

SPECIFICATION FOR APPROVAL

承 認 書

Description : Micro Dynamic Speaker

Kingstate Part No. : KDSG37045-020-B

Customer's Model No. : 8009111002

Specification No. : PKD-8658

Number Of The Edition : 1.1

CUSTOMER'S APPROVED SIGNATURE		

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



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Approved by	Checked by	Issued by

A. SCOPE 範疇

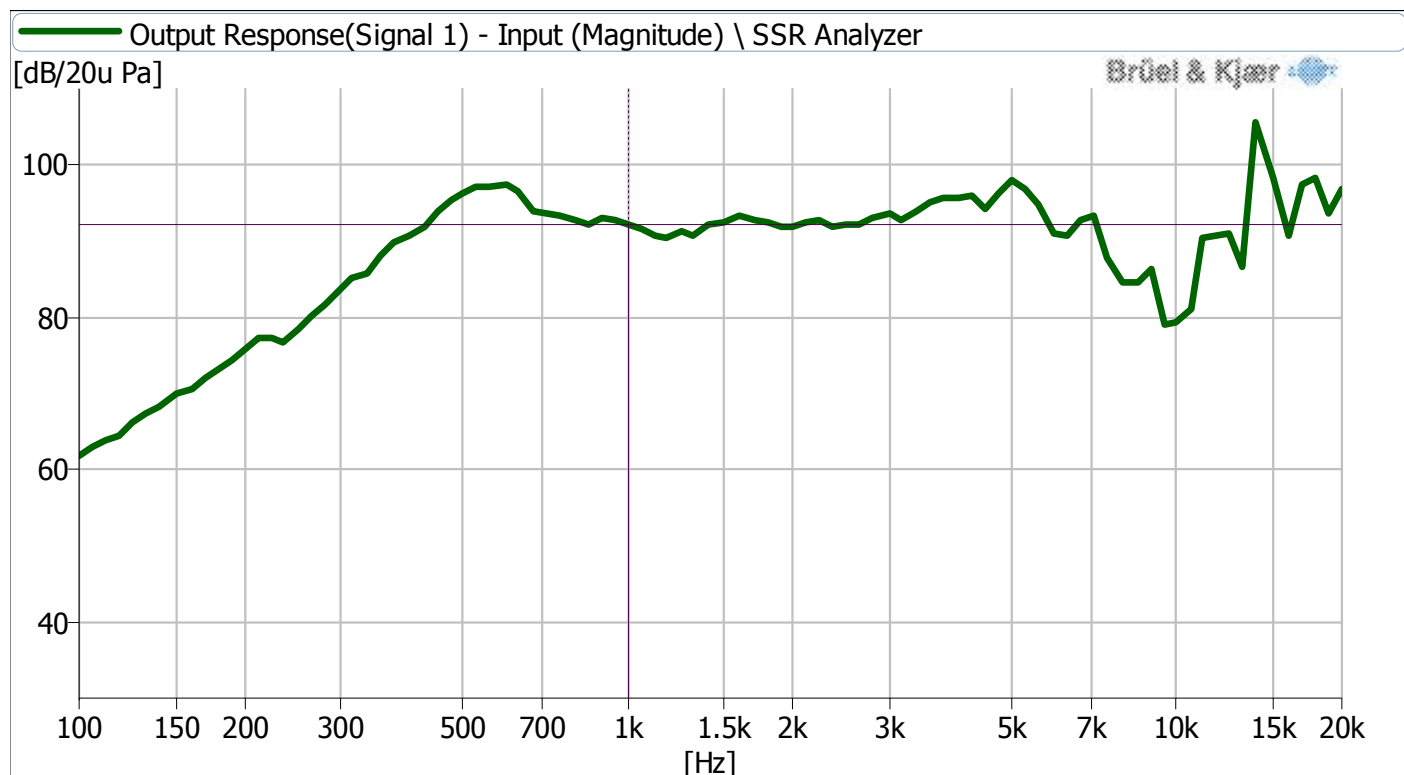
This specification applies speaker, **KDSG37045-020-B**

