

SPECIFICATION FOR APPROVAL

承 認 書

Description : **Magnetic Buzzer**

Kingstate Part No. : **KXG0903P4-D**

Customer's Model No. : _____

Specification No. : **TKR-7352**

Number Of The Edition : **1.1**

CUSTOMER'S APPROVED SIGNATURE		



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		YAO 2024.02.20

KINGSTATE ELECTRONICS CORPORATION

志豐電子股份有限公司

變更履歷表

圖號 Drawing No. : TKR-7352		機種 P/N: KXG0903P4-D		
變更日期 Date modified	提出者 Applied	版本 Version	頁數 Page	變更內容 Modified content
2024. 02. 20	鐘森強	1. 1		規格書建立

A. SCOPE 範疇

This specification applies magnetic buzzer, **KXG0903P4-D**

此規格書適用於電磁式蜂鳴器, **KXG0903P4-D**

B. SPECIFICATION 規格

No.	Item	Unit	Specification	Condition
1	Rated Voltage 額定電壓	Vo-p	3.0	
2	Operating Volt. 操作電壓	Vo-p	2.0~5.0	
3	Mean Current 平均耗電流	mA	Max.70	Applying rated voltage,2700Hz square wave, 1/2duty 施以額定電壓,2700Hz,方波, 50%負載
4	Coil Resistance 直流阻抗	Ω	25.0 ± 3.0	
5	Sound Output 輸出音壓	dBA	Min.85	Distance at 10cm(A-weight free air at room temperature). Applying rated voltage 2700Hz,square wave, 1/2duty 在室溫下的自由音場 10 公分處, 施以額定電壓, 2700Hz, 方波, 50%負載
6	Rated Frequency 額定頻率	Hz	2700	
7	Operating Temp. 操作溫度	$^{\circ}\text{C}$	-40 ~ +85	
8	Storage Temp. 儲存溫度	$^{\circ}\text{C}$	-40 ~ +85	
9	Dimension 尺寸	mm	$\phi 9.2 \times H5.5$	See attached drawing. 請參照外觀尺寸圖
10	Weight 重量	gram	0.8	
11	Material 材質		PPO (Black)	
12	Terminal 端子		Pin type (鍍錫/Plating Sn)	See attached drawing. 請參照外觀尺寸圖
13	Environmental Protection Regulation 環保法規		RoHS 2.0	

