

SPECIFICATION FOR APPROVAL

承 認 書

Description : Micro Dynamic Speaker

Kingstate Part No. : KDSG37045-020-C2

Customer's Model No. : _____

Specification No. : DRD-B433

Number Of The Edition : 1.1

CUSTOMER'S APPROVED SIGNATURE

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

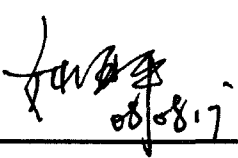
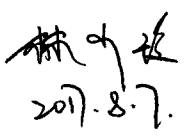


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Approved by	Checked by	Issued by
 08.08.17	 2017.8.7.	王川 2017.08.07

A. SCOPE 範疇

This specification applies speaker, **KDSG37045-020-C2**

此規格書適用於喇叭, **KDSG37045-020-C2**

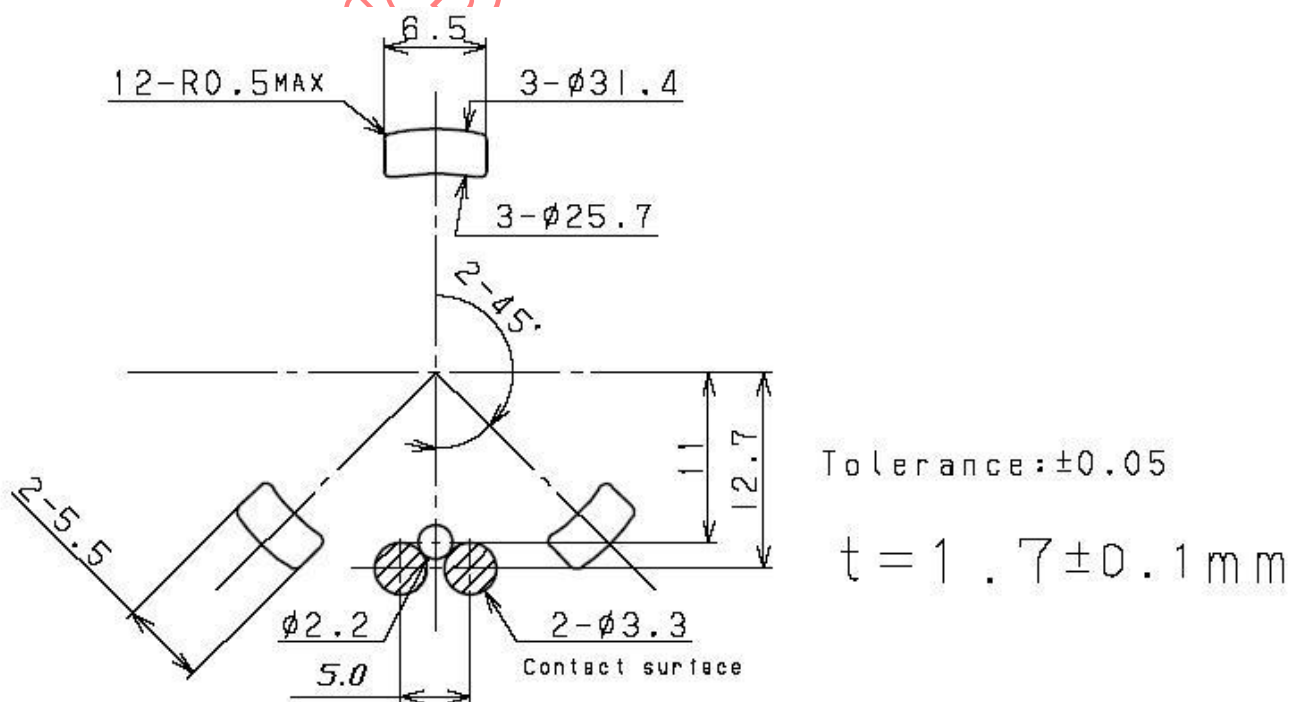
B. SPECIFICATION 規格

No.	Item	Symbol	Unit	Specification	Condition
1	Dimension 尺寸		mm	Φ 37.0 x 22H	
2	Power Rating 功率		W	Rated. 0.2/ MAX. 0.4	Maximum Power:IEC-60268-5 Filter 60s On/120s Off 10 Cycles (Room TEMP.)
