

# SPECIFICATION FOR APPROVAL

承 認 書

Description : Electret Condenser Microphone

Kingstate Part No. : KEIG4537FL-N

Customer's Model No. :

Specification No. : POD-5137

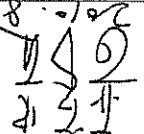
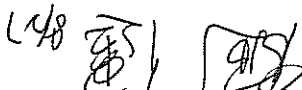
Number Of The Edition : 1.1

<b>CUSTOMER'S APPROVED SIGNATURE</b>		

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Approved by  2010.8.27	Checked by  8/27	Issued by Merry 08/27/10
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## A. SCOPE 範疇

This specification applies electret condenser microphone, KEIG4537FL-N  
此規格書適用於電容式麥克風 KEIG4537FL-N

## B. SPECIFICATION 規格

No.	Item	Symbol	Unit	Specification	Condition
1	Directionality			Unidirectional	單指向
2	Sensitivity	S	dB	-37 ± 3	f=1KHz, 1Pa 0dB=1V/Pa
3	Standard operating voltage	Vs	V D.C.	1.5	
4	Output impedance	Zout	KΩ	1.8 ± 30%	f=1KHz, 1Pa
5	Max operating voltage	V D.C.		9	
6	Sensitivity reduction	ΔS-Vs	dB	-3	f=1KHz, 1Pa Vs=1.5V D.C. to 1.0V D.C.
7	Frequency	f	Hz	100 ~ 12,000	
8	Max. current consumption	I <sub>DSS</sub>	mA	0.4	Vs=1.5V D.C. RL=2.0KΩ
9	Signal to noise ration	S/N	dB	69	f=1KHz, 1Pa A weighted
10	Operation temp.		°C	-20 ~ +70	
11	Storage temp.		°C	-20 ~ +70	
12	Dimension		mm	φ 9.7 x 4.5	See appearance drawing 請參照外觀尺寸圖
13	Weight (MAX)		gram	0.8	
14	Material			AL	鋁
15	Terminal			Terminal type	See appearance drawing 請參照外觀尺寸圖
16	Environmental Protection			RoHS	環保法規

We use "Pascal(Pa)" indication of sensitivity as per the recommendation of I.E.C.(International Electro technical Commission).  
The Sensitivity of "Pa" will increase 20dB comparing with "ubar" indication.

Example: -60dB(0dB=1V/ubar) = -40dB(1V/Pa)

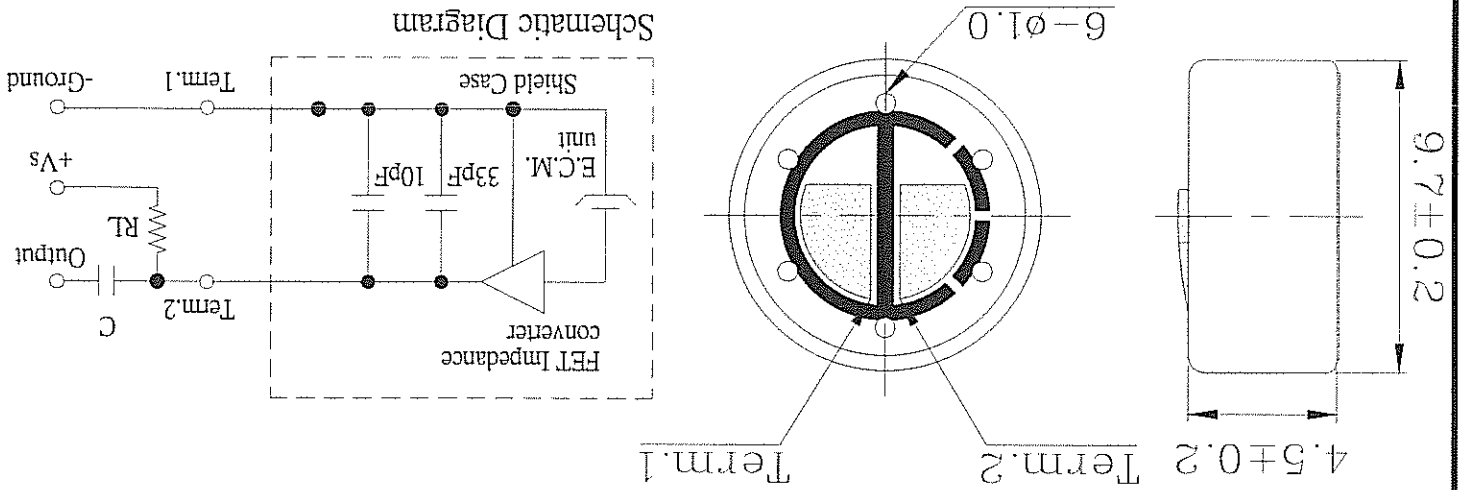
依 I.E.C.(國際電子協會)建議,以"Pa"為靈敏度標示單位比"ubar" 靈敏度標示單位增加 20dB

