




MESSRS. 客戶公司行號

SPECIFICATION FOR APPROVAL

承 認 書

Product	SMD PIEZO BUZZER
Part No.	APD-R1409-PU
Customer Approval	
Customer Part No.	

Approved By	Checked By	Made By
 <p>工程 部 SKY ZHAO FEB-25-2014</p>	 <p>工程 部 JEFF FANG FEB-25-2014</p>	 <p>工程 部 SUNNY CHEN FEB-25-2014</p>



Advanced Acoustic Technology Corporation
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QS9000 Certified

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EDITION:1.1

RoHS

1. SPECIFICATION

APD-R1409-PU

ITEM		UNITS	SPECIFICATIONS	CONDITIONS
01	Rated Voltage	V	9	Vp-p (Square Wave)
02	Operating Voltage	V	1~ 15	
03	Rated Current	mA(Max)	3	Rated Voltage
04	Sound pressure level (Distance at 10cm)	dBA(Min)	85	Rated Voltage Rated Frequency
05	Resonant Frequency	Hz	4000± 500	Rated Voltage
06	Capacitance	pF	15000±30%	At 100 Hz
07	Operating Temp.	°C	-20 ~ +85	
08	Storage Temp.	°C	-30 ~ +85	
09	Weight	g	1.0	
10	Housing Material		LCP	

2. MEASURING METHOD

2-1. Test Condition

STANDARD

Temperature : 15 ~ 35°C

Relative humidity: 45% ~ 85%,

Atmospheric pressure: 860mbar to 1060mbar.