C. TYPICAL FREQUENCY RESPONSE CURVE 頻率響應曲線

03/06/2024 12:43

CRY6125F 蜂 鳴 器 測 試 儀 V91

无框 滤波器无

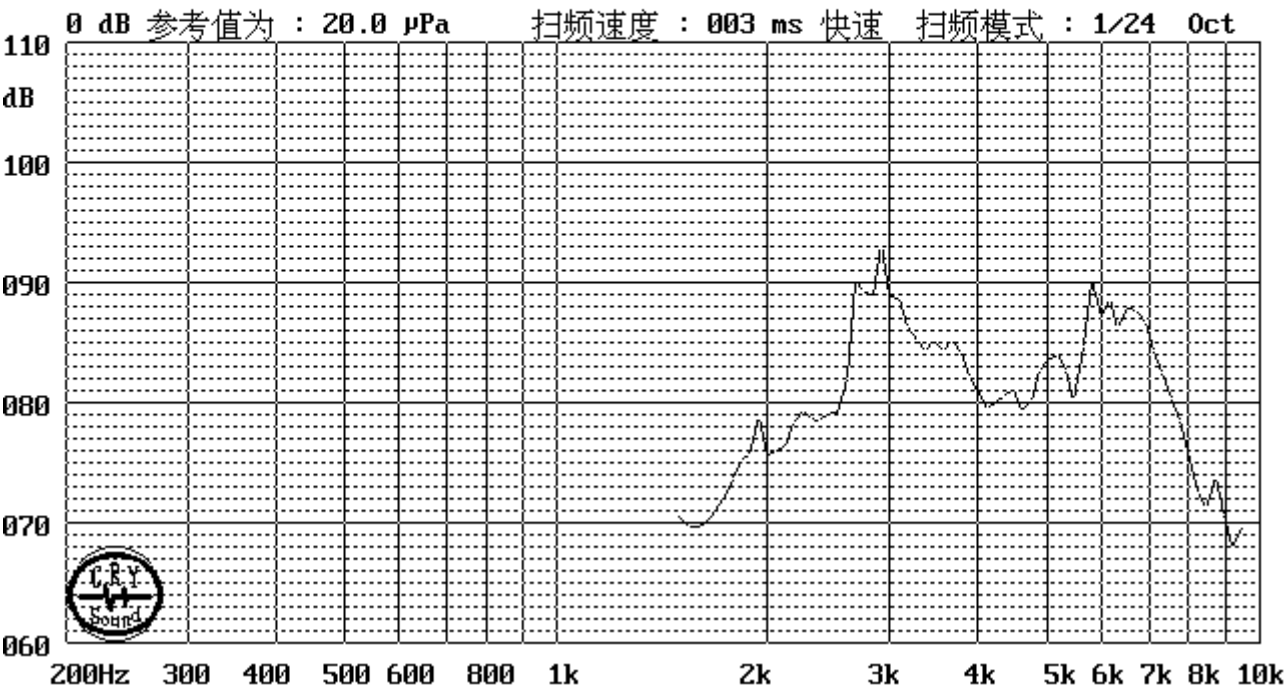
型号: _____

Fc= 2731 Hz 089.20 dB

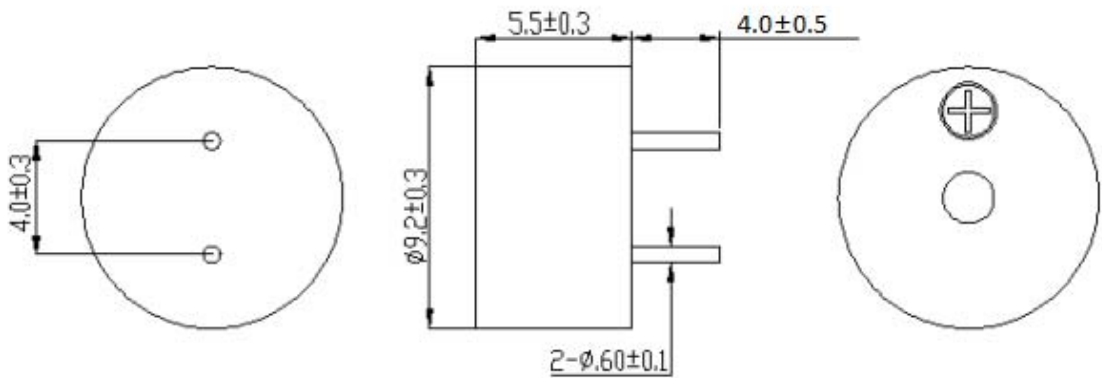
电压: 3000 mV

Fo= 2908 Hz 093.21 dB

正弦波

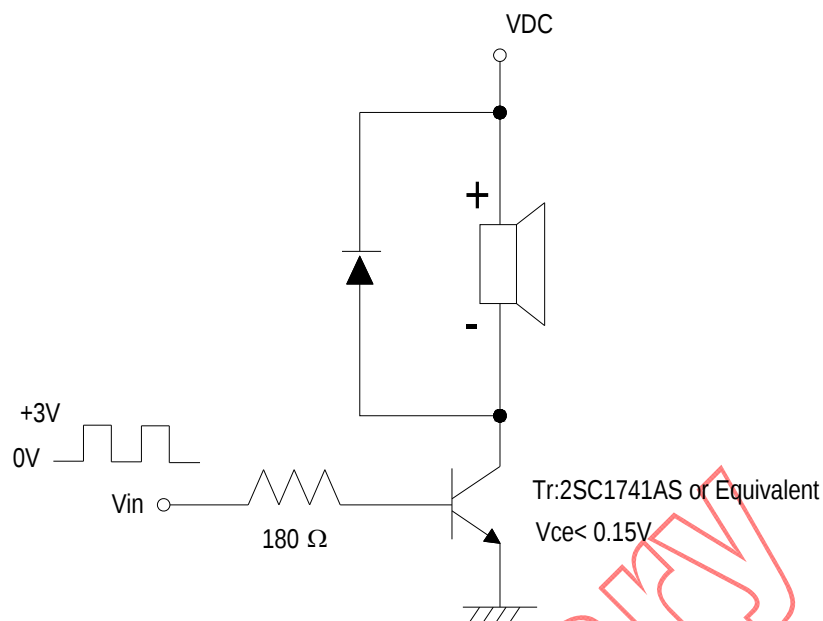


D. APPEARANCE DRAWING 外觀尺寸圖



Tol: ± 0.5
Unit: mm

E. MEASUREMENT METHOD 測量方式



F. MECHANICAL CHARACTERISTICS 機械特性

No.	Item	Test condition	Evaluation standard
1	Solderability 焊錫附著性	Lead terminals are immersed in rosin for 5 seconds and then immersed in solder bath of $+270\pm5^{\circ}\text{C}$ for 3 ± 1 seconds. 端子部份浸入松香溶液 5 秒後,再浸入 $+270\pm5^{\circ}\text{C}$ 熔融焊錫槽中 3 ± 1 秒.	90% min. lead terminals shall be wet with solder. (Except the edge of terminal) 浸入端子部份附著焊錫 90%以上.(末端斷面不算)
2	Soldering Heat Resistance 焊錫耐熱性	Lead terminal are immersed up to 1.5mm from sounder's body in solder bath of $+260\pm5^{\circ}\text{C}$ for 3 ± 1 seconds. 距離端子根部 1.5mm 的位置,浸入 $+260\pm5^{\circ}\text{C}$ 的焊錫槽 3 ± 1 秒.	No interference in operation 操作上無任何不良
3	Terminal Mechanical Strength 端子強度	The force 10 seconds of 9.8N(1.0kg) is applied to each terminal in axial direction. 各端子的軸方向施以 9.8N(1.0kg)的力量 10 秒.	No damage and cutting off 端子不鬆動, 不脫落
4	Vibration 振動測試	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.	After the test the part shall meet specifications with-out any damage in appearance and the SPL should be in $\pm 10\text{dBA}$ compared with initial one.
5	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.	經測試後,單體除音壓外,外觀及電氣特性須符合規格. 輸出音壓變化量須 $\pm 10\text{dBA}$ 內.

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 +85°C for 96 hours. 置於+85°C環境中 96 小時	After the test the part shall meet specifications with-out any degradation in appearance and performance except SPL. after 4 hours at +25°C. the SPL should be in $\pm 10\text{dBA}$ compared with initial one. 經測試後，靜置於+25°C（室溫）環境中 4 小時後，單體除音壓外，外觀及電氣特性須符合規格。輸出音壓變化量須在 $\pm 10\text{dBA}$ 內。
