

# ***MESSRS***

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## SPECIFICATION FOR APPROVAL

## 承 認 書

Product	DYNAMIC SPEAKER
Part No.	AD-8504-LQ4(RoHS)
Customer Approval	

Approved By	Checked By	Made By
工程部 BOB CHEN JUL-07-2008	工程部 DAVID LIU JUL-07-2008	工程部 TOM CHAN JUL-07-2008



**ADVANCED ACOUSTIC TECHNOLOGY CORP.**

**苙 翔 科 技 股 份 有 限 公 司**



ISO 9001 Certified

2F, No.207, Sec. 6, Chung Shan N. Rd., Taipei

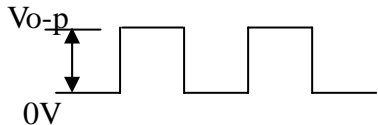
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**<http://www.aatc.tw>**

# 1.CHARACTER DATA

AD-8504-LQ4(RoHS)

Items		Units	Specifications	Conditions
01	Rated Voltage	Vo-p	3.6	
02	Operating Voltage	Vo-p	2.5~4.5	
03	Consumption Current	mA (max)	Mean 100	Standard State, Standard Drive Circuit. Rated Voltage, Rated Frequency, Distance at 10 cm free air, Square Wave 1 / 2 Duty
			Peak 300	
04	Sound Output	dB (min)	90	
05	Rated Frequency	Hz	4000	
06	Coil Resistance	$\Omega$	$16 \pm 3$	
07	Operating Temp.	$^{\circ}\text{C}$	-30 ~ +75	
08	Storage Temp.	$^{\circ}\text{C}$	-40 ~ +85	
09	Weight	Gram	0.6	

## 2.Test Condition

### STANDARD

Temperature : 15 ~ 35 $^{\circ}\text{C}$

Relative humidity : 25% ~ 85%,

Atmospheric pressure : 860mbar to 1060mbar.