例如: -60dB(0dB=1V/ubar) = -40dB(1V/Pa)

Unit:mm

TOL:±0.20

RL=2.0KΩ



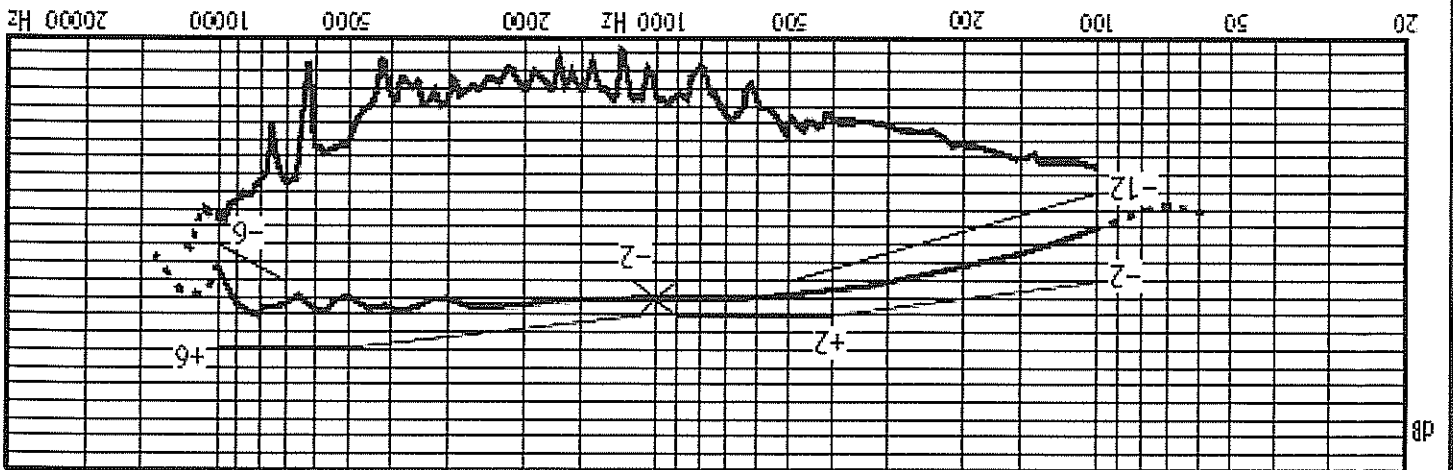
Microphone Complete

外觀尺寸圖

D. APPEARANCE DRAWING

測量線路

E. MEASUREMENT CIRCUIT

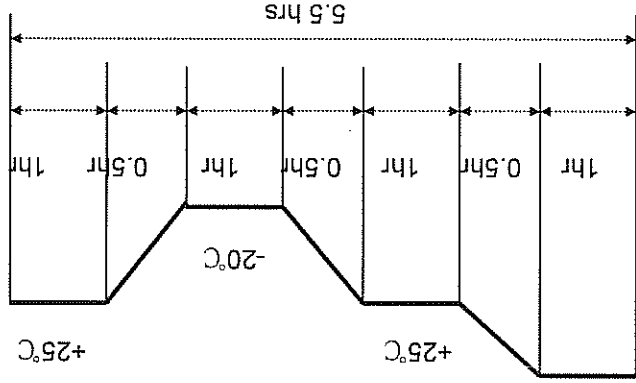


C. TYPICAL FREQUENCY RESPONSE CURVE 頻率響應曲線

## F. MECHANICAL CHARACTERISTICS 機械特性

No.	Item	Test condition	Evaluation standard
1	Soldering Heat Resistance	Soldering iron of +270±5°C should be placed on the terminal for 2±0.5 seconds. 端子部份置於+270±5°C烙鐵上 2±0.5 秒。	No interference in operation 操作無任何不良
2	PCB Wire Pull Strength	The pull force shall be applied to double lead wire : Horizontal 4.9N(0.5kg) for 30 seconds. 雙線材水平方向施以 4.9N(0.5kg) 的力量, 30 秒。	No damage and cutting off. 不鬆動, 不脫落。
3	Vibration Test	The part 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。	After any tests, the sensitivity to be within ±3dB 測試其靈敏度須與原測試值的差異不超過±3dB。
4	Drop Test	The part unit without packaged must be subjected to each 3 drops at three axes from the height of 1 meter to 20 mm thick wooden board. The part shall be subjected to 10 cycles. One cycle shall be consist of: 單體承受溫度循環測試 10 次, 其循環內容如圖示: 置於+70°C 環境中 72 小時 置於-20°C 環境中 72 小時 置於+40°C, 相對濕度 90±5% 環境中 240 小時	測試其靈敏度須與原測試值的差異不超過±3dB。

