

MESSRS.

SPECIFICATION FOR APPROVAL

承 認 書

Product	PIEZO BUZZER (SMD)
Part No.	APD-1603-KP2
Customer Approval	

Approved By	Checked By	Made By



苙翔科技股份有限公司
ADVANCED ACOUSTIC TECHNOLOGY CORP.



ISO 9001 Certified

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APD-1603-KP2

Scope:

This specification relates to piezoelectric sounder intended to be used in alarm systems, etc.
Please contact us before using any of the products the applications not described above

Items		Units	Specifications	Conditions
01	Rated Voltage	Vp-p	3.0	Square Wave
02	Operating Voltage	Vp-p	1.0~25.0	Square Wave
03	Consumption Current	mA(max)	2	.Rated Voltage, Distance at 10 cm free air 4000Hz, Square Wave
04	Sound Pressure Label	dB(min)	70	
05	Resonant Frequency	Hz	4000±500	
06	Static Capacitance	nF	14.0±30%	At 1.0KHz
07	Operating Temp.	°C	-20 ~ +70	
08	Storage Temp.	°C	-30 ~ +80	
09	Dimension	mm	16 x 16 x 2.5	See attached drawing.
10	Weight	g	1	

Standard condition:

Ordinary Temp.(+5~+35°C), Humidity(45~85%RH), Air Pressure(860~1060HPa)

In case of doubtful judgment, the test is re-performed under basic state.

Basic State:

Temp.(+25±3°C), Humidity(60~70%RH),Air Pressure(860~1060HPa).

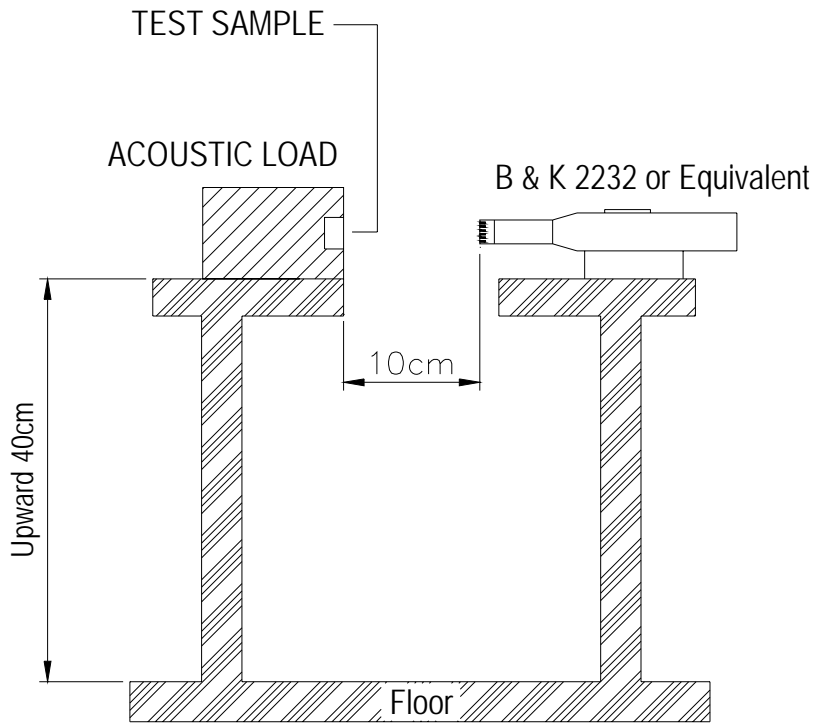
Soldering Heat Resistance (Re-Flow)

Following profile of heat stress is applied to sounder, then being place in natural condition for 1 hour, sounder shall be measured.

