疇

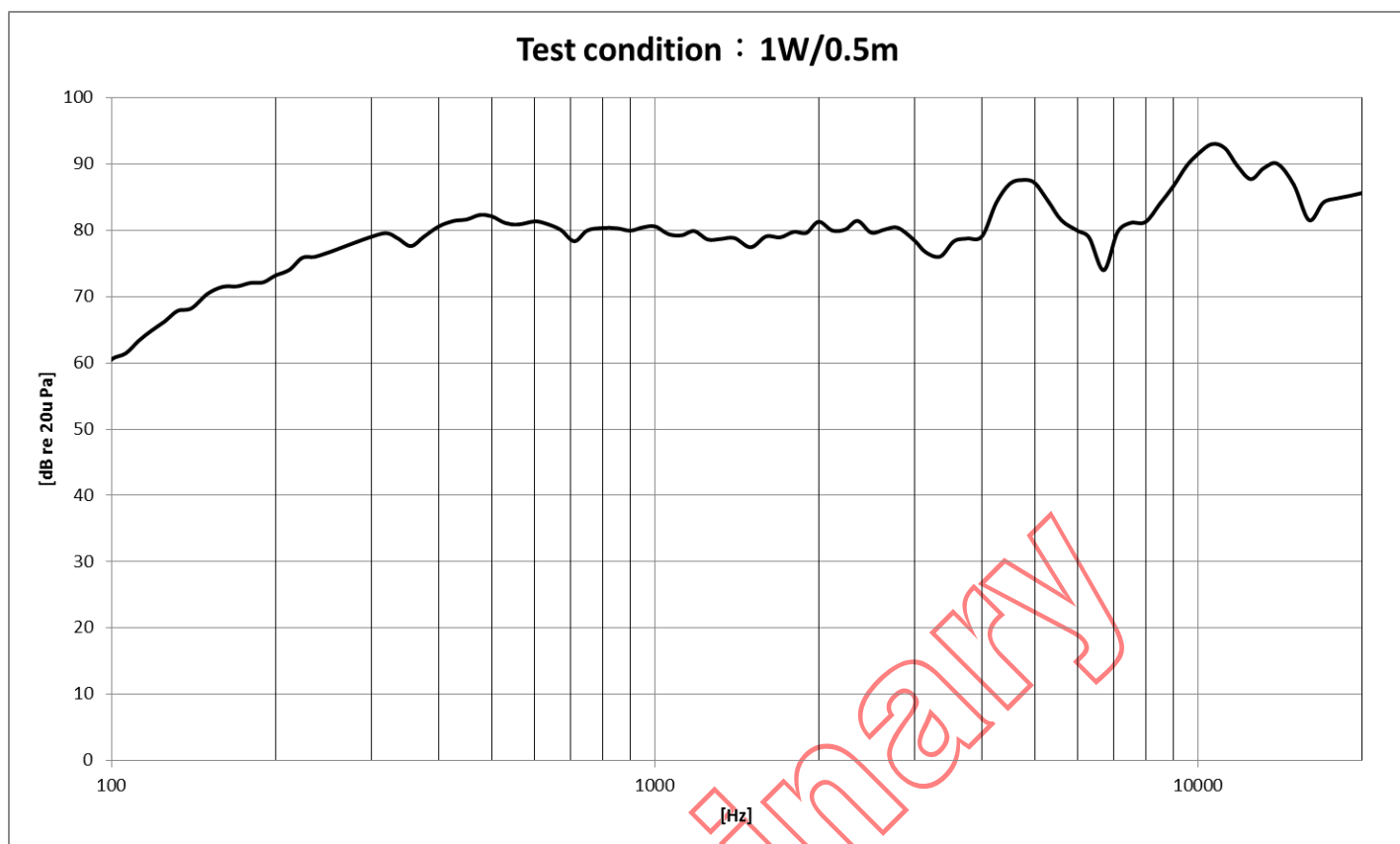
This specification applies speaker,KDSG28008C-20

