

# SPECIFICATION FOR APPROVAL

## 承 認 書

Description : Micro Dynamic Speaker

Kingstate Part No. : KDSG1609008-05WA

Customer's Model No. : \_\_\_\_\_

Specification No. : DOD-8545

Number Of The Edition : 1.2

CUSTOMER'S APPROVED SIGNATURE		

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Approved by	Checked by	Issued by

## A. SCOPE 範疇

This specification applies speaker **KDSG1609008-05WA**

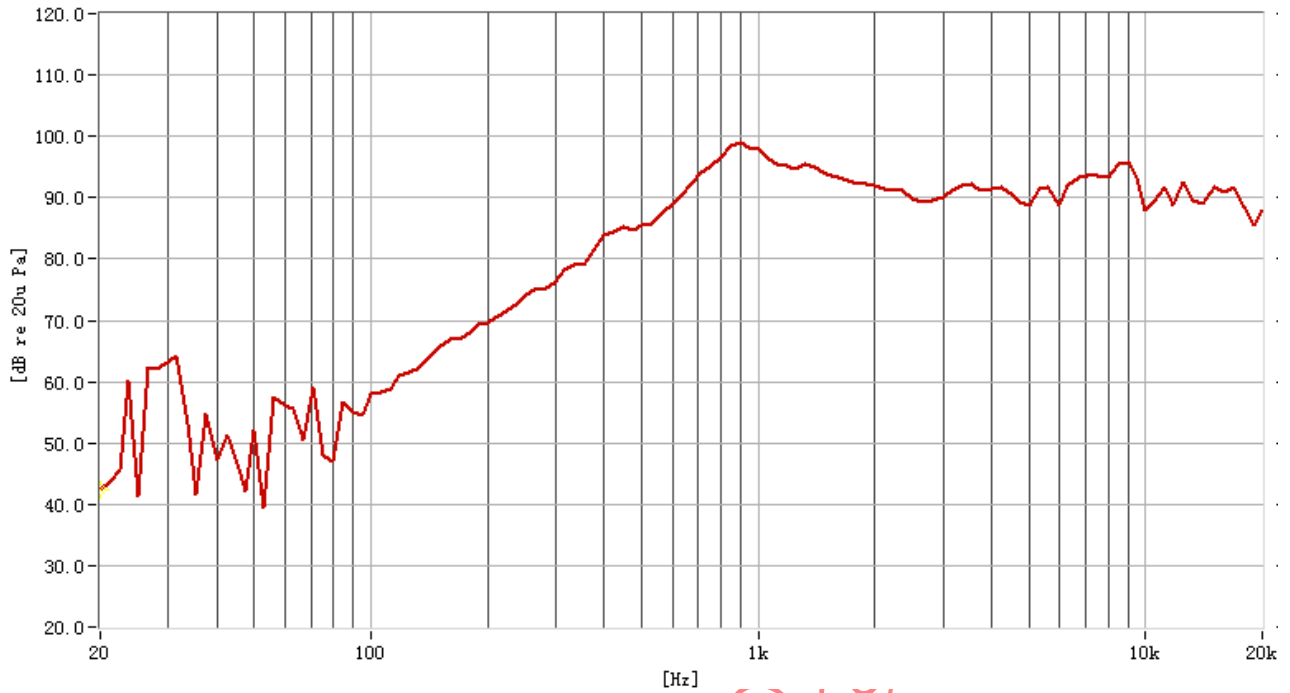
此規格書適用於喇叭, **KDSG1609008-05WA**

## B. SPECIFICATION 規格

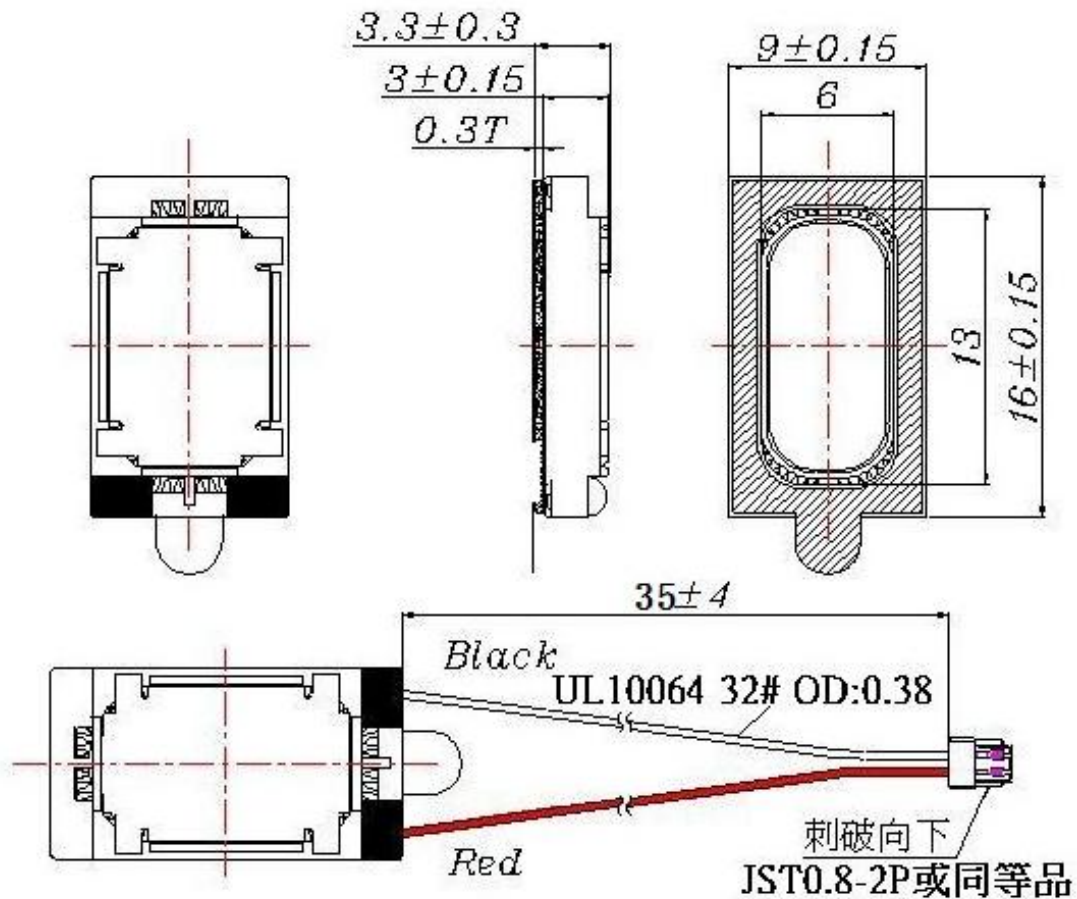
No.	Item	Symbol	Unit	Specification	Condition
1	Dimension 尺寸		mm	L16*W9*H3.3	Refer to attached drawing in details
2	Power Rating 功率		W	Rated: 0.5 / Max:1.0	Maximum Power: Must be normal at a white noise(1.0W) for one minute
3	Impedance 阻抗	$\Omega$	ohm	$8 \pm 10\%$	At 1.5KHz 1.0V
4	Resonance Frequency 低音諧振	Fo	Hz	$650 \pm 20\%$	
5	S.P.L. 音壓位準		dB	$94 \pm 3\text{dB}(0.5\text{W}/5\text{cm})$	At 1.0k,1.2k,1.5k,2.0k (Average figures)
6	Frequency Range 有效頻寬		Hz	FO---20K	
7	Distortion 失真		%	10% Max	At 0.5W/5cm 1KHz
8	Operating temp. 操作溫度		$^{\circ}\text{C}$	-20~+55	
9	Buzze & Rattle 異常音				Not be audible at 2.0V sine wave between Fo~ 20KHz 輸入2.0V 正弦波從 Fo~ 20KHz 之間無異常音
10	Weight 重量		g	1.1	
11	Material 材質				
12	Environmental Protection Regulation 環保法規			HSF	