3	Impedance 阻抗	Ω	ohm	$45 \pm 15\%$	At 1.5KHz 1.0V
4	Resonance Frequency 低音諧振	Fo	Hz	$480 \pm 20\%$	At 1.0V
5	Output S.P.L. 音壓位準		dB	$92 \pm 3\text{dB}(0.2\text{ w}/0.1\text{m})$	At 1.0k,1.5k,2.0k,3.0kHz (Average figures)
6	Frequency Range 有效頻寬		Hz	Fo---10K	Output S.P.L. $\pm 10\text{dB}$
7	Distortion 失真		%	5% Max.	At 1.0kHz , 0.2W
8	Voice Coil 音圈		mm	ϕ 13.28	
9	Magnet 磁石		mm	ϕ 12.5 X 1.2H	Nd-Fe-B (鈹鐵硼)
10	Flux Density 磁通密度		Gauss		
11	Operating temp. 操作溫度		$^{\circ}\text{C}$	-40 ~ +105	
12	Buzze & Rattle 異常音				Not be audible at 3.0V sine wave between Fo ~ 10KHz 輸入 3.0V 正弦波從 Fo 到 10KHz 之間無異常音
13	Weight 重量		g	9.5	
14	Material 材質			PBT+15%玻纖 / PC	
15	Environmental Protection Regulation 環保法規			RoHS2.0	

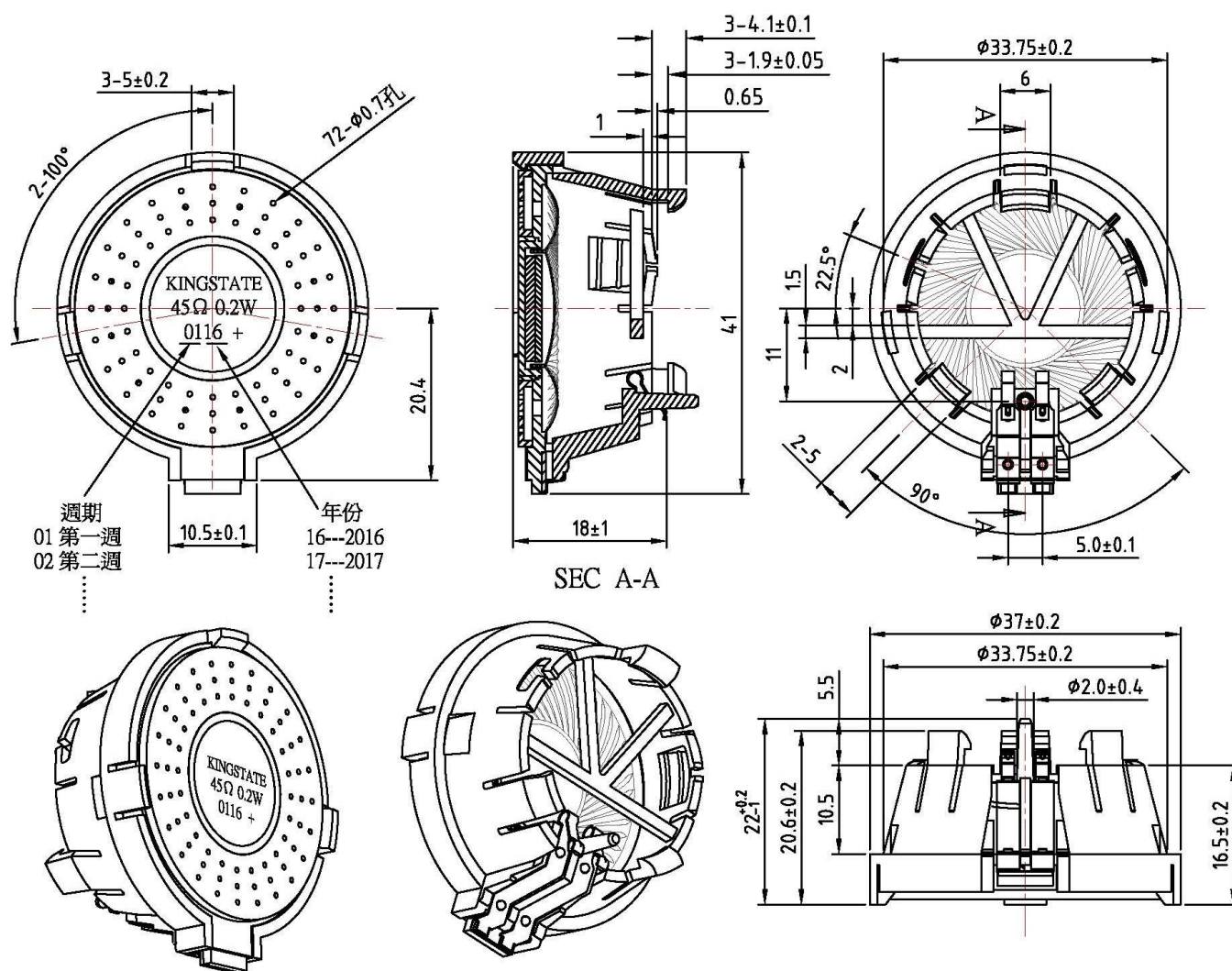
C. TYPICAL FREQUENCY RESPONSE CURVE 頻率響應曲線



