SPECIFICATION FOR APPROVAL

承　　認　　書

Description	:	**Piezo Audio Indicator**
Kingstate Part No.	:	**KPEG268H-1**
Customer's Model No.	:	
Specification No.	:	**DRD-A837**
Number Of The Edition	:	**1.1**

CUSTOMER'S APPROVED SIGNATURE		

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

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Approved by	Checked by	Issued by

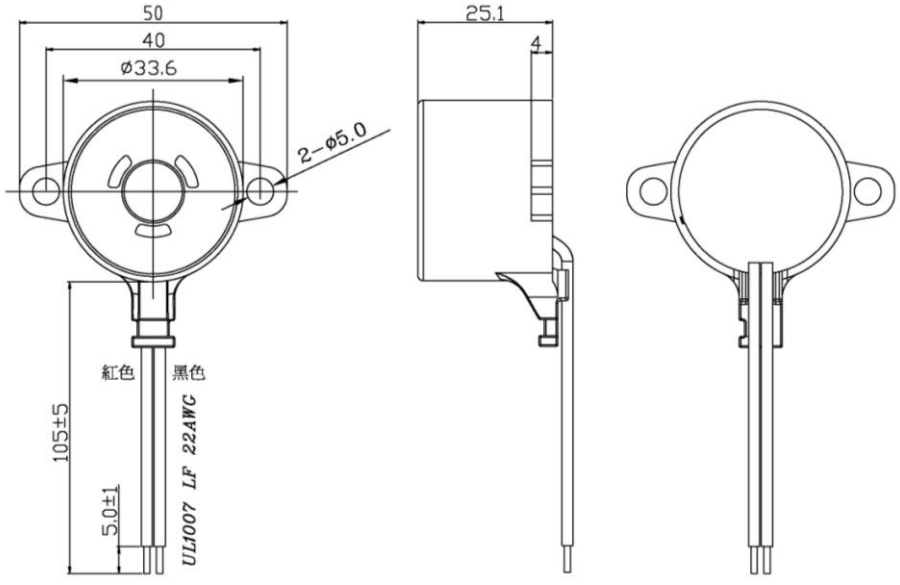
A. SCOPE 範疇

This specification applies piezo audio indicator, **KPEG268H-1**
此規格書適用於壓電式蜂鳴器, **KPEG268H-1**

B. SPECIFICATION 規格

No.	Item	Unit	Specification	Condition
1	Operating Frequency 操作頻率	KHz	3.5 ± 0.5	
2	Operating Volt. range 操作電壓範圍	VDC	6 ~ 16	
3	Current consumption 消耗電流	mA	MAX 35	at 12VDC
4	Sound pressure level 輸出音壓	dB	MIN 108	at 30cm/12VDC
5	Rated Voltage 額定電壓	VDC	12	
6	Tone 聲音		Continuous 直音	at 12VDC
7	Operating temp. 操作溫度	℃	-30~ + 85	
8	Storage temp. 儲存溫度	℃	-40 ~ +95	
9	Dimension 尺寸	mm	φ33.6 x H25.1	See appearance drawing 請參照外觀尺寸圖
10	Weight (MAX) 重量	gram	41.0	
11	Material 材質		PBT+15%GF （BLACK）	
12	Terminal 端子		Wire type	See appearance drawing 請參照外觀尺寸圖
13	Environmental Protection Regulation 環保法規		HSF	
14	Dustproof and waterproof level 防塵、防水等級		IP67	IEC standard 529 edition 2.0(1989) IEC 標準 529 第二版(1989)