此規格書適用於喇叭, **KDSG37045-020-B**

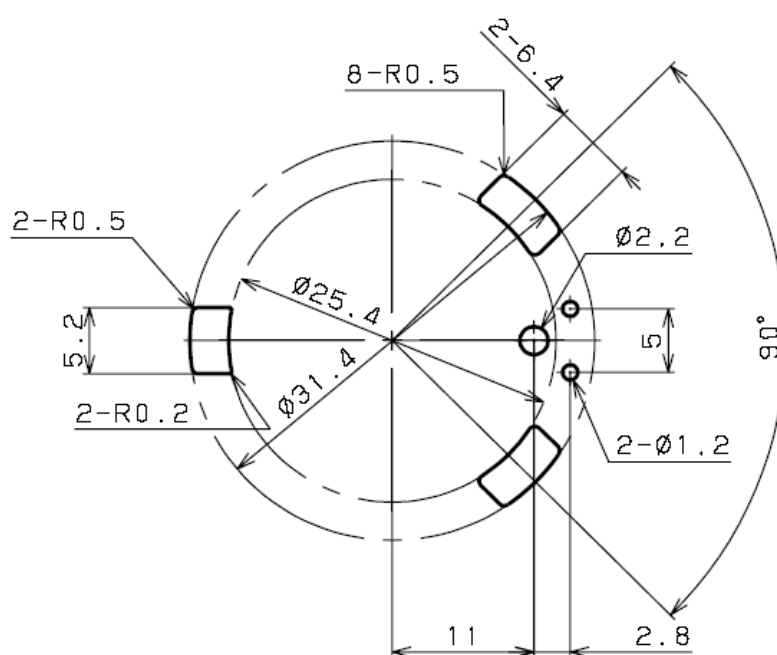
B. SPECIFICATION 規格

No.	Item	Symbol	Unit	Specification	Condition
1	Dimension 尺寸		mm	$\Phi 37.0 \times 22H$	
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	$92 \pm 3dB(0.2 \text{ w}/0.1m)$	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. $\pm 10dB$
7	Distortion 失真		%	5% Max.	At 1.0kHz , 0.2W
8	Voice Coil 音圈		mm	$\varphi 13.28$	
9	Magnet 磁石		mm	$\varphi 12.5 \times 1.2H$	Nd-Fe-B (鈹鐵硼)
10	Flux Density 磁通密度		Gauss		
11	Operating temp. 操作溫度		°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	9.3	
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