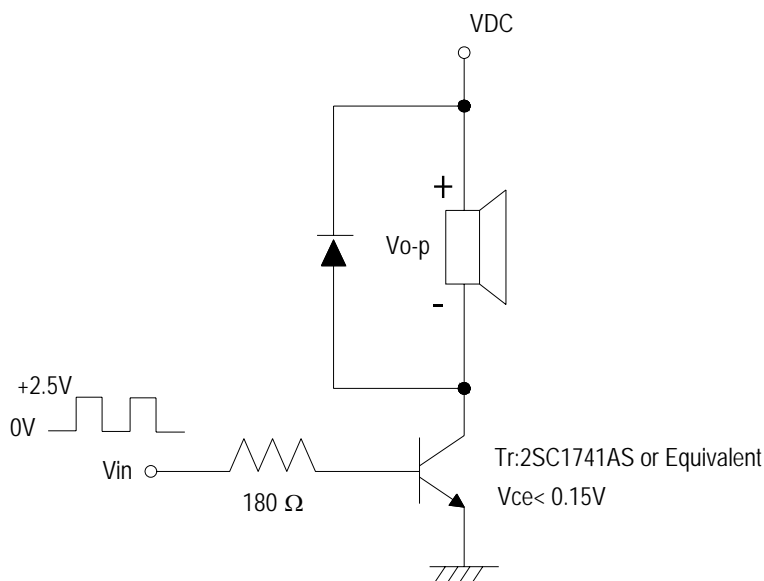
### BASIC

Temperature : 20 $\pm$ 3 $^{\circ}\text{C}$

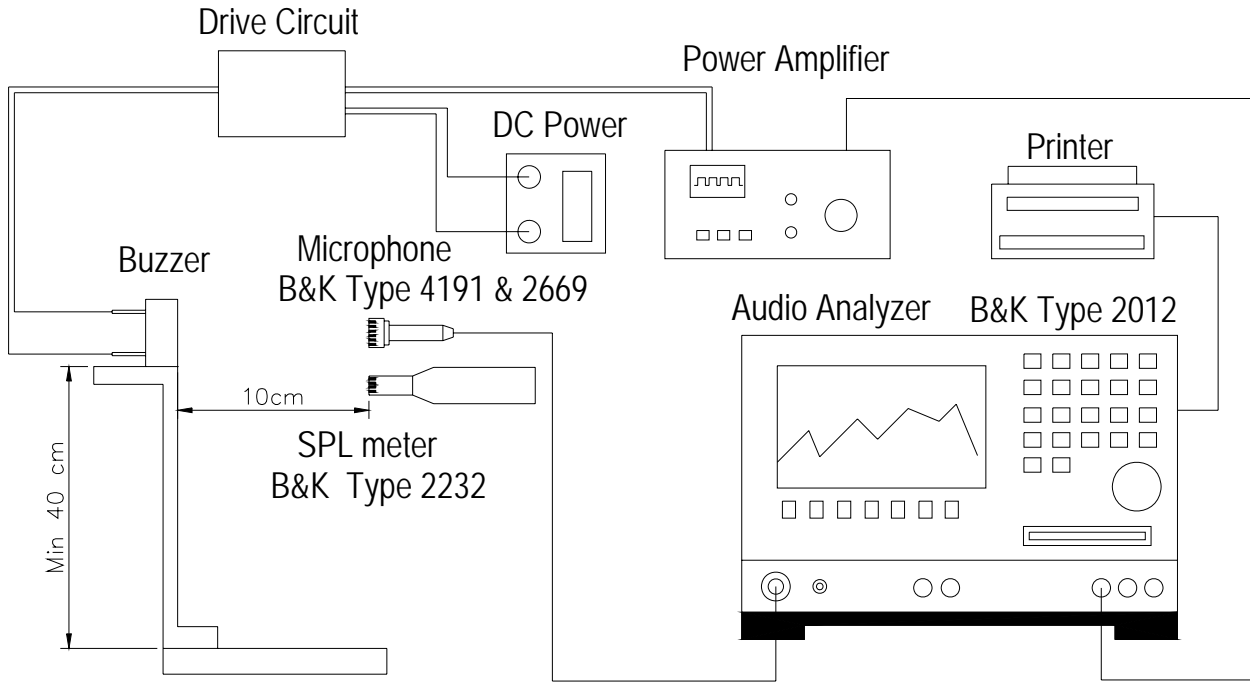
Relative humidity : 60% ~ 70%,

Atmospheric pressure : 860mbar to 1060mbar

