

# *MESSRS.*

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## SPECIFICATION FOR APPROVAL

### 承 認 書

Product	SMD PIEZO BUZZER
Part No.	APD-1709-LF (RoHS)
Customer Approval	

Approved By	Checked By	Made By
工程部 王台平 JAN-18-2007	工程部 劉民祥 JAN-18-2007	工程部 許俊程 JAN-18-2007



**ADVANCED ACOUSTIC TECHNOLOGY CORP.**

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# 1. Specifications

APD-1709-LF

Items		Units	Specifications	Conditions
01	Rated Voltage	Vp-p	9	(square wave)
02	Operating Voltage	Vp-p	6~18	
03	Rated Current	mA(Max)	5	
04	Sound Output	dBA(Min)	85	At 9Vp-p , 3.2K Hz / 10cm
05	Resonant Frequency	Hz	3200	
06	Capacitance	pF	15000±30%	At 120Hz
07	Operating Temp.	°C	-30 ~ +75	
08	Storage Temp.	°C	-40 ~ +85	
09	Weight	g	0.5	

## 2. Measuring Method

### 2-1. Test Condition

#### STANDARD

Temperature : 15 ~ 35°C

Relative humidity : 25% ~ 85%,

Atmospheric pressure : 860mbar to 1060mbar.

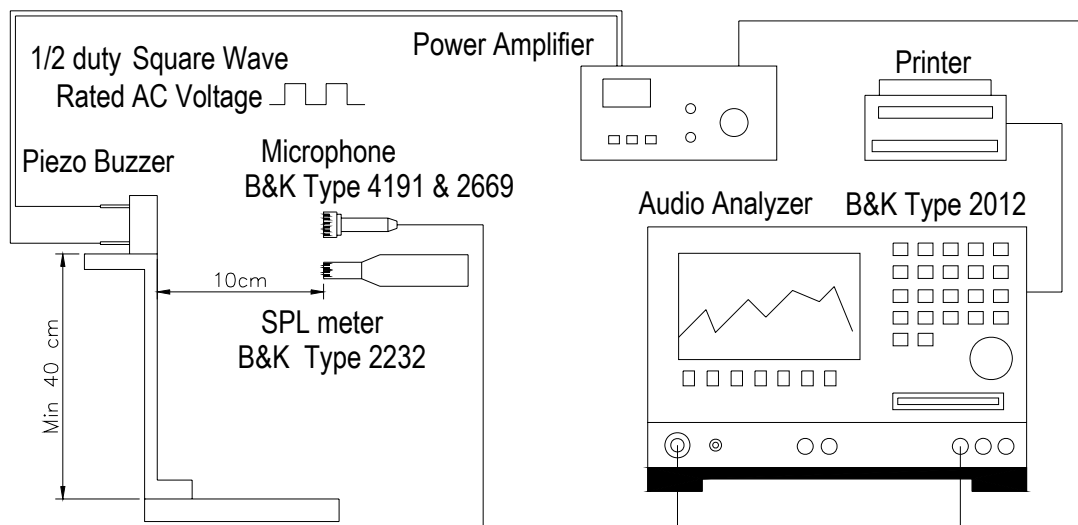
#### BASIC

Temperature : 20±3°C

Relative humidity : 60% ~ 70%,

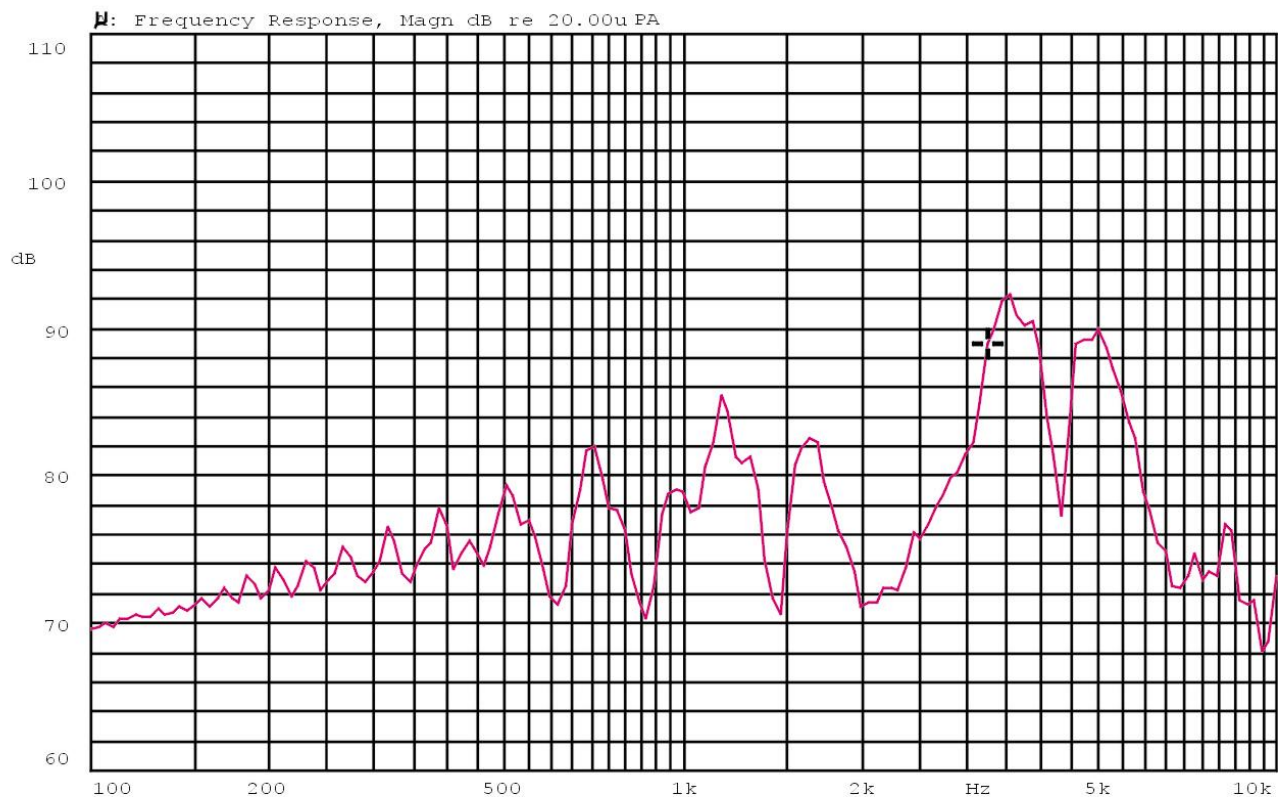
Atmospheric pressure : 860mbar to 1060mbar