此規格書適用於喇叭, KDSG28008C-20

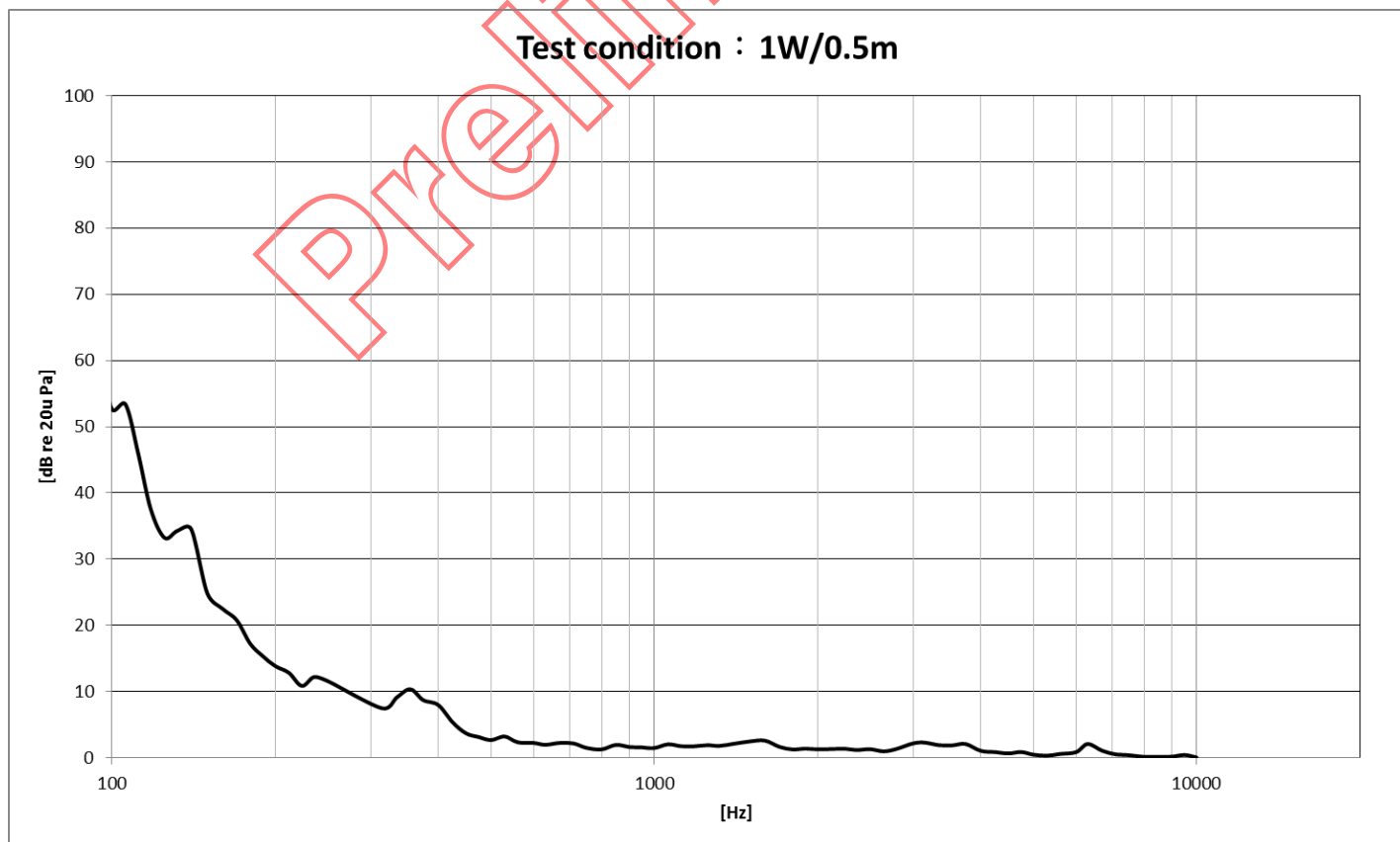
B. SPECIFICATION 規格

No.	Item	Symbol	Unit	Specification	Condition
1	Dimension 尺寸		mm	28 x 7.5	
2	Power Rating 功率		W	Rated. 2.0/ MAX. 3.0	Maximum Power:IEC-60268-5 Filter 60s On/120s Off 10 Cycles (Room TEMP.)
3	Impedance 阻抗	Ω	ohm	8 $\pm$ 15%	
4	Resonance Frequency 低音諧振	F0	Hz	300 $\pm$ 20%	
5	Output S.P.L. 音壓位準		dB	80 $\pm$ 3(1W/0.5m)	@0.8,1.0,1.2,1.5KHz Average
6	Frequency Range 有效頻寬		Hz	F0-8K	Deviation -10dB from average S.P.L