### Standard Drive Circuit



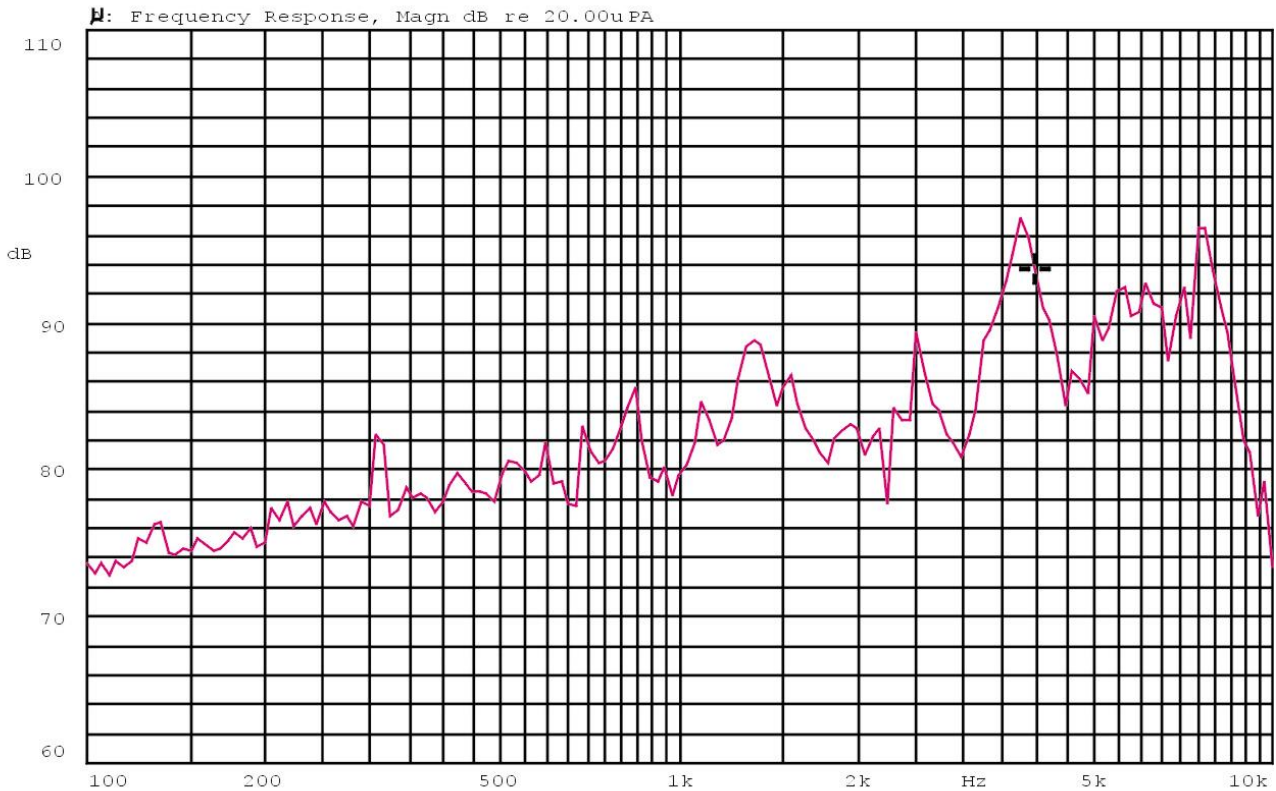
# Standard Test Fixture



# Frequency Response Curve

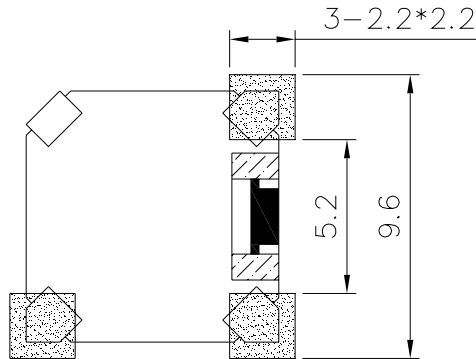
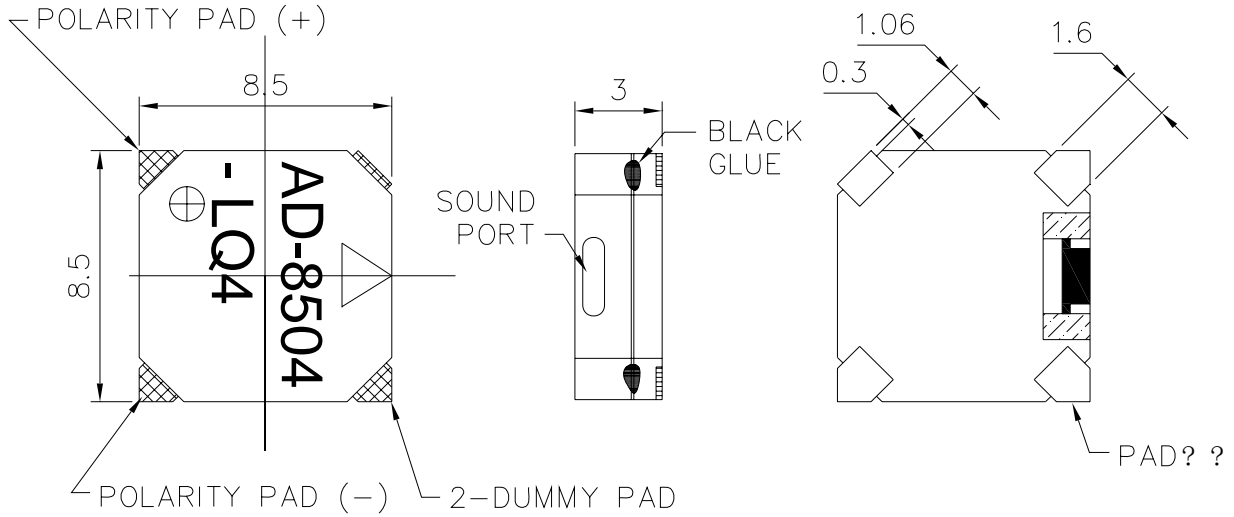
AD-8504-LQ2