2	Low temp. test 低溫測試	After being placed in a chamber at -40°C for 96 hours. 置於-40°C環境中 96 小時	
3	Humidity Test 恒濕試驗	Stored in the temperature humidity: 60 $\pm$ 5°C 90%--95% environment for 96 hours, and then placed into storage at room temperature for 2 hours after the test. 存放在溫度：60 $\pm$ 5°C 濕度：90%--95%的環境里 96 小時，然後放置到室溫下放置 2 小時後測試。	
4	Temperature Cycle Test 溫度循環試驗	After being placed in a chamber with -40 $\pm$ 2°C for 30 minutes, products shall be placed at room temperature(25°C $\pm$ 10°C).After 15 minutes at this temperature, products shall be placed in a chamber at +85 $\pm$ 2°C .After 30 minutes at this temperature, products shall be return to room temperature (25°C $\pm$ 10°C) for 15 minutes. After 20 above cycles, products shall be measured after being placed in natural condition for 2 hours. 放置-40 $\pm$ 2°C 30 分鐘、25°C $\pm$ 10°C 放置 15 分鐘，15 分鐘後再將產品放入+85 $\pm$ 2°C 30 分鐘、常溫 25°C $\pm$ 10°C 放置 15 分鐘，20 個循環後放置常溫下 2 小時。	

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) The part shall be subjected to 72 hours at +70°C with 3.0V, 2700Hz applied. 在+70°C環境下，輸入 3.0V,2700Hz 連續操作 72 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 10000 times at room temp.(+25$\pm$10°C) with 3.0V,2700Hz applied. 在室溫下(+25$\pm$10°C)，輸入 3.0V,2700Hz 通電 1 分鐘/斷電 1 分鐘，測試 10000 次循環。	After the test the part shall meet specifications with-out any degradation in appearance and performance except SPL. after 4 hours at +25°C. the SPL should be in $\pm 10\text{dBA}$ compared with initial one. 經測試後，靜置於+25°C（室溫）環境中 4 小時後，單體除音壓外，外觀及電氣特性須符合規格。輸出音壓變化量須在 $\pm 10\text{dBA}$ 內。

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 $\pm$ 2°C	b) Humidity : 60-70%	c) Pressure : 860-1060mbar
爭議時測試條件	:	a) 溫度 : +25 $\pm$ 2°C	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。

Preliminary