**C. TYPICAL FREQUENCY RESPONSE CURVE 頻率響應曲線**

XY Graph 1

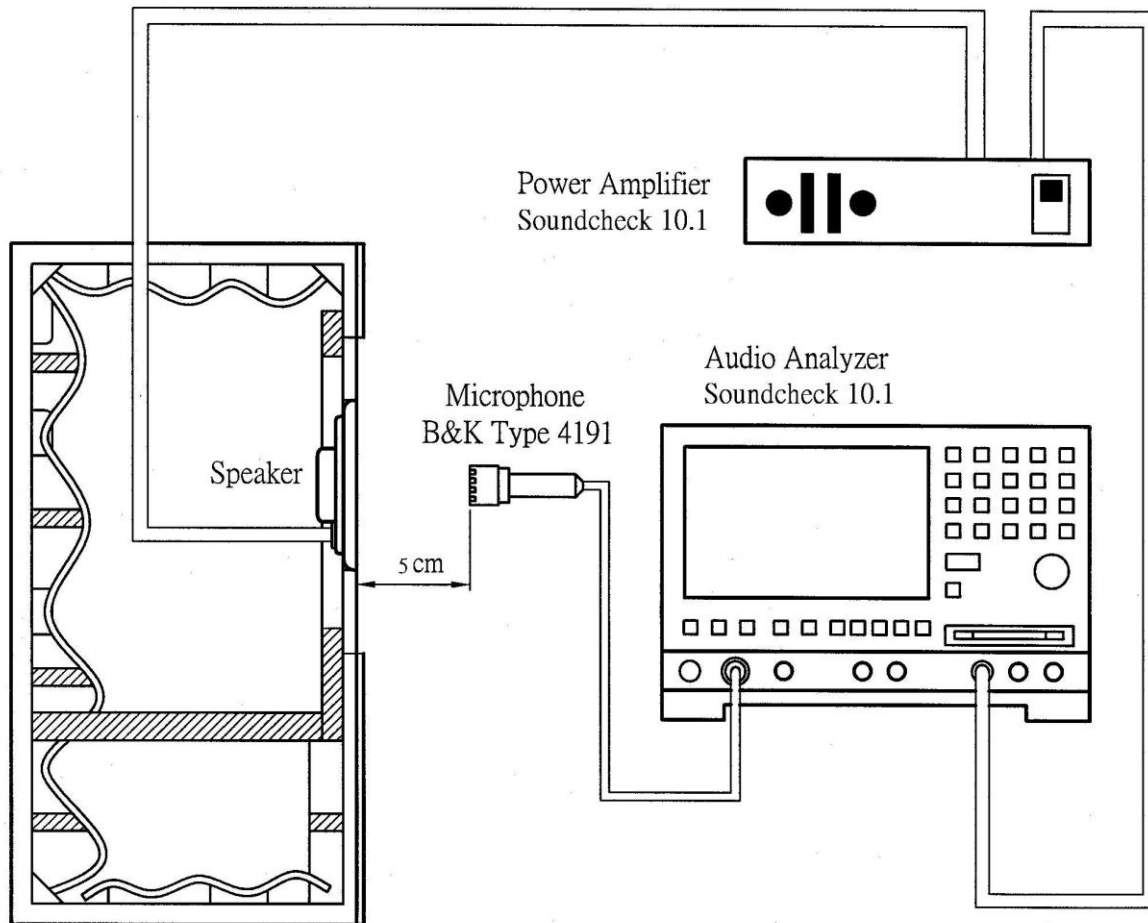


**D. APPEARANCE DRAWING 外觀尺寸圖**



**Tol:  $\pm 0.2$  Unit: mm**

## E. MEASUREMENT METHOD 測量路線

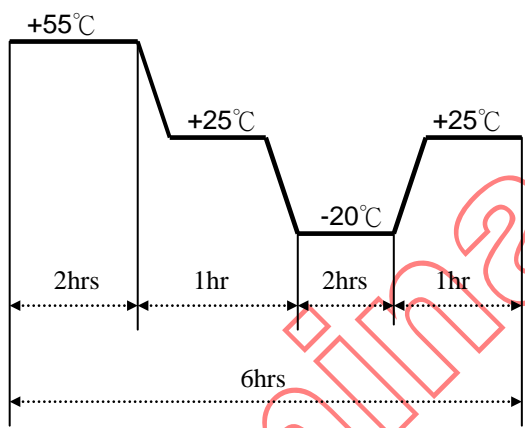


JIS C5531  
940mm x 640mm x 1240mm

## F. MECHANICAL CHARACTERISTICS 機械特性

No.	Item	Test conditions	Evaluation standard
1	Solderability 焊錫附着性 (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 $+270\pm 5^{\circ}\text{C}$ for $3\pm 0.5$ seconds. 裸線部份浸入松香溶液 5 秒後,再浸入 $+270\pm 5^{\circ}\text{C}$ 熔融焊錫槽 $3\pm 0.5$ 秒.	90% min. stripped wires shall be wet with solder. (Except the edge of terminal) 浸入裸線部份附着焊錫 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	Receiver 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 2.0V sine wave between Fo~20KHz
4	Drop test 落下測試	Drop the receiver contained in normal box onto the board 40mm thick 10 times from the height of 75cm 將受話器置於盒中, 自 75 公分高度落在 40mm 木板上共 10 次.	輸入 2.0V 正弦波從 Fo~20KHz 之間無異常音

## G. ENVIRONMENT TEST 環境測試

No.	Item	Test conditions	Evaluation standard
1	High temp. Test 高溫測試	After being placed in a chamber at +55°C for 96hours 置於+55°C環境 96 小時	Being placed for 1 hours at +25°C, receiver 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~20KHz. 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 2.0V 正弦波從 Fo~20KHz 之間無異常音。