7	Distortion 失真		%	Less than 5%	@ 1kHz 0.1W
8	Voice Coil 音圈		mm	N/A	
9	Magnet 磁石		mm	$\varnothing$ 15.5x2.2	Nd-Fe-B(鈹鐵鋁)
10	Flux Density 磁通密度		Gauss	N/A	
11	Operating temp. 操作溫度		°C	-30 ~ +70	
12	Storage temp. 存儲溫度		°C	-40 ~ +85	
13	Buzz & Rattle 異常音				Not be audible at 4.0V sine wave between F0~ 8KHz 輸入 4.0V 正弦波從 F0 到 8KHz 之間無異常音
14	Weight 重量		g		
15	Material 材質			ABS	
16	Environmental Protection Regulation 環保法規			HSF	

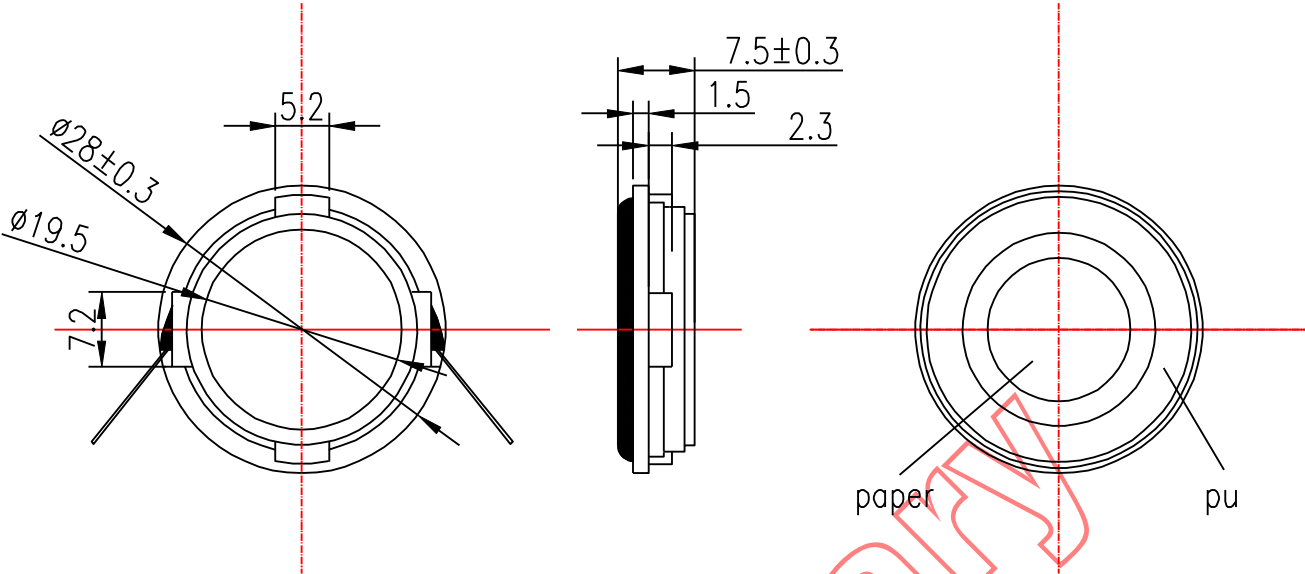
C.TYPICAL FREQUENCY RESPONSE CURVE 頻率響應曲線



