

SPECIFICATION FOR APPROVAL

承 認 書

Description : **Micro Dynamic Speaker**

Kingstate Part No. : **KDRG0612F-32P**

Customer's Model No. :

Specification No. : **DOD-S254**

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.

Address : 10F, No. 69-11, Sec. 2, Chung Cheng E. Rd., Tamshui County, Taipei Hsien, Taiwan, R.O.C.

International sales dept.: TEL:886-2-2809-5651 FAX:886-2-2809-7151

Domestic sales dept.: TEL:886-2-2809-0668 FAX:886-2-28096748

<http://www.kingstate.com.tw>

Approved by	Checked by	Issued by

A. SCOPE 範疇

This specification applies speaker, **KDRG0612F-32P**

此規格書適用於喇叭，**KDRG0612F-32P**

B. SPECIFICATION 規格

No.	Item	Symbol	Unit	Specification	Condition
1	Dimension 尺寸		mm	L12 x W6 x H2.3	
2	Rated Power 額定功率		W	20m	
3	Max. Input Power 最大輸入功率		W	40m	
4	Impedance 阻抗	Ω	ohm	32 \pm 15%	At 1kHz 179mVrms input
5	Output S.P.L. 音壓位準		dB	110 \pm 3dB	at 1.0KHz, 0dB SPL = 20 μ Pa 1mW /1cm, with B&K artificial ear 4153
6	Frequency Range 有效頻寬		Hz	300~3.4K	
7	Distortion 失真		%	5% Max.	At 1KHz , 1mW
8	Diaphragm 振膜		mm	N/A	PEEK
9	Magnet 磁石		mm	N/A	Nd-Fe-B (钕铁硼)
10	Flux Density 磁通密度		Gauss	N/A	
11	Operating temp. 操作溫度		$^{\circ}$ C	-20~ +75	
12	Storage temp. 存儲溫度		$^{\circ}$ C	-30 ~ +85	
13	Buzzer & Rattle 異常音				Must be free audible noise (buzzes and rattles)(300~3.4KHz frequency range , input level up to 0.8Vrms) 无杂音和异常音(输入信号频 率范围 300Hz~3.4KHz 输入 电压 0.8 Vrms)
14	Weight 重量		g	About0.3	
15	Material 材質			PPA	
16	Polarity			Diaphragm shall move Forward when Apply a Positive DC. Current to the "+" or "Marked" Terminal.	
17	Environmental Protection Regulation 環保法規			RoHS2.0	