D. RECOMMENDED PCB DRAWING 建議安裝基板尺寸圖

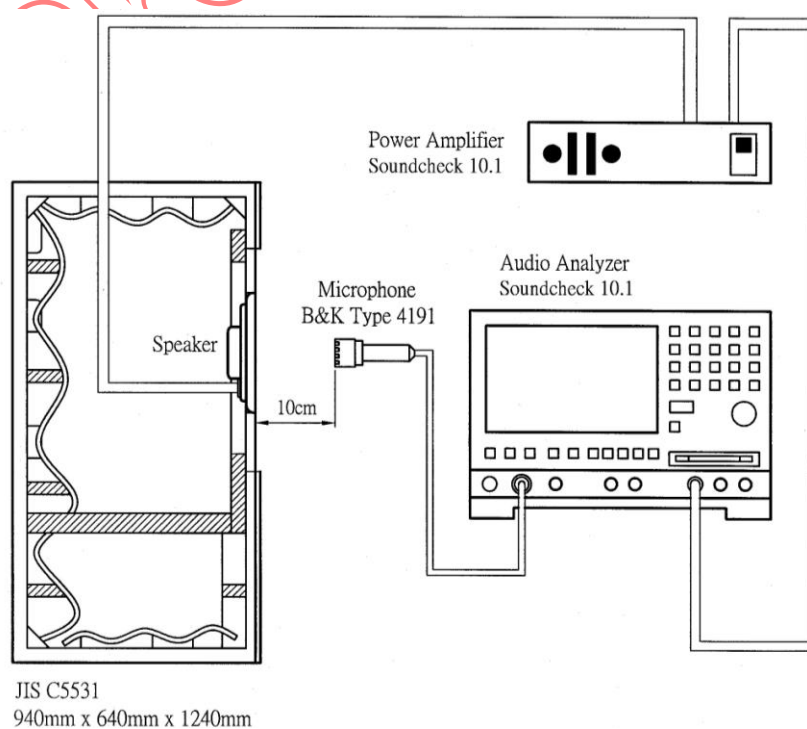


E. APPEARANCE DRAWING 外觀尺寸圖

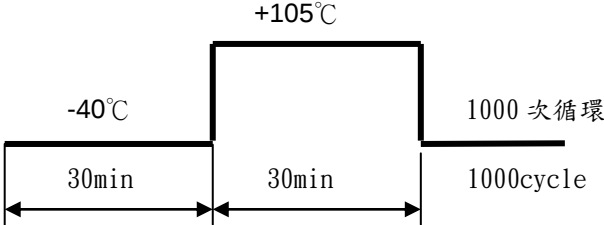
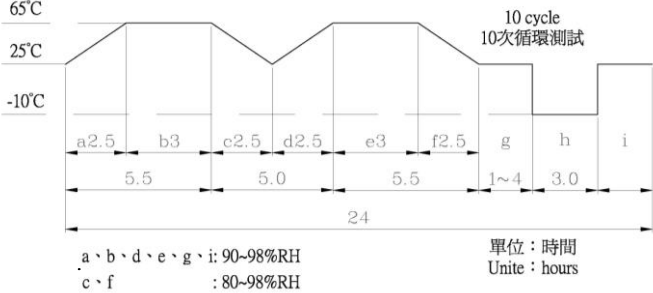
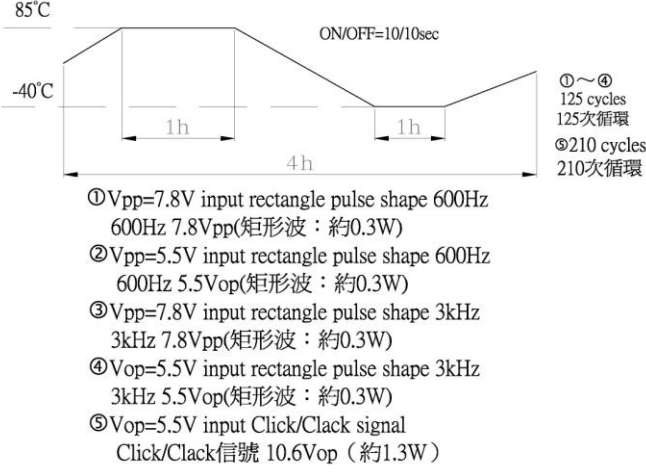