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 -20°C for 96 hours. 置於-20°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±5%RH relative humidity for 96 hours. 置於+40°C，相對濕度 95±5%環境中 96 小時。	
4	Thermal cycle test 溫度循環測試	The part shall be subjected to 6 cycles. One cycle shall be consist of : 單體承受溫度循環測 6 次，其循環內容如圖示： 	

## H. RELIABILITY TEST 信賴性測試

No.	Item	Test conditions	Evaluation standard
1	Load test 連續負荷	0.5W white noise is applied for 96 hours, at room temp. 在室溫下，輸入功率 0.5W，白雜音連續操作 96 小時。	Being placed for 1 hours at +25°C, receiver 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~20KHz. 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 2.0V 正弦波從 Fo~20KHz 之間無異常音。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 : 850-1050mbar
一般測試條件	: a) 溫度 : +5 ~ +35°C	b) 濕度 : 45-85%	c) 氣壓 : 850-1050mbar
Judgement Test Condition	: a) Temperature : +25 ± 2°C	b) Humidity : 50-70%	c) Pressure : 850-1050mbar
爭議時測試條件	: a) 溫度 : +25 ± 2°C	b) 濕度 : 50-70%	c) 氣壓 : 850-1050mbar

## I. PACKING STANDARD 包裝規格

Each minimum package unit of products shall be in a carton box and it shall be clearly marked with Part Number, quantity and outgoing inspection number. There shall be no mechanical damage on products during transportation and/or in storage.

外箱須標示最小包裝單位，並註明產品型號、數量及檢驗批號，必須是物品儲藏或運輸過程中可防止造成損傷的包裝。

Preliminary