C. TYPICAL FREQUENCY RESPONSE CURVE 頻率響應曲線

Test condition: 1mW/1cm with B&K artificial ear 4153

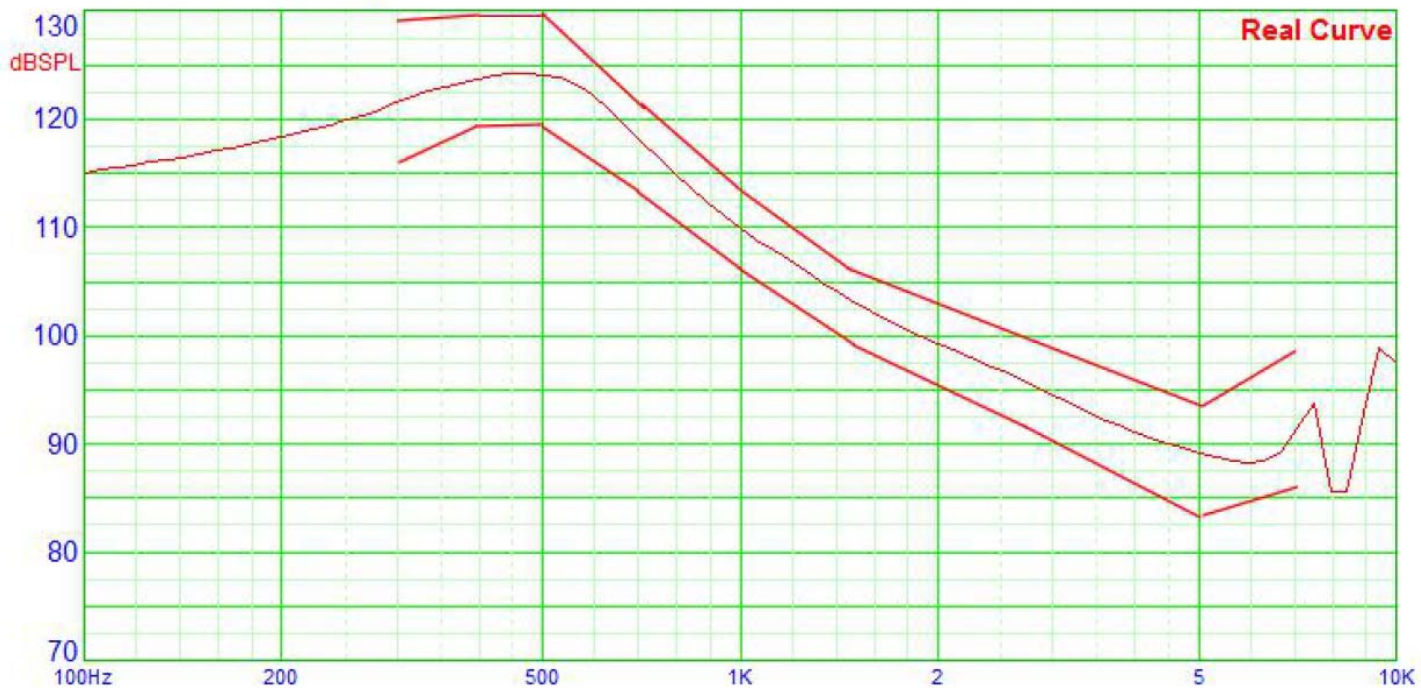


Table 1: Tolerance Limits Data for FR

Frequency(Hz)	Upper Limits(dB)	Frequency(Hz)	Lower Limits(dB)
300	128.3	300	116.3
400	129	400	118
500	129.4	500	119.4
700	121.6	700	113.6
1000	113	1000	107
1500	106	1500	99
2650	100	2650	92
5000	93	5000	83
7000	98	7000	86

D. THD CURVE 失真曲線

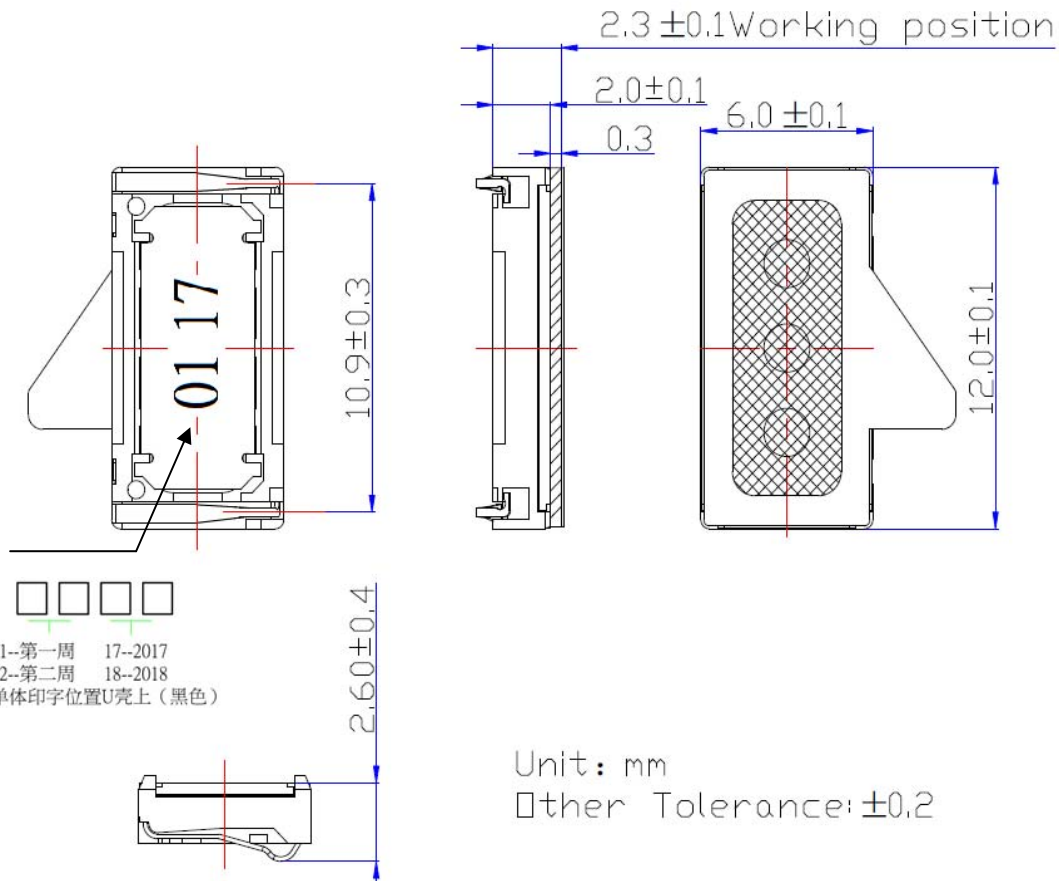
Test condition: 1mW/1cm with B&K artificial ear 4153