X: 3.9811kHz Y: 93.64dB ZA: Live Curve SSR T. RMS



Mode: SSR



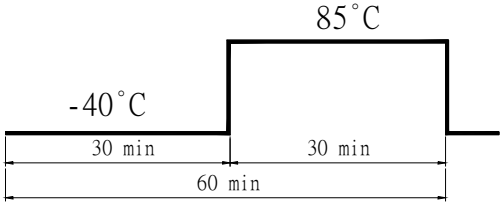
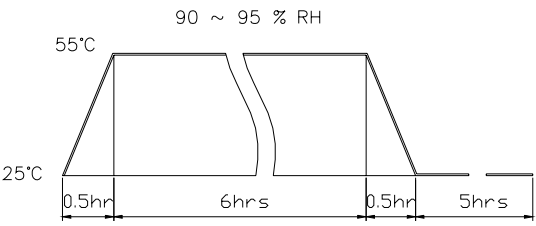


RECOMMENDED P.C.B LAYOUT

TITLE: SOUND TRANSDUCER (SMD)		DRAWN: <i>JOM</i> 2008/07/07	SCALE: 4:1	SHEET: 1 OF 1
PART NO. AD-8504-LQ4	1 REV	DESIGNED: R&D OF AAT	UNITS: mm	
DWG NO. DTD-2003		CHECKED:	TOLERANCE ± 0.3	
		APPROVAL:	UNLESS OTHERWISE SPECIFIED: ONE PLACE DECIMAL ± *** TWO PLACE DECIMAL ± *** THREE PLACE DECIMAL ± ***	
		MATERIAL: LCP		