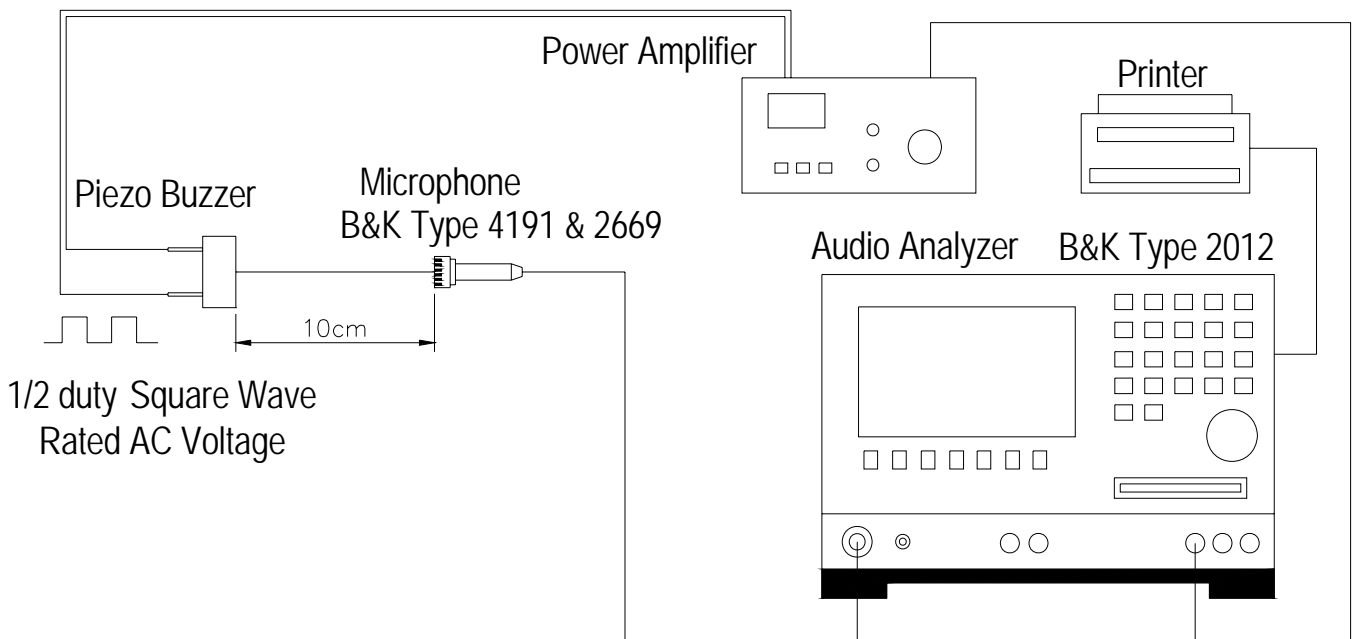
Pre-heating conditions shall be +140°C to 160°C for 60 to 120 seconds. Ascending time up to +150°C shall be longer than 30 second.

Heating conditions shall be within 10 seconds at +220°C min., but peak temperature shall be lower than+230°C