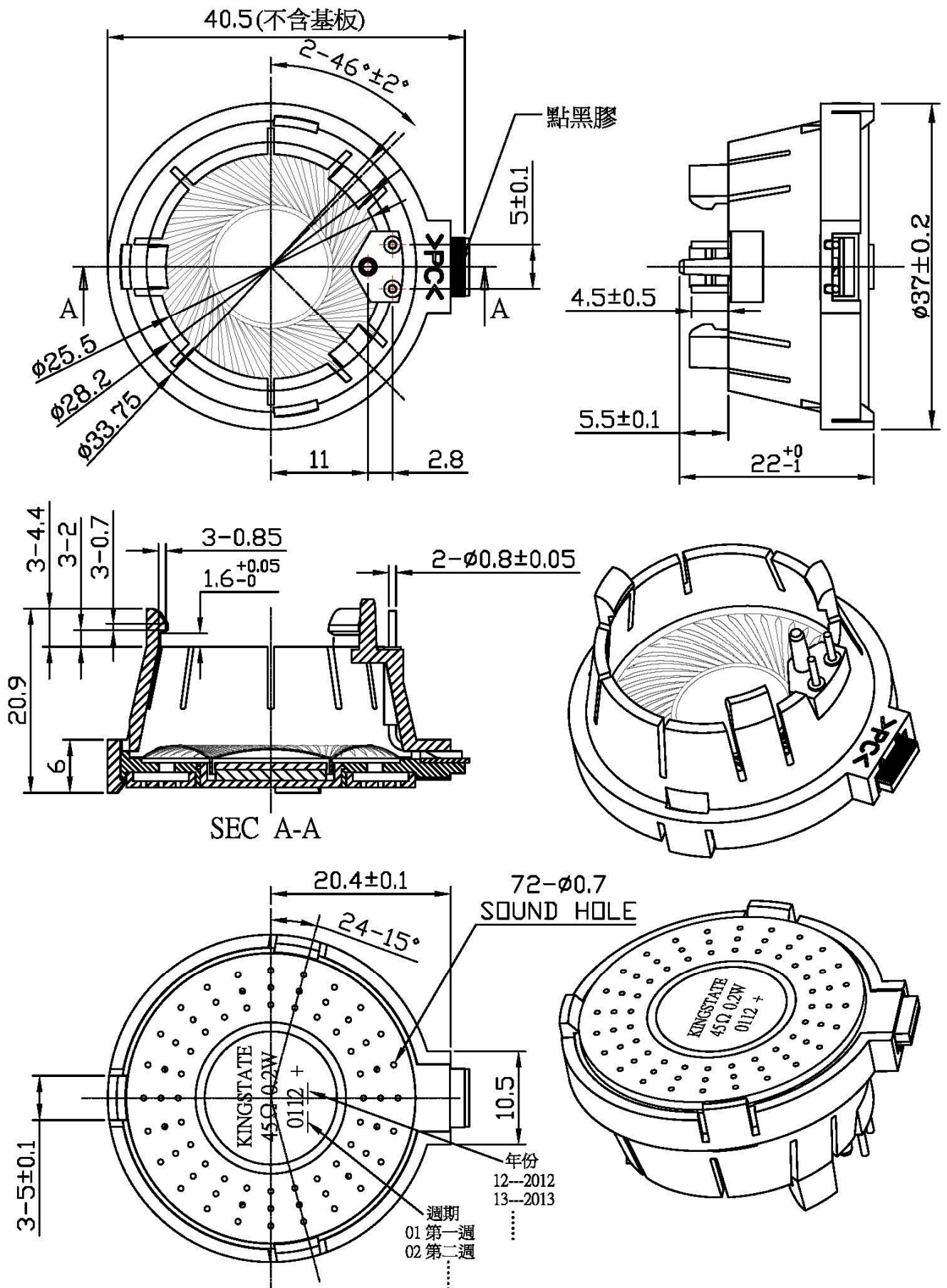
D. RECOMMENDED PCB DRAWING 建議安裝基板尺寸圖



tolerance ± 0.1

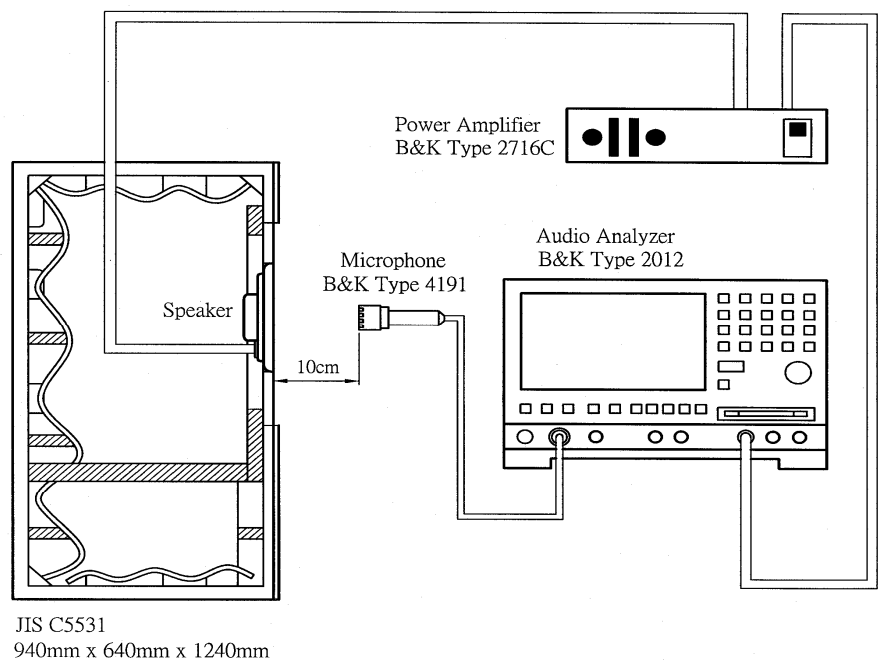
$t = 1.6 \text{ mm}$

E. APPEARANCE DRAWING 外觀尺寸圖



Tol: ± 0.3 Unit: mm

F. MEASUREMENT CIRCUIT 測量線路

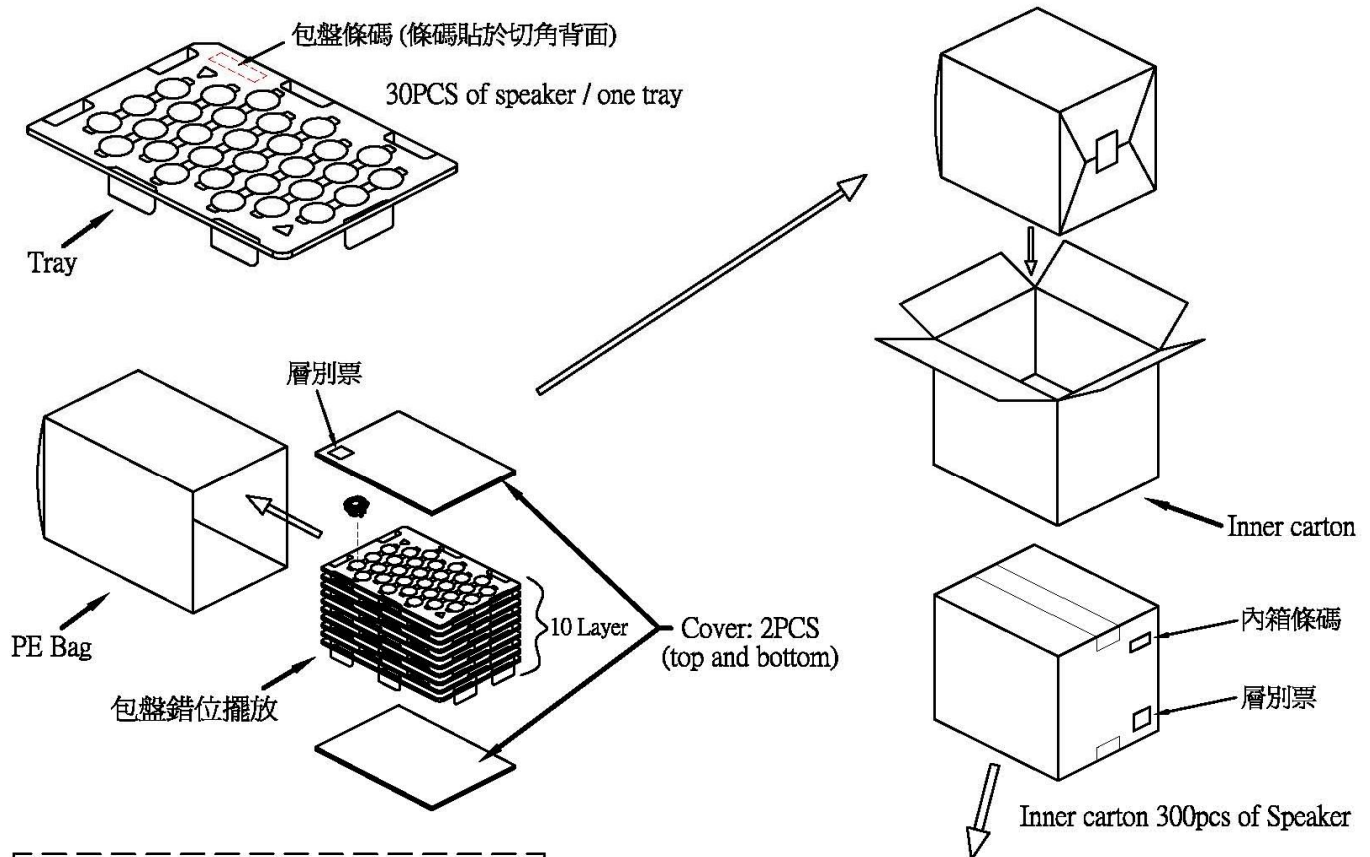


G. RELIABILITY TEST 信賴性試驗

No.	Item	Test condition	Evaluation standard
1	High temp. preservation 高溫保存測試	Exposure to 120°C for 96 hours. 在 120°C 環境下放置時間 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	Low temp. preservation 低溫保存測試	Exposure to -40°C for 96 hours. 在 -40°C 環境下放置時間 96 小時.	
3	Thermal Shock 熱衝擊測試	+105°C -40°C 30min 30min 1000個循環 (1000 cycles)	
4	Temp. cycle test 溫度循環測試	65°C 25°C -10°C 10 個循環 10 cycles a2.5 b3 c2.5 d2.5 e3 f2.5 g h i 5.5 5.0 5.5 1~4 3.0 24 a、b、d、e、g、i: 90 ~ 98%RH c、f : 80 ~ 98%RH 單位：小時 Unit: hours	
5	Ordinary Temp life 常溫壽命測試	Room Temperature, 440Hz, 0.2W input, working 1000hours 在室溫下，440Hz、0.2W、工作 1000 小時	