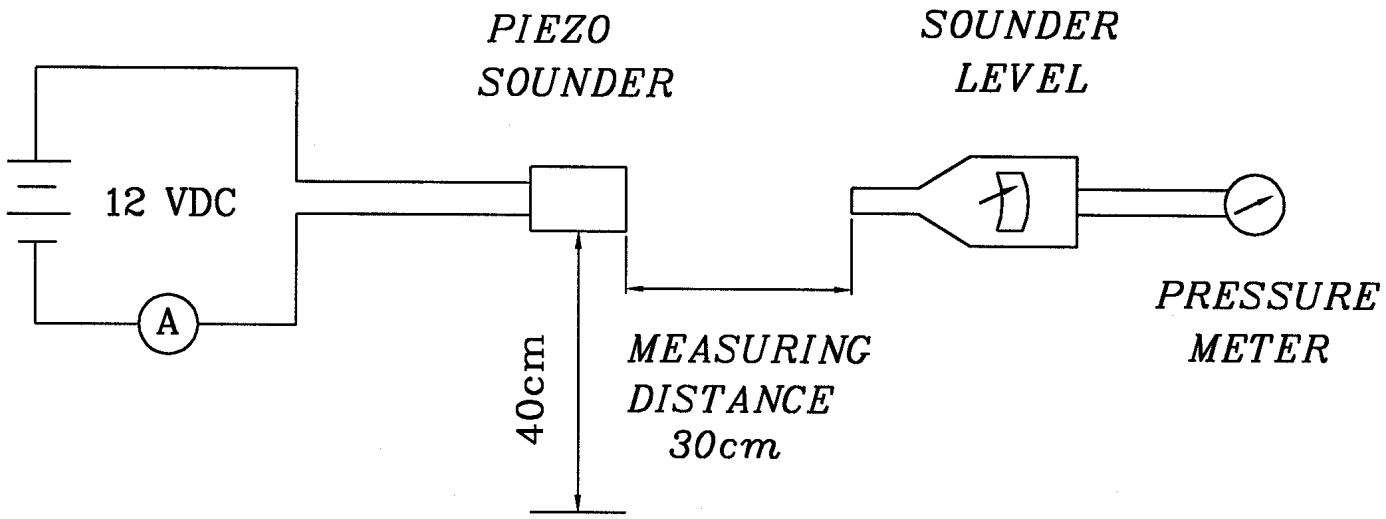
C. APPEARANCE DRAWING 外觀尺寸圖



Tol: ± 0.5 **Unit: mm**

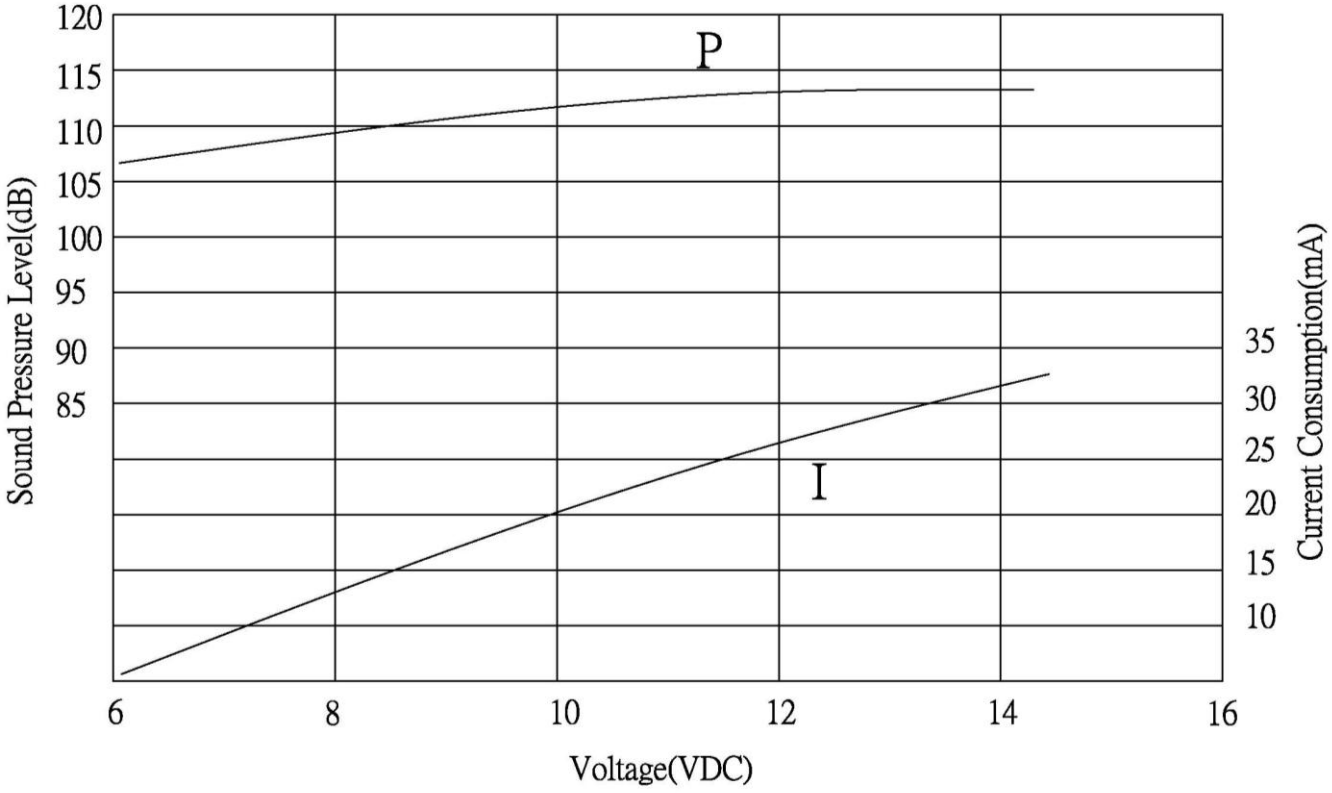
D. MEASURING METHOD 測量方法

S.P.L. Measuring Circuit 音壓測試接線圖



Mic : RION S.P.L meter UC30 or equivalent
Mic：RION 噪音計 UC30 或同等品
S.G：Hewlett Packard 33120A Function Generator or equivalent
S.G：Hewlett Packard 33120A 函數信號產生器 或同等品

