

SPECIFICATION FOR APPROVAL

承 認 書

Description : **Micro Dynamic Speaker**

Kingstate Part No. : **KDSG25004C-20**

Customer's Model No. :

Specification No. : **DOD-3122**

Number Of The Edition : **1.2**

CUSTOMER'S APPROVED SIGNATURE

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KINGSTATE

志豐電子股份有限公司 KINGSTATE ELECTRONICS CORP.

Address:10F, No. 69-11, Sec. 2, Chung Cheng E. Rd., Tamshui County, Taipei Hsien, Taiwan, R.O.C.

International sales dept.: TEL:886-2-2809-5651 FAX:886-2-2809-7151

Domestic sales dept.: TEL:886-2-2809-0668 FAX:886-2-28096748

<http://www.kingstate.com.tw>

Approved by	Checked by	Issued by

RELEASE HISTORY 發行歷史

Version	Date	Description	Remark
1.1	3/8/16	Creation	
1.2	5/18/17	F0 修正為 300Hz	

Preliminary

A. SCOPE 範疇

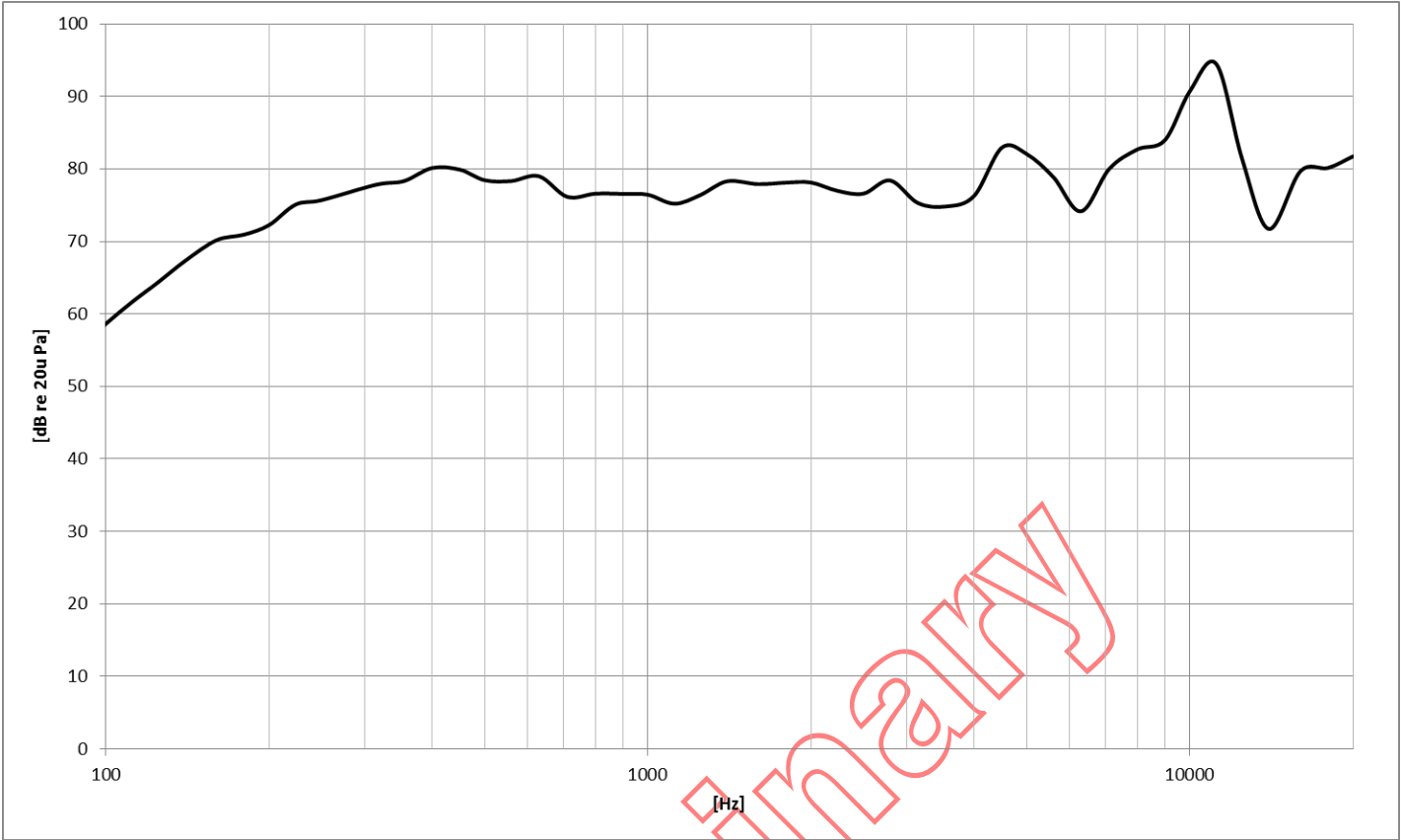
This specification applies speaker, **KDSG25004C-20**