6	High Temp life 高溫壽命測試	+105°C, 440Hz、0.2W input, working 500hours +105°C, 440Hz、0.2W、工作 500 小時	
7	Low Temp life 低溫壽命測試	-40°C, 440Hz、0.2W input, working 500hours -40°C, 440Hz、0.2W、工作 500 小時	

8	Max power test 最大功率測試	Room temp. input: 440Hz、0.4W, 1min/on-2min/off,10 cycles. 在室溫下，440Hz、0.4W, 1 分鐘開，2 分鐘關，10 個循環	
9	Vibration Test 振動測試	10~200~10Hz Sinewave，Sweep 15min ,49m/s ² (const) X、Y、Z 3Direction 2 hours each,Total 6hours。 10~200~10Hz,正弦波工作 15 分鐘，49m/s ² (一定) X、Y、Z 3 個方向各 2 小時，共計 6 小時。	
10	Solder Heat Resistance 端子焊錫耐熱性測試	Solder temperature: 350±10℃ Soaking time: 3.5±0.5sec 焊錫溶解溫度：350±10℃ 浸漬時間：3.5±0.5 秒	
11	Fixed drop Test 固定跌落測試	Fix onto standard Jig,drop on concrete 100cm height.Every 6 surface x 1 times,Total 6 times. 使用專用治具固定在離地面 100cm 高度跌落，6 面各跌落一次，共計跌落 6 次。	Being placed for 24 hours at +25℃, 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.