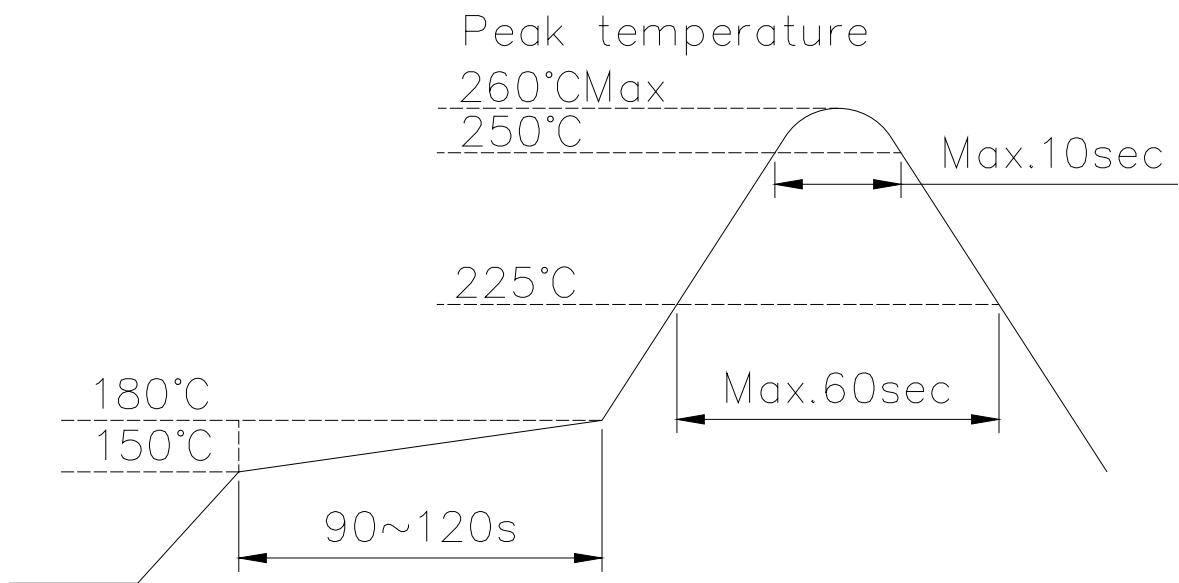
## 5.RELIABILITY TEST

Item		Test conditions	Evaluation standard
01	High temp.Storage life	The part shall be capable of withstanding a storage Temperature of 85°C for 96 hours.	After the test the part shall meet specifications without Any degradation in appearance and performance except S.P.L S.P.L shall be 82dB or more.
02	Low temp.Storage life	The part shall be capable of withstanding a storage Temperature of -40°C for 96 hours.	
03	Temp. cycle	<p>The part shall be subjected 10 cycles. One cycle shall consist of;</p>  <p>The diagram shows a temperature cycle with a total duration of 60 minutes. It consists of a 30-minute hold at -40°C, followed by a 30-minute hold at 85°C.</p>	
04	Temp./Humidity cycle	<p>The part shall be subjected 10 cycles. One cycle shall be 12 hours and consist of</p>  <p>The diagram shows a 12-hour cycle. It starts with a 0.5-hour ramp from 25°C to 55°C, followed by a 6-hour hold at 55°C and 90 ~ 95 % RH. This is followed by a 0.5-hour ramp down to 25°C, and finally a 5-hour hold at 25°C.</p>	
05	Operating life	<p>Rated Voltage,Frequency applied.</p> <ol style="list-style-type: none"> <li>Ordinary temperature The part shall be subjected to 1000 hours at room temperature (<math>25 \pm 10^\circ\text{C}</math>)</li> <li>High temperature The part shall be subjected to 500 hours at 75°C</li> <li>Low temperature The part shall be subjected to 500 hours at -30°C</li> </ol>	
06	Vibration	The part shall be subjected to a vibration cycle of 10Hz to 55Hz to 10Hz in a period of 1 minute. Total peak amplitude shall be 1.52mm (9.3G). The vibration test shall consist of 2 hours per plane in each three mutually perpendicular planes for a total time of 6 hours.	
07	Fixed drop	The part shall be mounted on standard pc board and dropped from a height of 152cm onto a concrete floor 5 times in each 6 planes.(a total of 30 times)	

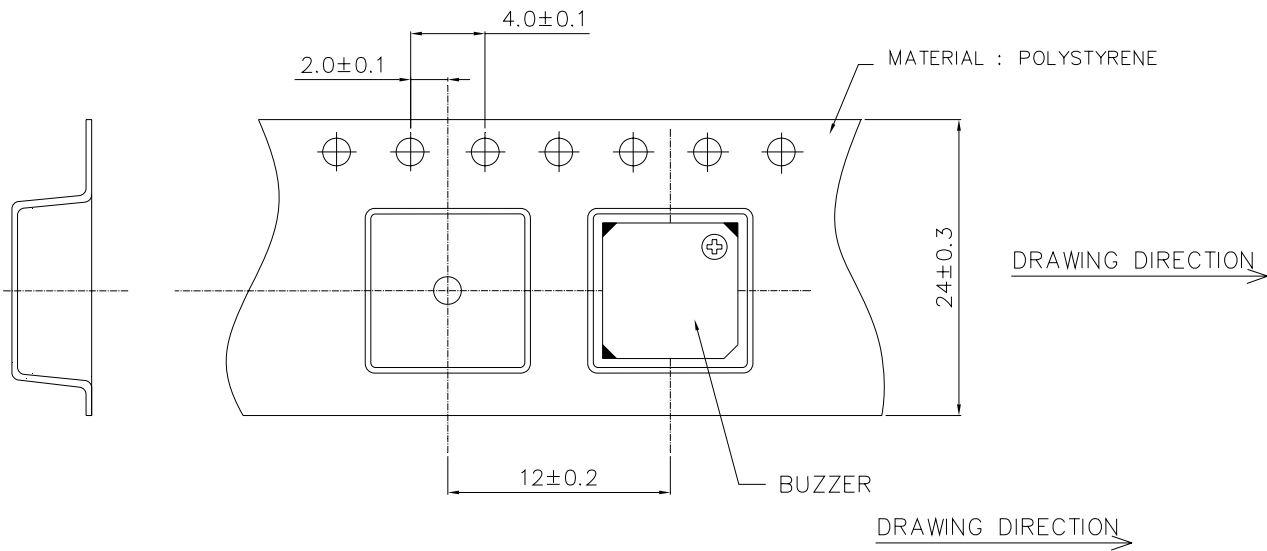
Item		Test conditions	Evaluation standard
08	Free drop	The part only shall be dropped from a height of 75cm onto a 40mm thick wooden board 3 times in 3 axes (X.Y.Z). (a total of 9 times).	
10	Lead strength	Pull lead with a force of 10N, on the direction of the lead axis for 10 :10±1 sec	