此規格書適用於喇叭, **KDSG25004C-20**

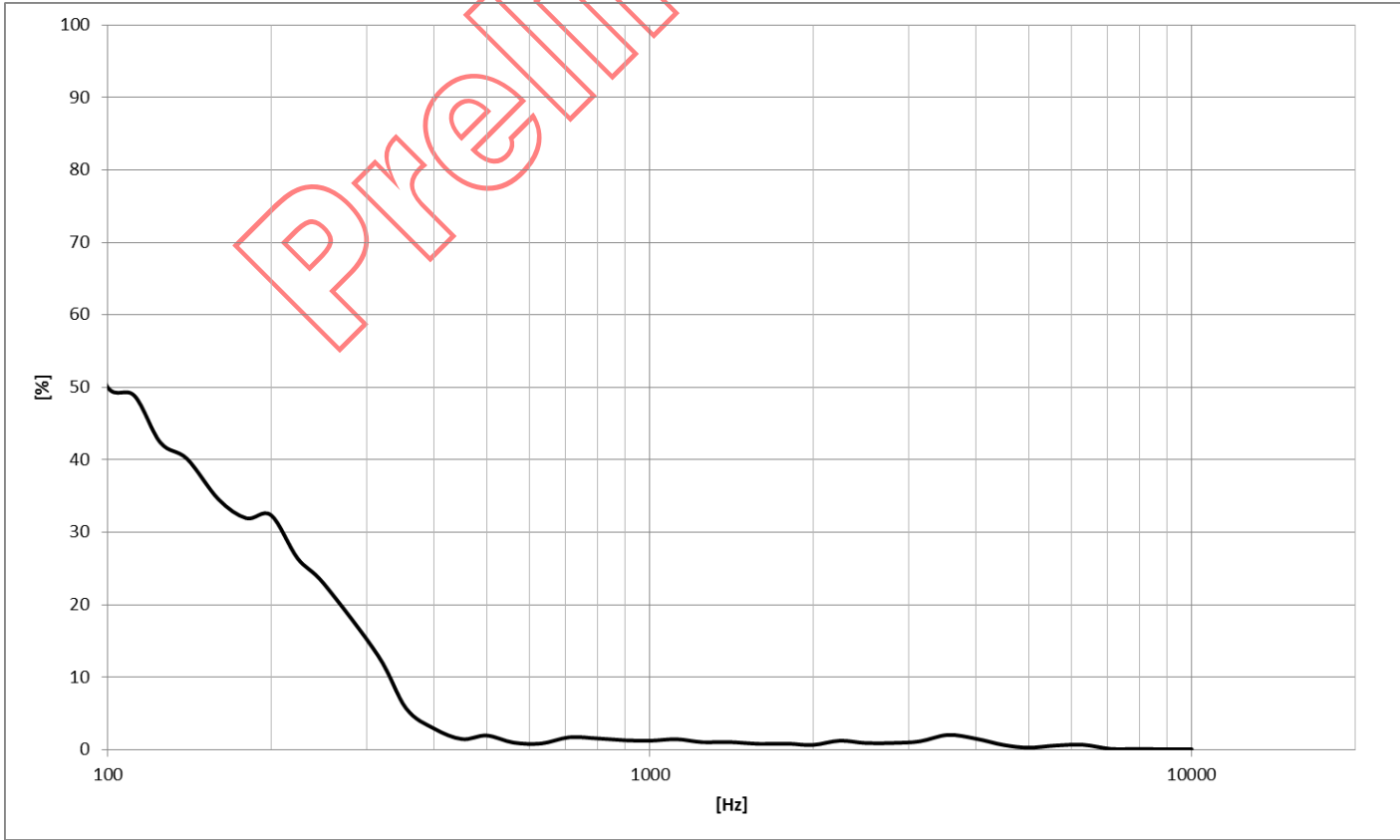
B. SPECIFICATION 規格

No.	Item	Symbol	Unit	Specification	Condition
1	Dimension 尺寸		mm	25 x 7.5	
2	Power Rating 功率		W	Rated. 2.0/ MAX. 2.5	Maximum Power:IEC-60268-5 Filter 60s On/120s Off 10 Cycles (Room TEMP.)
3	Impedance 阻抗	Ω	ohm	$4 \pm 15\%$	
4	Resonance Frequency 低音諧振	F0	Hz	$300 \pm 20\%$	
5	Output S.P.L. 音壓位準		dB	$79 \pm 3(1W/0.5m)$	@ AVE 0.8K 1.0K 1.2K 1.5K Hz
6	Frequency Range 有效頻寬		Hz	F0~20k	