12	Free drop Test 自由跌落測試	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	經測試後，靜置於+25℃（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
13	Solderability 端子焊接性測試	40℃,90~95%RH 條件下放置 240 小時後， 焊錫槽溶錫溫度：265±5℃ 焊錫浸漬時間：2±0.5sec Pretreatment: 40℃,90~95%RH x 240hours Soldering into solderbath:Solder Temp. 265±5℃ Soaking Time 2±0.5sec	95% surface of leade pins must be covered with fresh solder and no soldering holess should be found. Pin95%表面要沾錫，不可假焊。
14	Terminal strength 端子拉力強度	Pulled in the direction along the pin axis. 22.2N,沿著端子方向進行負荷測試	No damage and cutting off. 不鬆動,不脫落。

H. PACKING STANDARD 包裝規格



層別票 (Label)

Lot No.	XXXXXXXXXX
Model No.	8009111002 KDSG37045-020-B
Quantity.	XXXX Pcs
Date: (例:0108)	

HSF

KINGSTATE ELECTRONICS CORP.

(層別票不允許出現塗改現象)

外箱條碼 (料號: MTGLB0037-1)



內箱條碼 (料號: MTGLB0037-2)



包盤條碼 (料號: MTGLB0037-3)



備註: 所貼條碼要保證能被讀

外箱條碼

層別票