JUDGEMENT

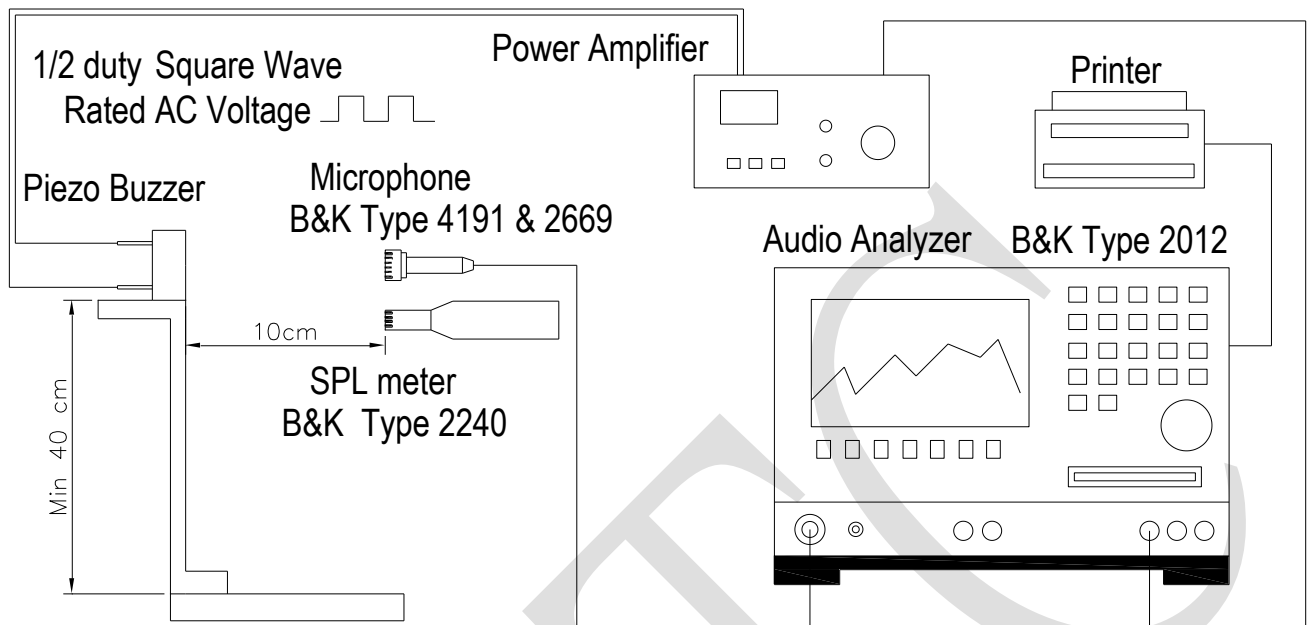
Temperature : 20±3°C

Relative humidity: 60% ~ 70%,

Atmospheric pressure: 860mbar to 1060mbar

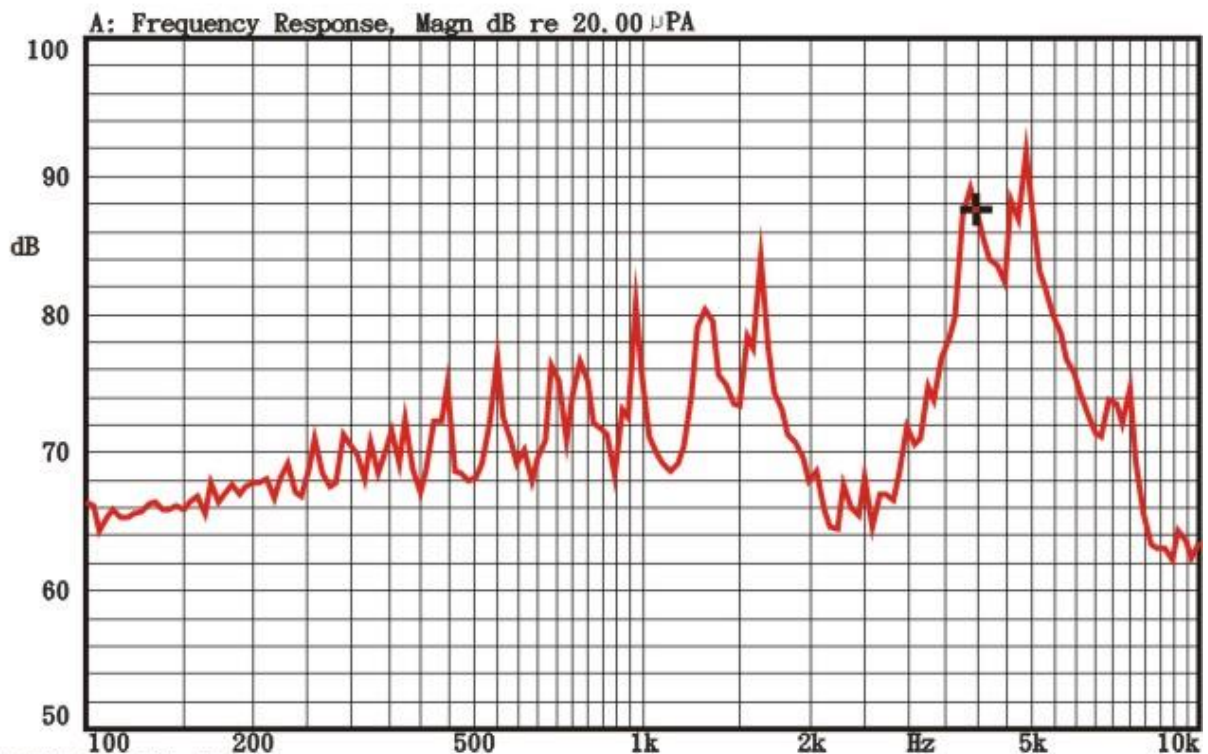
RoHS

2-2. Standard Test Fixture



2-3. Frequency Response Curve

X:3.9811kHz Y:87.56dB ZA:Live Curve SSR T. RMS