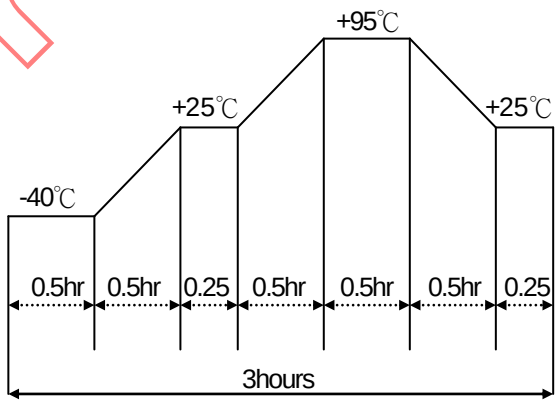
E. VOLTAGE: SOUND PRESSURE LEVEL / VOLTAGE: CURRENT CONSUMPTION CHARACTERISTICS 電壓與音壓/電壓與耗電流之特性



F. 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±5℃ for 3±0.5 seconds. 裸線部份浸入松香溶液 5 秒後,再浸入+270±5℃溶融焊錫槽 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 振動試驗	Buzzer 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.	The value of oscillation frequency/ current consumption should be in ±10% compared with initial ones .The SPL should be in ±10dB compared with initial one. 諧振頻率與消耗電流變化量須在±10%內. 輸出音壓變化量須在±10dB 內.
4	Drop test 落下測試	The part only shall be dropped from a height of 75cm onto a 40mm thick wooden board 3 times in 3 axes (X.Y.Z). (a total of 9 times). 單體從 75 公分高處, X.Y.Z.3 個方向,各 3 回,落於 40mm 厚木板上.	

G. ENVIRONMENT TEST 環境測試

No.	Item	Test Condition	Evaluation standard
1	High temp. test 高溫測試	After being placed in a chamber at +95℃ for 240 hours 置於+95℃環境中 240 小時	Being placed for 4 hours at +25℃, buzzer shall be measured. The value of oscillation frequency/ current consumption should be in±10% compared with initial ones .The SPL should be in±10dB compared with initial one. 經測試後, 靜置於+25℃（室溫）環境中 4 小時後,諧振頻率與消耗電流變化量須在±10%內. 輸出音壓變化量須在±10dB 內.
2	Low temp. test 低溫測試	After being placed in a chamber at –40℃ for 240 hours 置於-40℃環境中 240 小時	
3	Humidity test 相對濕度測試	After being placed in a chamber at +40℃ and 90±5% relative humidity for 240 hours 置於+40℃, 相對濕度 90±5% 環境中 240 小時	
4	Temp. cycle test 溫度循環試驗	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：  	

H. RELIABILITY TEST 信賴性測試

No.	Item	Test condition	Evaluation standard
1	Operating life test 壽命測試	1.Continuous life test 高溫壽命測試(連續) 48 hours continuous operation at +70℃ with rated voltage applied. 在+70℃境下,以額定電壓連續操作 48 小時. 2.Intermittent life test 室溫壽命測試(間歇) A duty cycle of 1 minute on, 1 minutes off, a minimum of 5000 times at room temp.(+25±2℃)and rated voltage applied 在室溫下(+25±2℃), 以額定電壓操作, 通電 1 分鐘/斷電 1 分鐘,測試 5000 次循環.	Being placed for 4 hours at +25℃, buzzer shall be measured. The value of oscillation frequency/ current consumption should be in ±10% compared with initial ones .The SPL should be in ±10dB compared with initial one. 經測試後, 靜置於+25℃（室溫）環境中 4 小時後,諧振頻率與消耗電流變化量須在±10%內. 輸出音壓變化量須在±10dB 內.

TEST CONDITION.

Standard Test Condition	:	a) Temperature：+5 ~ +35℃	b) Humidity：45-85%	c) Pressure：860-1060mbar
一般測試條件	:	a) 溫度：+5 ~ +35℃	b) 濕度：45-85%	c) 氣壓：860-1060mbar
Judgement Test Condition	:	a) Temperature：+25 ± 2℃	b) Humidity：60-70%	c) Pressure：860-1060mbar
爭議時測試條件	:	a) 溫度：+25 ± 2℃	b) 濕度：60-70%	c) 氣壓：860-1060mbar

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.