7	Distortion 失真		%	Less than 5%	@1KHz input Rated Power
8	Voice Coil 音圈		mm	NA	
9	Magnet 磁石		mm	NA	Nd-Fe-B (鈹鐵鋁)
10	Flux Density 磁通密度		Gauss	NA	
11	Operating temp. 操作溫度		°C	-20 ~ +70	
12	Storage temp. 存儲溫度		°C	-40 ~ +85	
13	Buzz & Rattle 異常音				Not be audible at 2.83V sine wave between F0~10kHz 輸入 2.83V 正弦波從 F0 到 10kHz 之間無異常音
14	Weight 重量		g	3.0	
15	Material 材質			PPA	
16	Environmental Protection Regulation 環保法規			HSF	

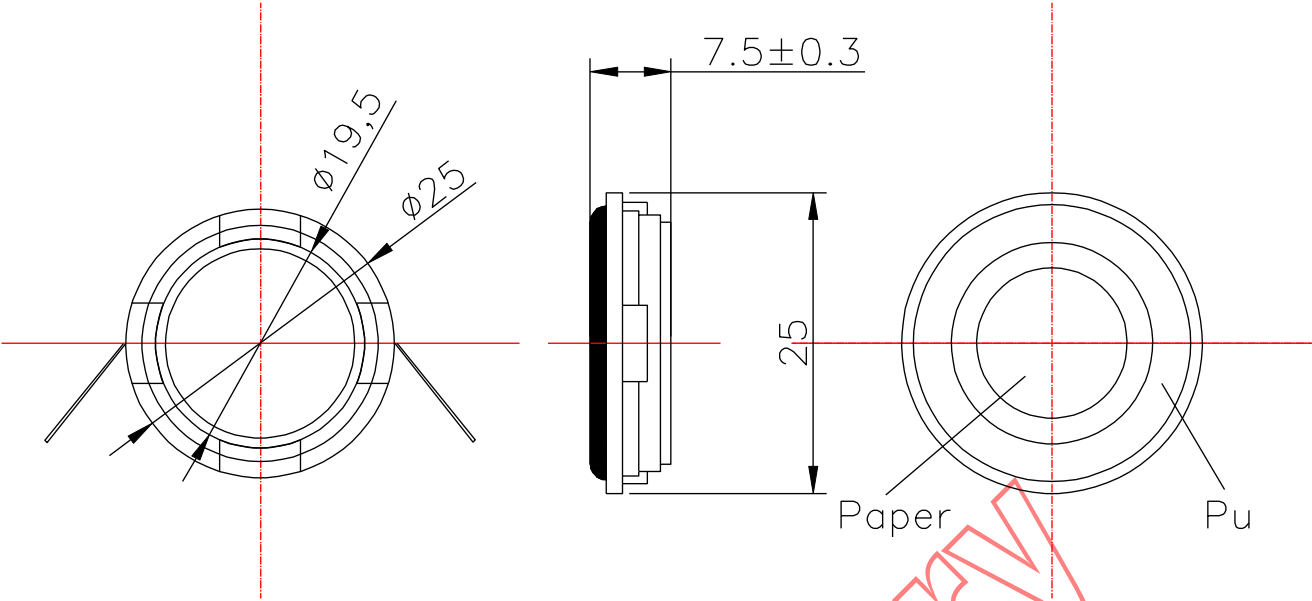
C. TYPICAL FREQUENCY RESPONSE CURVE 頻率響應曲線