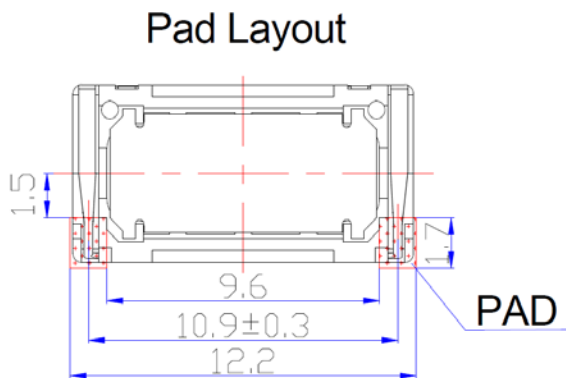
Table 2: Limits Data for THD

Frequency (Hz)	Limits (%)
300	5
500	5
800	3
1000	3

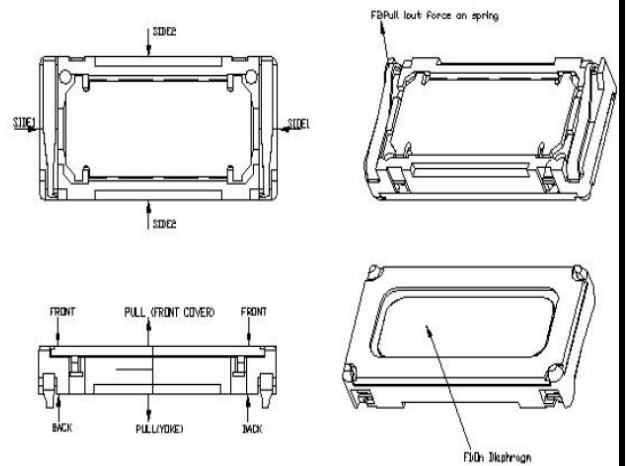
E. APPEARANCE DRAWING 外觀尺寸圖



Pad Layout of Spring contact

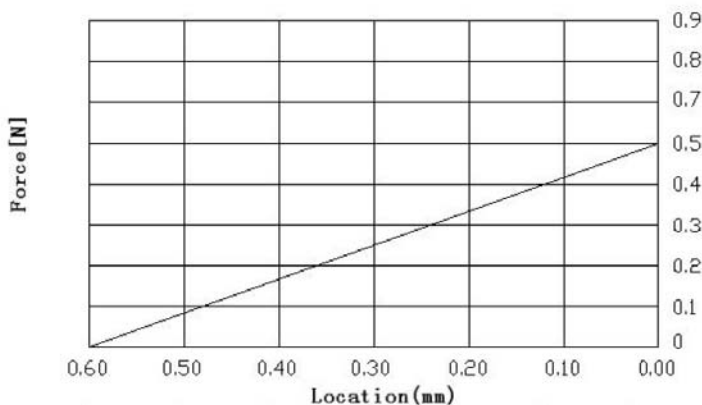


Permitted Force to Receiver



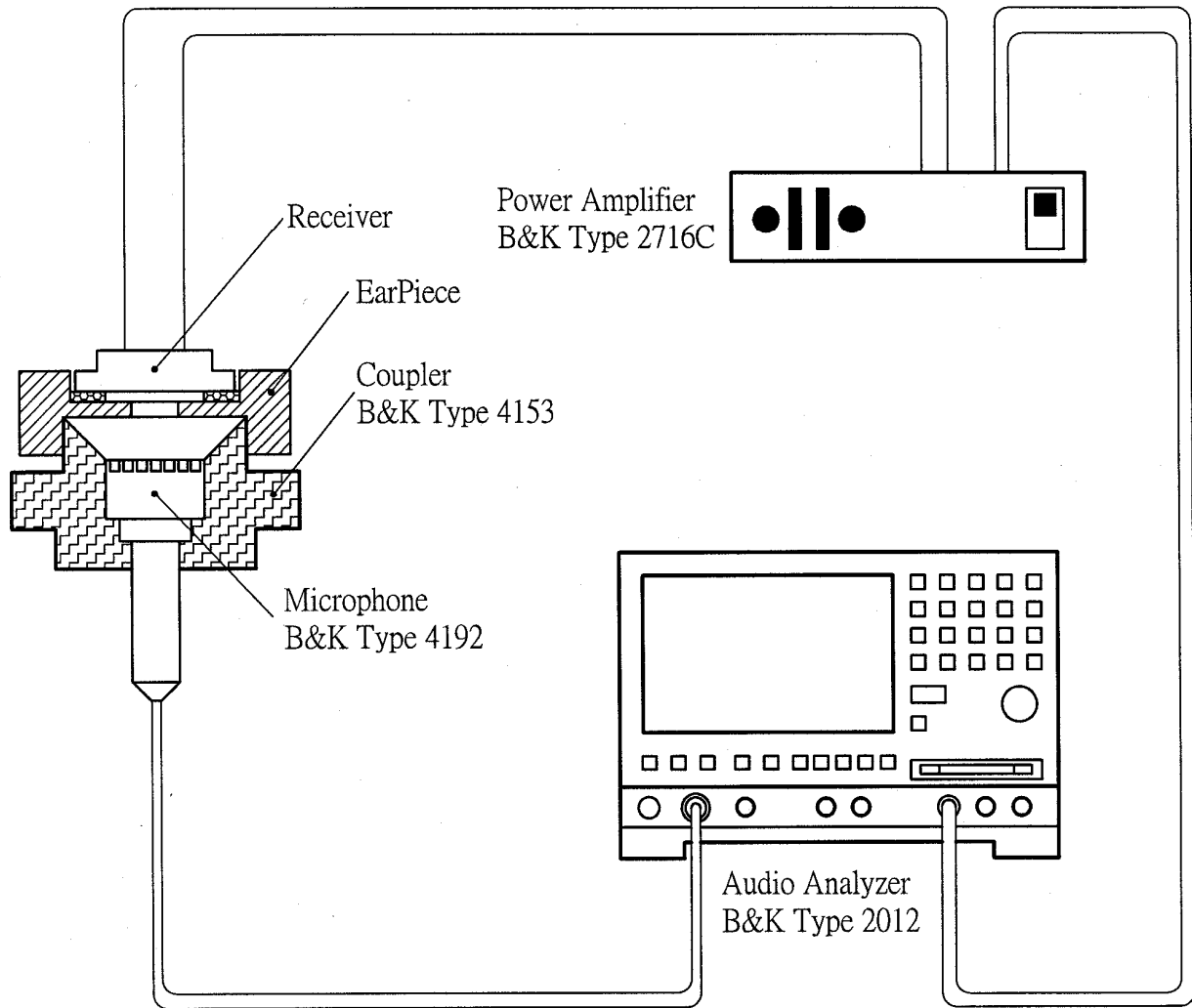
Force Diagram

FORCE PROGRESSION OF ONE SPRING CONTACT



MAX. Permitted Compression FORCES			
NO.	From	To	Maximum Force
1	F1		0N
2	F2		0N
3	Front	Back	5N
4	Side1	Side1	10N
5	Side2	Side2	10N
6	Pull of Force (Yake/Cover)		0N

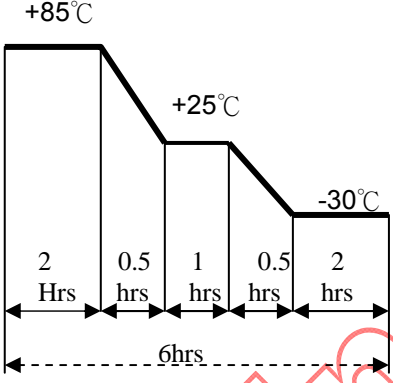
F. MEASUREMENT CIRCUIT 測量線路



G. MECHANICAL CHARACTERISTICS 機械特性

No.	Item	Test condition	Evaluation standard
1	Solder ability 焊錫附着性 (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 $+270\pm 5^{\circ}\text{C}$ for 3 ± 0.5 seconds. 裸線部份浸入松香溶液 5 秒後,再浸入 $+270\pm 5^{\circ}\text{C}$ 熔融焊錫槽 3 ± 0.5 秒.	90% min. stripped wires shall be wet with solder.(Except the edge of terminal) 浸入裸線部份附着焊錫 90% 以上.(末端斷面不算)
2	Vibration Test 振動測試	Speaker shall be measured after being applied vibration of amplitude of 1.5mm with 10 to 55Hz band of vibration frequency to each of 3 perpendicular 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.	No obstacle to be harmful to normal operation; damages, cracks, rusts and distortions. Should not be audible at 0.8V sine wave between 300-3.4KHz
3	Drop Test 落下測試	Drop the speakers contained in normal box onto the board 40mm thick 10 times from the height of 75cm 將揚聲器置於盒中,自 75 公分高度落在 40mm 木板上共 10 次.	試後無任何障礙防礙正常操作.且在輸入 0.8V 正弦波從 300 到 3.4KHz 之間無異常音.