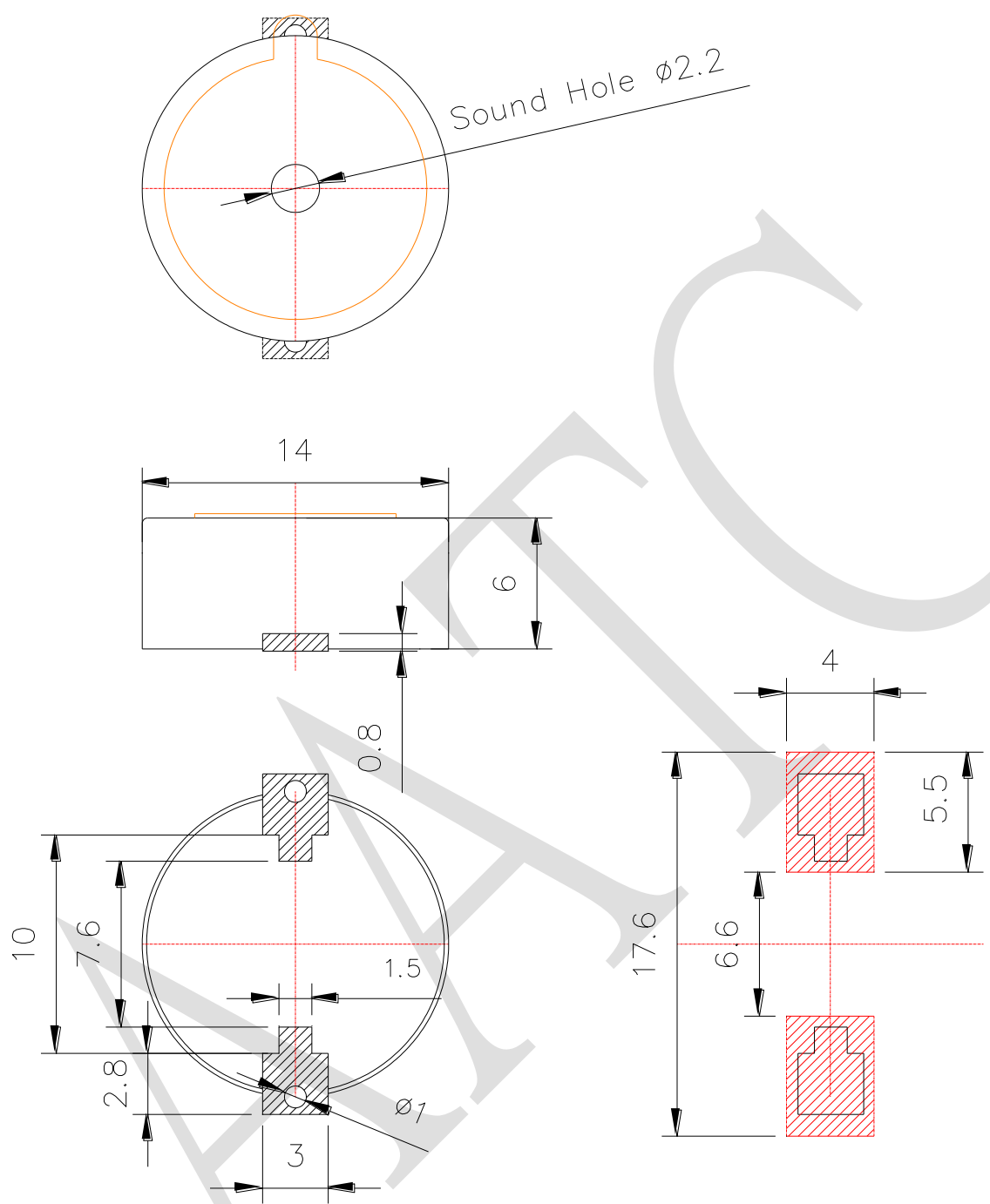


14-MAY-2012 10:37:58

Mode: SSR



REV NO.	REVISION NOTE	APPROVAL	DATE
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PCB LAYOUT

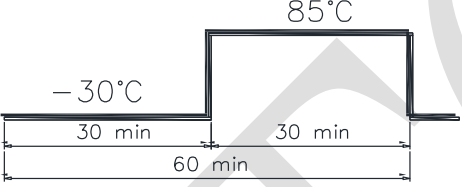
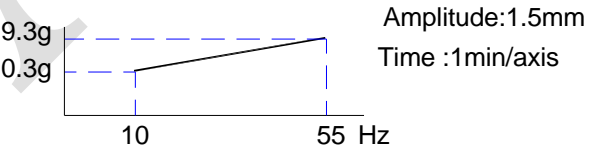
RoHS