## 2-2. Standard Test Fixture



## 2-3. Frequency Response Curve

X: 3.2546kHz Y: 89.03dB ZA: Live Curve SSR T. RMS



Mode: SSR

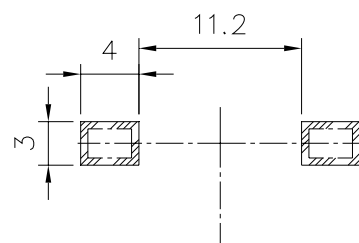
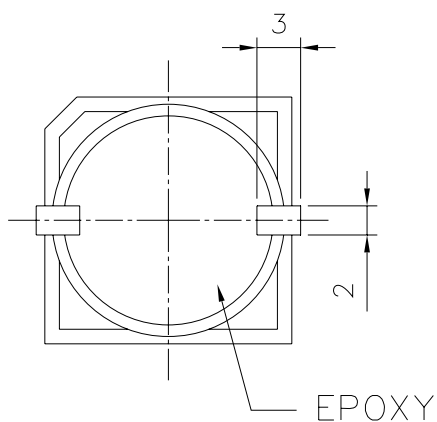
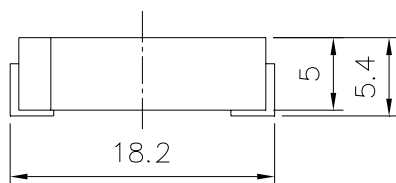
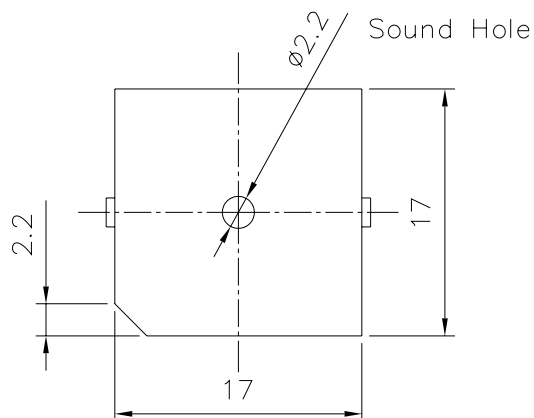


REV NO.

REVISION NOTE

APPROVAL

DATE



PCB LAYOUT

TITLE: SMD PIEZO BUZZER		DRAWN: JOYEN 01/18/2007	SCALE: 2:1	SHEET: 1 of 1
PART NO. APD-1709-LF	1	DESIGNED: R&D OF AAT	UNITS: mm	
DWG NO. DTS-1401		CHECKED:	TOLERANCE $\pm 0.2$	
	REV	APPROVAL:	UNLESS OTHERWISE SPECIFIED:	
		MATERIAL: LCP	ONE PLACE DECIMAL $\pm$ ***	
			TWO PLACE DECIMAL $\pm$ ***	
			THREE PLACE DECIMAL $\pm$ ***	



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## 4. Reliability Test

Item	Conditions	Evaluation standard
01 Low Temp. Storage Test	$-40^{\circ}\text{C} \pm 2^{\circ}\text{C}$ ,240Hr	After the test the part shall meet specifications without Any degradation and performance except S.P.L S.P.L shall be 73dB or more.
02 High Temp.Storage Test	$85^{\circ}\text{C} \pm 2^{\circ}\text{C}$ ,240Hr	
03 Temp./Humidity Storage Test	$40^{\circ}\text{C} \pm 2^{\circ}\text{C}$ , RH90-95% 240Hr	
04 Thermal Shock Test	$-40^{\circ}\text{C} \pm 2^{\circ}\text{C}$ (0.5Hr) $\rightarrow$ , $20^{\circ}\text{C} \pm 2^{\circ}\text{C}$ (0.25Hr) $85^{\circ}\text{C} \pm 2^{\circ}\text{C}$ (0.5Hr) $\rightarrow$ , $20^{\circ}\text{C} \pm 2^{\circ}\text{C}$ (0.5Hr) 5 cycles	
05 Vibration Test	10-55Hz/2 Hr amplitude1.5mm X,Y, Z,3 directions	
06 Mechanical Shock Test	+100G,Half Sine wave, XYZ , 3 impacts per axis ,3 times.	
07 Free Drop Test	The part shall be dropped freely from a height of 75 cm X,Y, Z,3 directions 3times (total 9 times )	
08 Life Burning Test	The part shall be subjected to 500 hrs in the room temp with rated voltage applied	
09 Lead Strength Test	Pull Lead with a force of 10N,on the direction of the lead axis for $10 \pm 1$ sec.	

## 5.Solder ability

Temperature profile for reflowable Buzzer .