D. THD CURVE 失真曲線圖



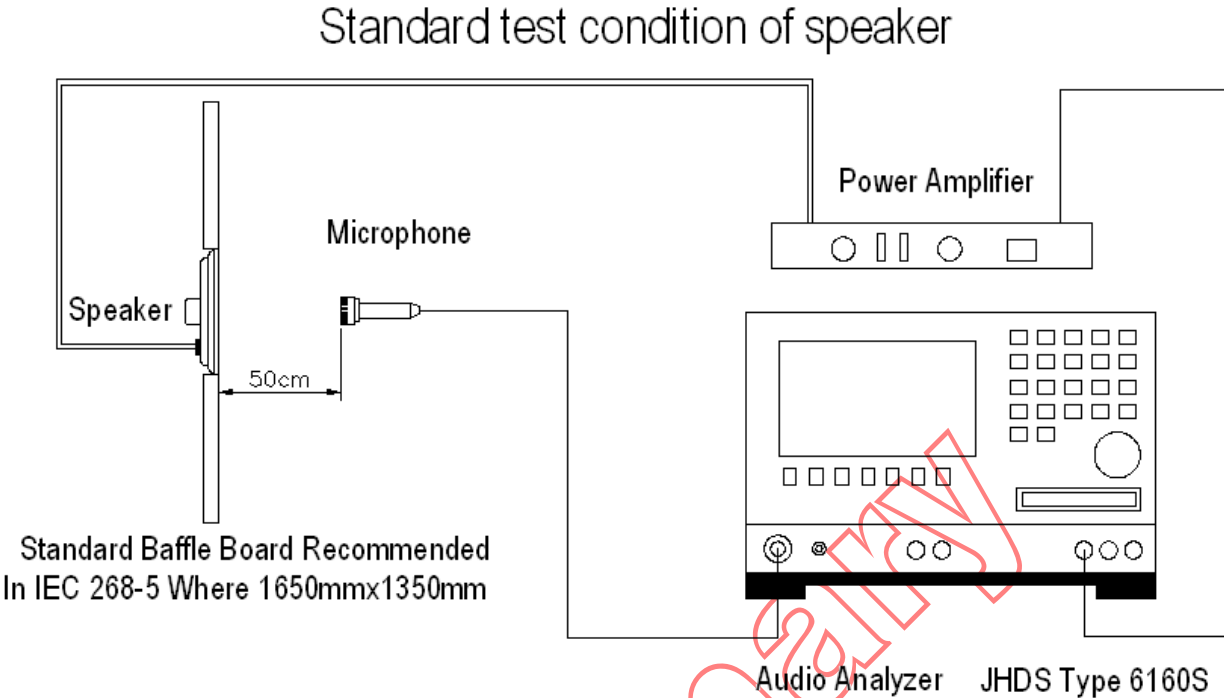
E. APPEARANCE DRAWING 外觀尺寸圖



NOTE:TOLERANCE GENERAL UNLESS OTHERWISE NOTED :± 0.5mm
Unit:mm

PART NO.	PART NAME	Q'TY	MATERIAL	TREATMENT	REMARK
1	Frame	1	Plastic		
2	PCB	1	Fr4		
3	Magnet	1	NdFeB		
4	Plate	1	SPCC		
5	Voice Coil	1	Paper+Cu		
6	Diaphragm	1	Paper+Pu		