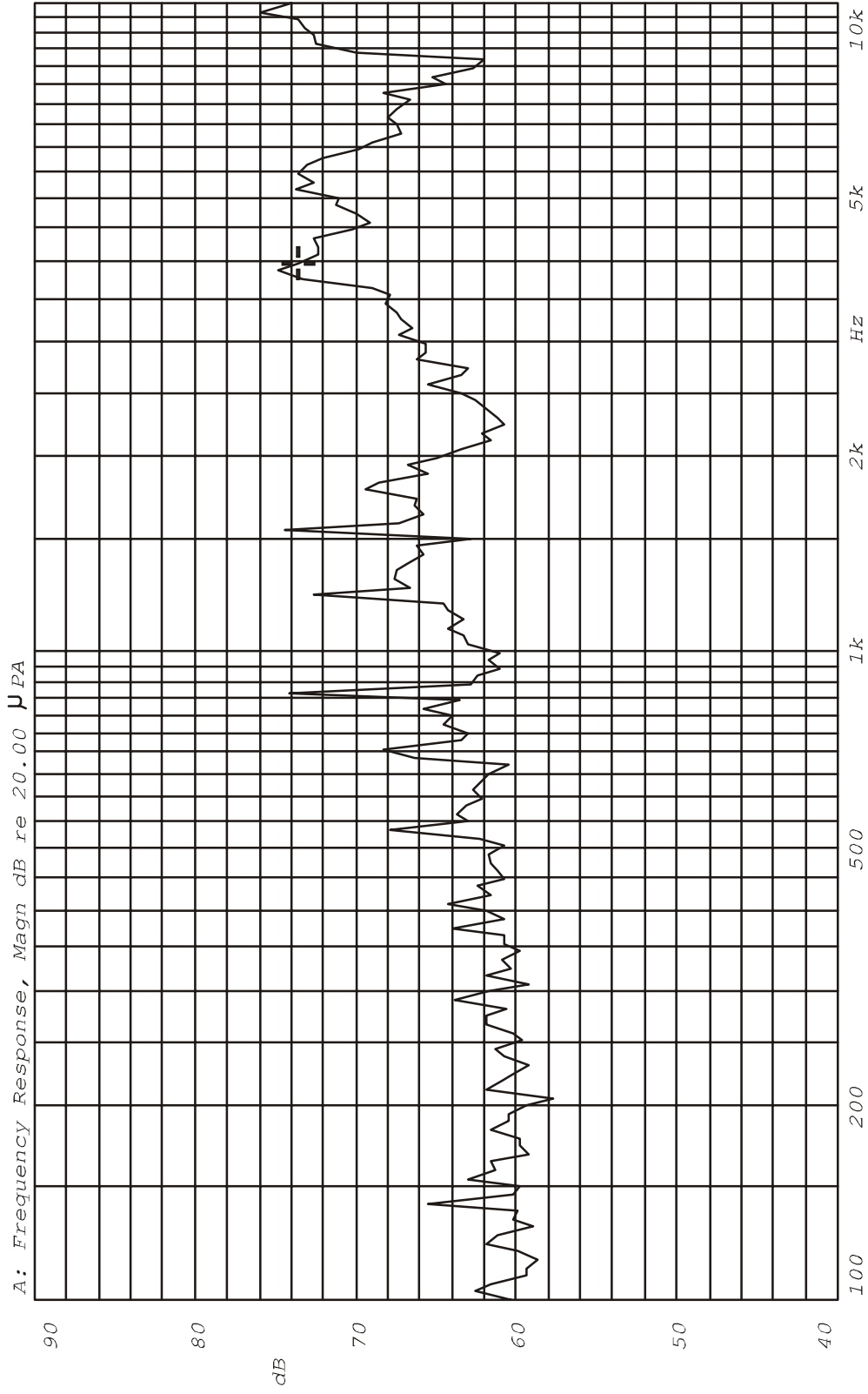
STANDARD TEST FIXTURE



Standard test condition of piezo buzzer



X:3.9811kHz Y:73.56dB ZA:Live Curve SSR T. RMS



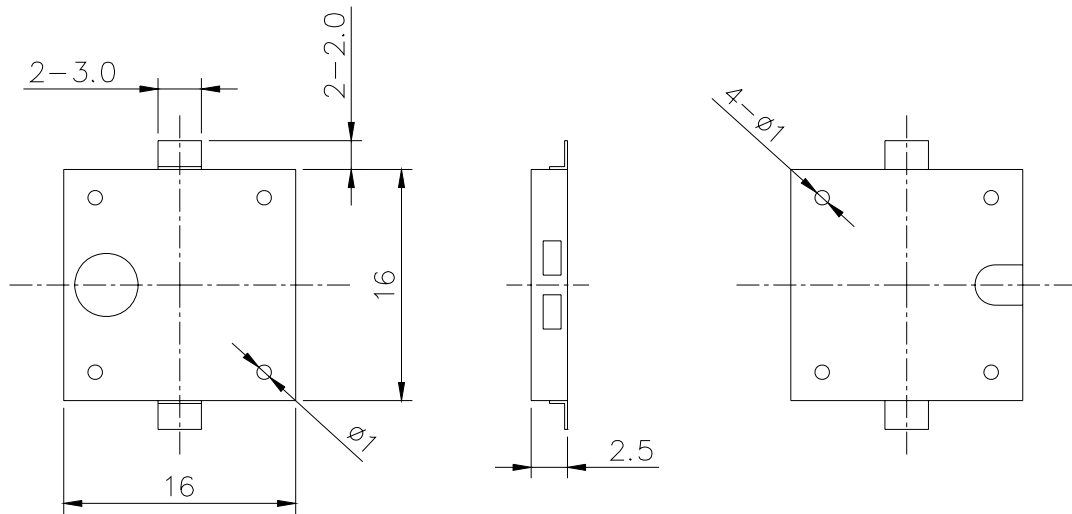
Mode: SSR

REV NO.

REVISION NOTE

APPROVAL

DATE



TITLE: PIEZO BUZZER (SMD)		DRAWN: Milton	01/23/2002	SCALE: 4:1	SHEET: 1 OF 1
PART NO.	APD-1603-KP2	DESIGNED:	R&D OF AAT	UNITS:	mm
DWG NO.	DPD-1002	CHECKED:		TOLERANCE ± 0.2	
		APPROVAL:		UNLESS OTHERWISE SPECIFIED:	
		MATERIAL:	LCP	ONE PLACE DECIMAL \pm ***	
				TWO PLACE DECIMAL \pm ***	
				THREE PLACE DECIMAL \pm ***	