## SOLDER ABILITY

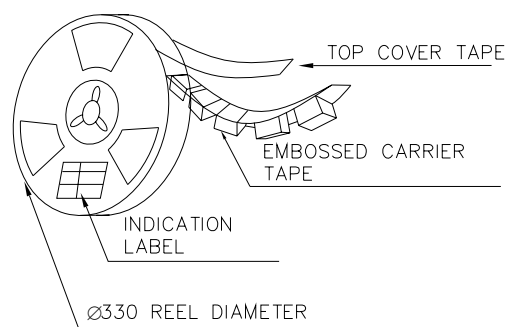
Recommend temperature profile for lead-free solder.



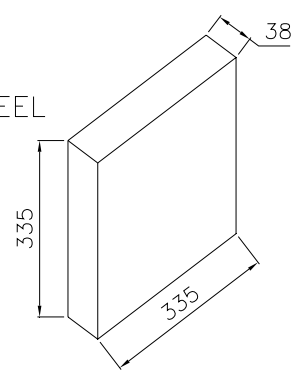
REV NO.	REVISION NOTE	APPROVAL	DATE
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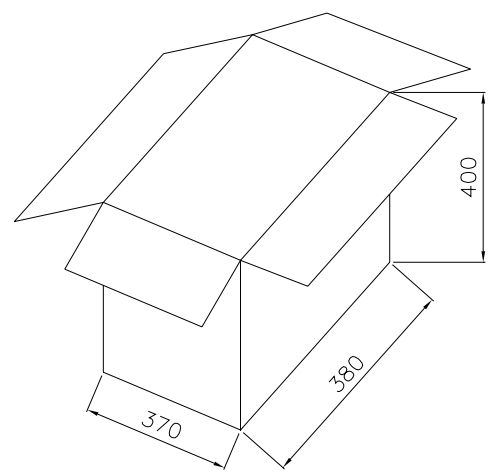
Q'TY : 1,000PCS/ REEL



INNER BOX  
1 ROLL CARRIER REEL



CARTON BOX  
10 INNER BOX  
10K PCS BUZZER



NOTE:

TAPE WIDTH: 24MM  
TAPE PITCH: 12MM  
TAPE POLARITY: COMPONENTS "+" TERMINAL SHALL BE LOCATED

CLOSEST TO THE ROUND SPROCKET HOLES AND ON THE TAPE'S LEADING EDGE.(THE SOUND PORT IS ORIENTED OPPOSITE THE TAPE FEEDER SPROCKET HOLES)  
REEL DIAMETER: 330MM(13 INCHES)

TITLE: PACKING FORMAIION		DRAWN: JOHN	2007/10/19	SCALE: NONE	SHEET: 1 OF 1
PART NO. AD-85 SERIAL		DESIGNED: R&D OF AAT	UNITS: mm		
DWG NO. DTD-2004-2		CHECKED:	TOLERANCE ± ****		
		APPROVAL:	UNLESS OTHERWISE SPECIFIED: ONE PLACE DECIMAL ± *** TWO PLACE DECIMAL ± *** THREE PLACE DECIMAL ± ***		
REV 1		MATERIAL: LCP			



ADVANCED ACOUSTIC TECHNOLOGY CORPORATION