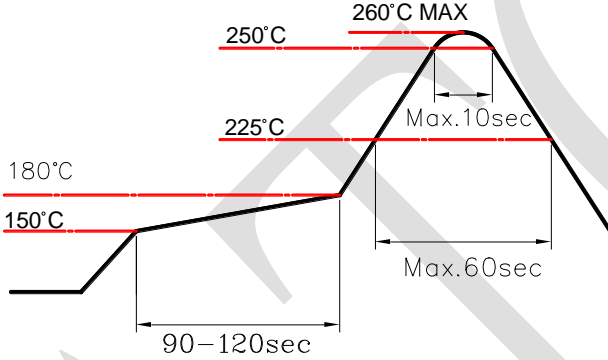
TITLE: SMD PIEZO BUZZER		DRAWN: Sunny	2014-2-25	SCALE: 2:1	SHEET: 1 of 1
PART NO. APD-R1409-PU		DESIGNED: R&D OF AAT	UNITS: mm		
DWG NO. SMD-140060F-09040TJ		CHECKED:	TOLERANCE ± 0.5		
		APPROVAL:	UNLESS OTHERWISE SPECIFIED:		
REV 3	MATERIAL: LCP&PPS	ONE PLACE DECIMAL \pm ***			
		TWO PLACE DECIMAL \pm ***			
		THREE PLACE DECIMAL \pm ***			



ADVANCED ACOUSTIC TECHNOLOGY CORPORATION

4. RELIABILITY TESTS

Item	Test conditions	Evaluation standard
01 High temp. Storage life	The part shall be capable of withstanding a storage Temperature of +85°C for 120 hours.	<p>1. After the test the part shall meet specifications without Any degradation in appearance and performance except S.P.L</p> <p>2. S.P.L shall be ± 7 dB.</p>
02 Low temp. Storage life	The part shall be capable of withstanding a storage Temperature of -30°C for 120 hours.	
03 Temp. cycle	<p>The part shall be subjected 10 cycles. One cycle shall of ;</p> 	
04 Temp./Humidity cycle	The part shall be subjected with 90~95% R.H at +40°C for 96 hours.	
05 Operating life	<p>Rated Voltage, Frequency applied.</p> <ol style="list-style-type: none"> Ordinary temperature The part shall be subjected to 1000 hours at room temperature ($25 \pm 10^\circ\text{C}$) High temperature The part shall be subjected to 500 hours at 70°C Low temperature The part shall be subjected to 500 hours at -20°C 	
06 Vibration	 <p>Amplitude: 1.5mm Time : 1min/axis</p> <p>Make this test for the directions of X, Y, Z for 2 hours each (total 6 hours).</p>	

Item	Test conditions	Evaluation standard
07 Free drop (Packing)	The part only shall be dropped from a height of 100cm onto a 10mm thick wooden board 1 times in 3 axes (X.Y.Z). (a total of 3 times).	
08 Solder ability	Hand Soldering : $360\pm 5^{\circ}\text{C}$ / ≤ 2 Sec. Recommend using constant searing-iron	
09 Soldering profile	Soldering into solder bath: 	1. After the test the part shall meet specifications without Any degradation in appearance and performance except S.P.L 2. S.P.L shall be ± 7 dB.
10 Wash ability	Solvent : deionizer water Solvent temp. : $55\pm 5^{\circ}\text{C}$ Soaking time : 5 ± 0.5 min. After the washing process, be sure to tear off the label.	
Note: 1. After solder bath, the cooling time must be longer than 2 hours before function test. 2. If you need more information, please contact our technology department, thank you.		

5. PACKING