D. DISTORTION CURVE 失真曲線



E. APPEARANCE DRAWING 外觀尺寸圖

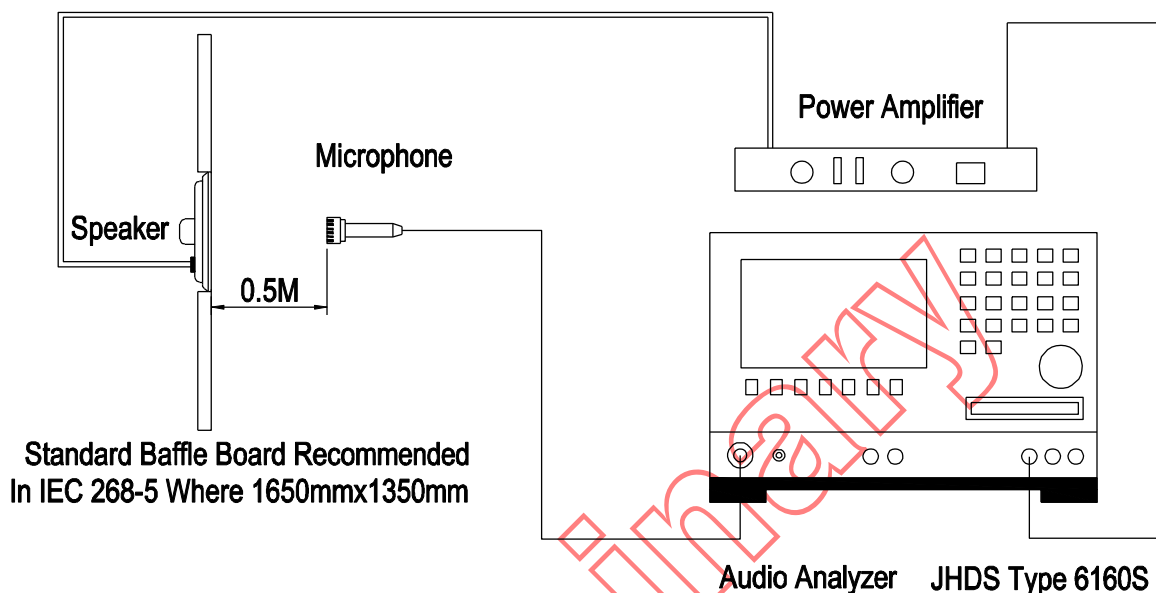


NOTE:TOLERANCE GENERAL UNLESS OTHERWISE NOTED :± 0.2mm
Unit :mm

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

F. MEASUREMENT CIRCUIT 測量線路

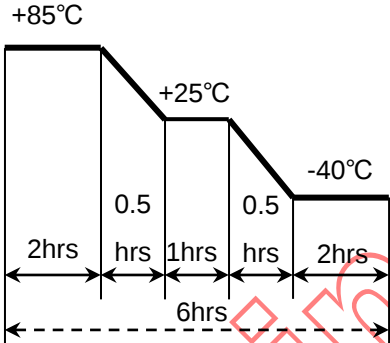
Standard test condition of speaker



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 $+270\pm5^{\circ}\text{C}$ for 3 ± 0.5 seconds. 裸線部份浸入松香溶液 5 秒後,再浸入 $+270\pm5^{\circ}\text{C}$ 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 : Horizontal 3.0N (0.306kg) for 30 seconds. Vertical 2.0N (0.204kg) for 30 seconds. 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 2.83V sine wave between F0 ~ 10kHz
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 2.83V 正弦波從 F0 到 10kHz 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 2.83Vrms sine wave between F0~10kHz. 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 2.83Vrms 正弦波從 F0 到 10kHz 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	2.0W pink noise is applied for 96 hours, at room temp. 在室溫下,輸入 2.0W,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 2.83V sine wave between F0 ~ 10kHz. 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 2.83V 正弦波從 F0 到 10kHz 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

Preliminary