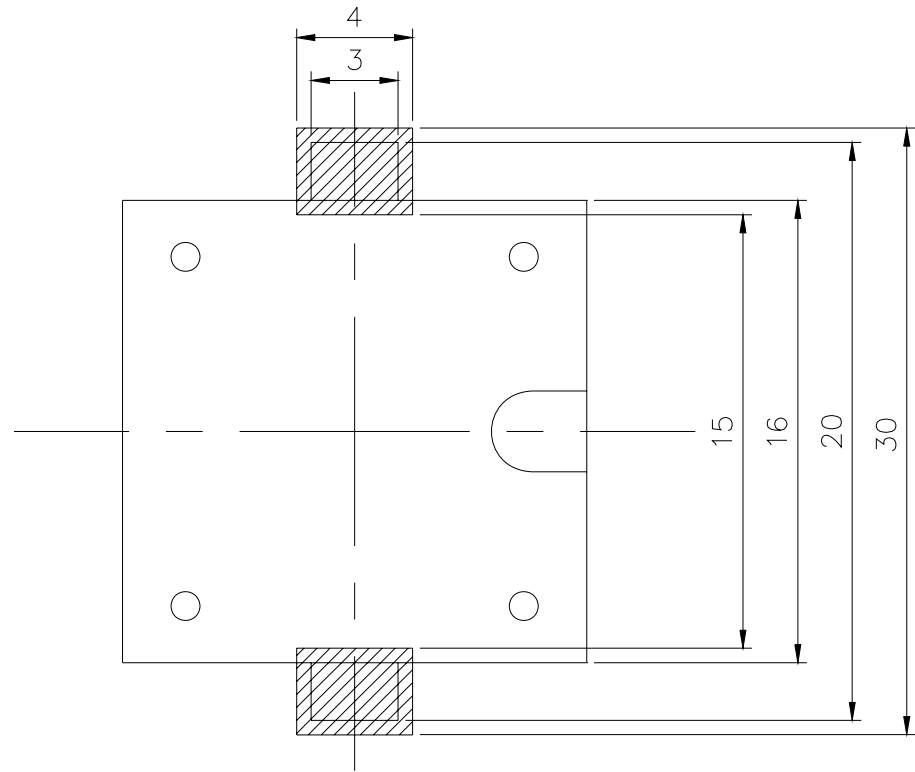
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REV NO.

REVISION NOTE

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DATE



TITLE: RECOMMENDED LAND PATTERN DIMENSIONS		DRAWN: Milton 01/23/2002	SCALE: 4:1	SHEET: 1 OF 1
PART NO. APD-1603-KP2-1	1 REV	DESIGNED: R&D OF AAT	UNITS: mm	
DWG NO. DPD-1002-1		CHECKED:	TOLERANCE ± 0.2	
		APPROVAL:	UNLESS OTHERWISE SPECIFIED: ONE PLACE DECIMAL ± *** TWO PLACE DECIMAL ± *** THREE PLACE DECIMAL ± ***	
		MATERIAL: LCP		



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RELIABILITY TEST

APD-1603-KP2

Item		Test conditions	Evaluation standard
1	High temp storage life	The part shall be capable of withstanding the storage temperature of +80°C for 240 hours.	<p>After the test, the part shall meet specifications without any degradation in appearance and performance except SPL. SPL shall be 62dB or more</p>
2	Low temp storage life	The part shall be capable of withstanding the storage temperature of -30°C for 240 hours.	
3	Temp. cycle	After being placed in chamber at -30±2°C for 30 minutes, products shall be placed at room temperature +20°C. After 15 minutes at this temperature, products shall be placed in a chamber at +85±2°C. After 30 minutes at this temperature, products shall be return to room temperature +20°C for 15 minutes. After 5 above cycles, products shall be measured after being placed in natural condition for 4 hours.	
4	Humidity cycle	After being placed in a chamber with 90-95% R.H. at 40±2°C for 24 hours and then being placed in natural condition for 4 hours.	
5	Operating life	Driving the sounder at 25±10°C for 240hrs. Input 3VP-P square wave 4000Hz	
6	High temp.	The part shall be subjected to 240 hours at +70°C with 3VP-P,4000Hz applied.	
7	Low temp.	The part shall be subjected to 240 hours at -20°C with 3VP-P,4000Hz applied.	
8	Vibration	10~55Hz 1.5mm 55~150Hz 5G 10~200~10Hz 15minutes X,Y,Z,3directions 2h/direction.	
9	Fixed drop	The part mounted on an exclusive fixture(115g) shall be dropped 5 times from a height of 152cm onto concrete in each of 6 different axes(total 6 times)	
10	Free drop	The part shall be dropped freely from a height of 100cm onto concrete 1 time in 6 axes.(total 6 time)	
11	Solder ability	The part leads shall be immersed in molten solder maintained at 235±5°C for a period of 2.0±0.5 seconds	Ninety-five percent(95%) coverage with a continuous coating of bright new solder
12	Strength of Terminal	It shall be more than 10N in the vertical direction of terminal in the state that 4 terminals are soldered on PCB	Same as items of No. 1 to No. 10