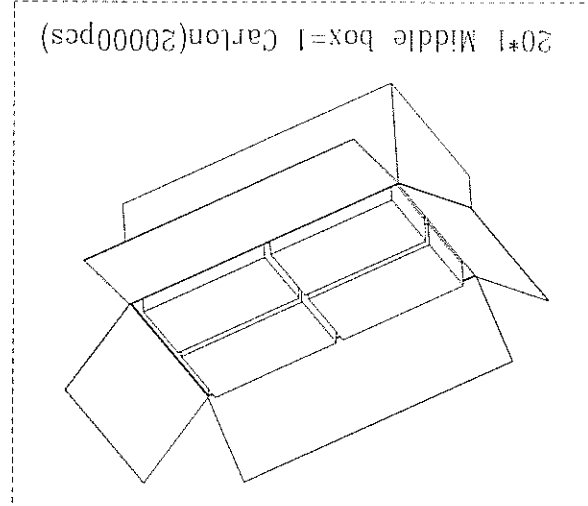
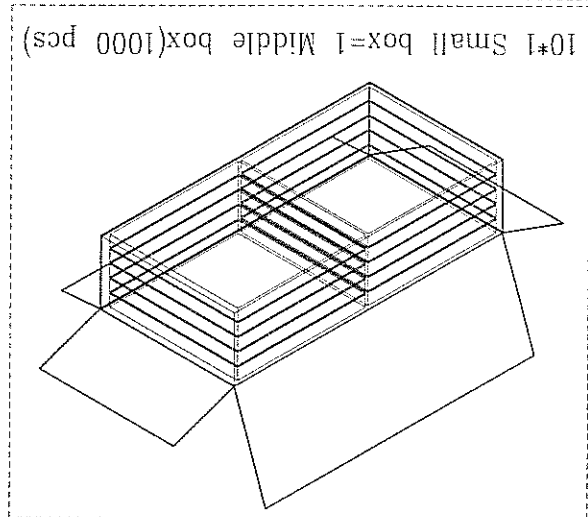
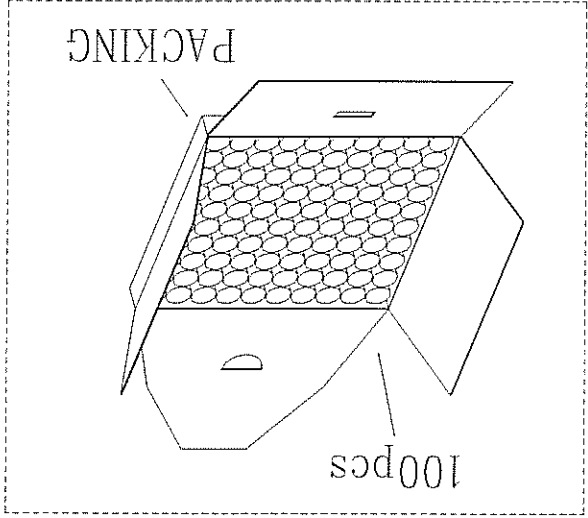
## G. ENVIRONMENTAL TEST 環境試驗

No.	Item	Test conditions	Evaluation standard
1	High temp. test	After being placed in a chamber at +70°C for 72 hours.	After any tests, the sensitivity to be within ±3dB of initial sensitivity after 6 hours of conditioning at +25°C 經測試後麥克風, 須靜置於 +25°C (室溫) 環境中 6 小時後, 測試其靈敏度須與原測試值的差異不超過±3dB
2	Low temp. test	After being placed in a chamber at -20°C for 72 hours.	
3	Humidity test	After being placed in a chamber at +40°C and 90±5% relative humidity for 240 hours.	
4	Temp. cycle test		

### 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  
 Judgement Test Condition : a) Temperature : +25 ± 2°C b) Humidity : 60-70% c) Pressure : 860-1060mbar  
 標準測試條件 : a) 溫度 : +25 ± 2°C b) 濕度 : 60-70% c) 氣壓 : 860-1060mbar

H. PACKING STANDARD 包裝規格



Small box	100mm*100mm*10mm	100PCS/ Small box
Middle box	205mm*105mm*50mm	1000PCS/Middlebox
Carton size	420mm*230mm*255mm	20000PCS/ Carton

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