H. ENVIRONMENTAL TEST 環境試驗

No.	Item	Test conditions	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	Being placed for 6 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 0.8V sine wave between 300-3.4KHz. S.P.L. deviation of unit should be within ±3dB 經測試後，靜置於+25°C (室溫)環境中 6 小時後，測試後無任何障礙防礙正常操作.且在輸入 0.8V 正弦波從 300 到 3.4KHz 之間無異常音.輸出音壓變化量在±3dB 內.
2	Low temp. Test 低溫測試	After being placed in a chamber at -30°C for 96 hours. 置於-30°C環境中 96 小時	
3	Humidity test 相對濕度測試	After being placed in a chamber at +40°C and 95±5%RH relative humidity for 96 hours. 置於+40°C, 相對濕度 95±5%環境中 96 小時	
4	Temp. cycle test 溫度循環測試	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: 	

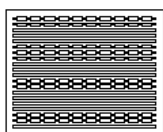
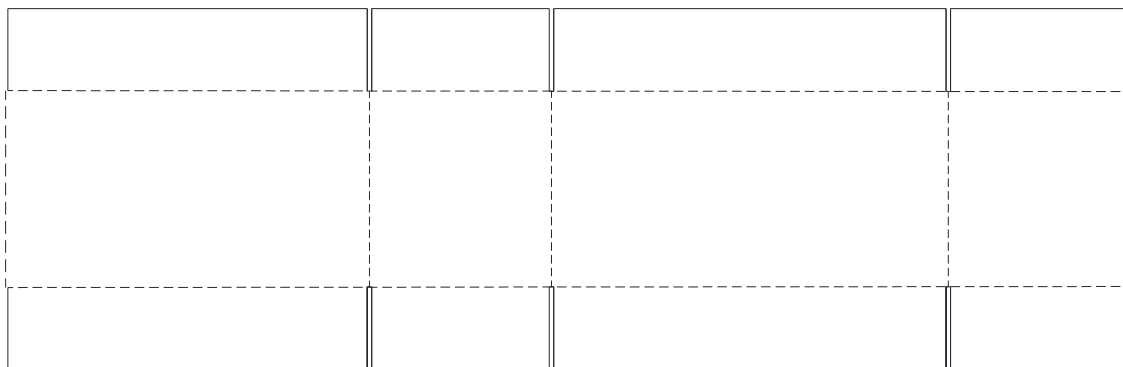
I. RELIABILITY TEST 信賴性試驗

No.	Item	Test conditions	Evaluation standard
1	Load test 連續負荷	20mW pink noise is applied for 96 hours, at room temp product. 在室溫下, 輸入功率 20mW, 粉雜音連續操作 96 小時.	Being placed for 1 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 0.8V sine wave between 300-3.4KHz. S.P.L. deviation of unit should be within ±3dB. 經測試後，靜置於+25°C (室溫)環境中 1 小時後，測試後無任何障礙防礙正常操作.且在輸入 0.8V 弦波從 300 到 3.4kHz 之間無異常音.輸出音壓變化量在±3dB 內

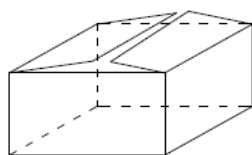
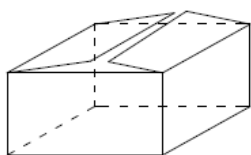
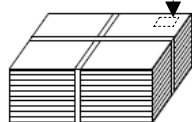
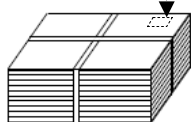
TEST CONDITION.

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 ± 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

J.PACKING STANDARD 包裝規格




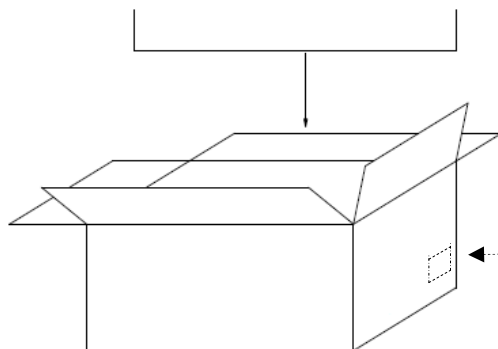
Q`TY:200PCS



INNER BOX
Q`TY:200*15=3000PCS

INNER BOX
Q`TY:200*15=3000PCS

Lot No.	XXXXXXXXXX
Model No.	XXXXXXXXXX
Quantity.	XXXX Pcs
Date:	例:0117
 KINGSTATE ELECTRONICS CORP.	



BOX
Q`TY:3000*2=6000PCS