Tol: ± 0.3 Unit: mm

F. MEASUREMENT CIRCUIT 測量線路



G. RELIABILITY TEST 信賴性試驗

No.	Item	Test conditions	Evaluation standard
1	High temp.preservation 1 高溫保存實驗 1	Exposure to 120°C for 96 hours 置於+120°C 環境中 96 小時	Being placed for 24 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 3.0V sine wave between Fo ~ 10KHz. 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 24 小時後，測試後無任何障礙防礙正常操作。且在輸入 3.0V 正弦波從 Fo 到 10KHz 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 temp.preservation 2 高溫保存實驗 2	Exposure to 85°C for 1000 hours 置於+85°C 環境中 1000 小時	
3	Low temp. preservation 低溫保存實驗	Exposure to -40°C for 1000 hours. 置於-40°C 環境中 1000 小時	
4	Humidity test 熱沖擊試驗	 1000 次循環 1000cycle	
5	Termal, Humidity cycle 溫濕度循環測試	 10 cycle 10次循環測試 單位：時間 Unit: hours	
6	Ordinary Temp.life 常溫壽命測試	Room Temperature, 440Hz, 0.2W input. 1000 hours 常溫 440Hz, 0.2W, 1000 時間鳴動	
7	Hight Temp.life 高溫壽命測試	+105°C, 440Hz, 0.2W input. 500 hours +105°C, 440Hz, 0.2W, 500 時間鳴動	
8	Low Temp.life 低溫壽命測試	-40°C, 440Hz, 0.2W input. 500 hours -40°C, 440Hz, 0.2W, 500 時間鳴動	
9	Max input test 最大入力試驗	Room temp input: 440Hz, 0.4W 1minute/on-2min/off, 10cycle 常溫 440Hz, 0.4W, 1 分鐘開 2 分鐘關, 10 個循環	
10	Termal, cycle life 溫度壽命循環測試	 ON/OFF=10/10sec ①~④ 125 cycles 125次循環 ⑤ 210 cycles 210次循環 ① Vpp=7.8V input rectangle pulse shape 600Hz 600Hz 7.8Vpp(矩形波：約0.3W) ② Vpp=5.5V input rectangle pulse shape 600Hz 600Hz 5.5Vop(矩形波：約0.3W) ③ Vpp=7.8V input rectangle pulse shape 3kHz 3kHz 7.8Vpp(矩形波：約0.3W) ④ Vop=5.5V input rectangle pulse shape 3kHz 3kHz 5.5Vop(矩形波：約0.3W) ⑤ Vop=5.5V input Click/Clack signal Click/Clack信號 10.6Vop (約1.3W)	
11	Humidity preservation 濕度保存測試	Exposure to 40°C 93%RH 1000hours 40°C, 濕度 93%的環境下放置 1000 小時	

12	Vibration Test1 振動測試 1	10 ~ 200 ~ 10Hz Sine wave, Sweep 15min, 49 m/s ² (const) X.Y.Z 3direction 2hours each, Total 6 hours 10~200~10Hz 正弦波，掃引15分，49m/s ² (一定) X. Y. Z 3 方向各2時間 計6時間	
13	Vibration Test2 振動測試 2	10~55Hz: 振幅 Amplitude ±0.75mm 55~2000Hz: 加速度 Acceralation 10G(98 m/s ²) 1-oct/min, X, Y, Z 3方向各24時間 3 directions 24hours each	
14	Free drop 1 自由落下試驗 1	Free drop on concrete 100cm height. X.Y.Z every surface x 1 times, Total 3times. 自由落下，自 100cm 高度落在地面上，X. Y. Z 各方向 1 回 計 3 回落下	
15	Free drop 2 自由落下試驗 2	Free drop on concrete 120cm height. Total 30times. 自由落下，自 120cm 高度落在地面上，30 次落下	Being placed for 24 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 3.0V sine wave between Fo ~ 10KHz. Fo should meet initial one. S.P.L. deviation of unit should be within 3dB Exclude bending of pin. 經測試後，靜置於+25°C (室溫) 環境中 24 小時後，測試後無任何障礙防礙正常操作。且在輸入 3.0V 正弦波從 Fo 到 10KHz 之間無異常音。Fo 與原規格值相同輸出音壓變化量在 3dB 內。 PIN 不可以變形
16	Terminal strength 端子拉力強度	Min 2.5N	No damage and cutting off. 不鬆動, 不脫落.

H. PACKING STANDARD 包裝規格