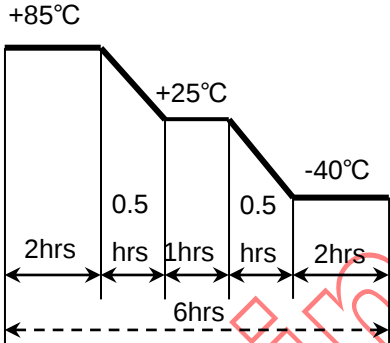
F. MEASUREMENT CIRCUIT 測量線路



G. MECHANICAL CHARACTERISTICS 機械特性

No.	Item	Test condition	Evaluation standard
1	Solderability 焊錫附著性 (Connector excepted) 端子類不適用此項	Stripped wires of lead wires are immersed in rosin for 5 seconds and then immersed in solder bath of +270±5℃ for 3±0.5 seconds. 裸線部份浸入松香溶液 5 秒後,再浸入+270±5℃ 熔融焊錫槽 3±0.5 秒.	90% min. stripped wires shall be wet with solder.(Except the edge of terminal) 浸入裸線部份附著焊錫 90% 以上.(末端斷面不算).
2	Lead Wire Pull Strength 線材拉力	The pull force shall be applied to double lead wire : Horizontal3.0N(0.306kg) for 30seconds. Vertical2.0N(0.204kg) for 30seconds. 雙線材水平方向施以 3.0N(0.306kg)的力量,垂直方向施以 2.0N(0.204kg)的力量,各 30 秒.	No damage and cutting off 線材不鬆動,不脫落.
3	Vibration Test 振動測試	Speaker shall be measured after being applied vibration of amplitude of 1.5mm with 10 to 55Hz band of vibration frequency to each of 3 per-pendicular directions for 2 hours. 振動週波數 10~55Hz、全振幅 1.5mm 於 X.Y.Z 3 個方向,各 2 小時.	No obstacle to be harmful to normal operation; damages, cracks, rusts and distortions. Should not be audible at 4.0V sine wave between F0 ~ 8KHz
4	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.且在輸入4.0V 正弦波從F0到8KHz 之間無異常音

H. ENVIRONMENTAL TEST 環境試驗

No.	Item	Test conditions	Evaluation standard
1	High temp. Test 高溫測試	After being placed in a chamber at +85°C for 96 hours 置於+85°C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. Should not be audible at 4.0Vrms sine wave between F0~8kHz. F0 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。且在輸入 4.0Vrms 正弦波從 F0 到 8kHz 之間無異常音。F0 與原規格值相同，輸出音壓變化量在±3dB 內。
2	Low temp. Test 低溫測試	After being placed in a chamber at -40°C for 96 hours. 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 95% RH relative humidity for 96 hours. 置於+40°C，相對濕度 95%環境中 96 小時	
4	Temp. cycle test 溫度循環測試	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： 	

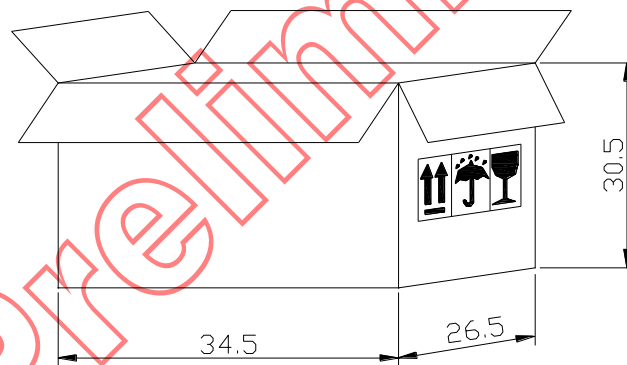
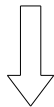
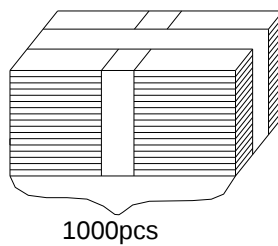
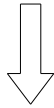
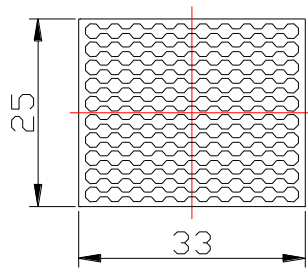
I. RELIABILITY TEST 信賴性試驗

No.	Item	Test conditions	Evaluation standard
1	Load test 連續負荷	2W pink noise is applied for 96 hours, at room temp. 在室溫下，輸入 2W，粉紅雜音連續操作 96 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 4.0V sine wave between F0 ~ 8KHz. F0 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。且在輸入 4.0V 正弦波從 F0 到 8KHz 之間無異常音。F0 與原規格值相同，輸出音壓變化量在±3dB 內。

TEST CONDITION.

Standard Test Condition: a) Temperature: +5 ~ +35°C b) Humidity: 45-85% c) Pressure: 860-1060mbar
 一般測試條件 a) 溫度: +5 ~ +35°C b) 濕度: 45-85% c) 氣壓: 860-1060mbar
 Judgment Test Condition a) Temperature: +25 ±2°C b) Humidity: 60-70% c) Pressure: 860-1060mbar
 爭議時測試條件 a) 溫度: +25 ±2°C b) 濕度: 60-70% c) 氣壓: 860-1060mbar

J. PACKING 包裝



Remark:
50pcs per tray
20 trays for unit
Total:1000 pcs per box
Size:34.5*26.5*30.5cm