

# 请承认书

Version No.: <u>V2.0</u>

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Changzho	u HaoXid	ing	Electi	ronic	Co., I	LTD
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CUSTOME	R NAMER :					_
产品名	<b>分</b> 称					
COMMOD	: TY		PIEZO	BUZZEI	R	_
产品型	보 <del>号</del>					
MODEL NO	o :		TDA-2	23220	)	_
客户料	4号					
PART NO	: -					_
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PART NO 审核	秦皓		主	办	唐彻雅	Jul.12,2018
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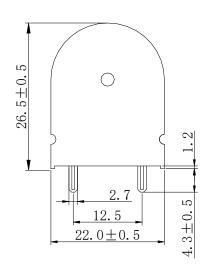
## A. SCOPE

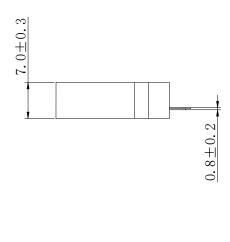
This specification applies piezo buzzer, TDA-23220

## **B. SPECIFICATION**

No.	Item	Unit	Specification	Condition
1	Oscillation Frequency	Hz	2000	square wave
2	Operating Voltage	Vp-p	30 max	
3	Current Consumption	mA	MAX. 2	at 5Vp-p
4	Sound Pressure Level	dB	MIN. 80	at 10cm 9Vp-p 2000Hz
5	Insulation Resistance	МΩ	1	at 1minute 25V
6	Operating Temperature	$^{\circ}$	-30 ~ +70	
7	Storage Temperature	$^{\circ}$	-40 ~ +80	
8	Dimension	mm	26.5x22x7.0	See appearance drawing
9	Weight (MAX)	gram	3	
10	Housing Material		PBT	
11	Leading Pin		Tin Plated Brass(Sn)	See appearance drawing
12	Environmental Protection Regulation		RoHS	

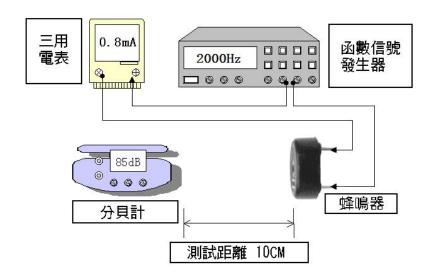
# **C. APPEARANCE DRAWING**



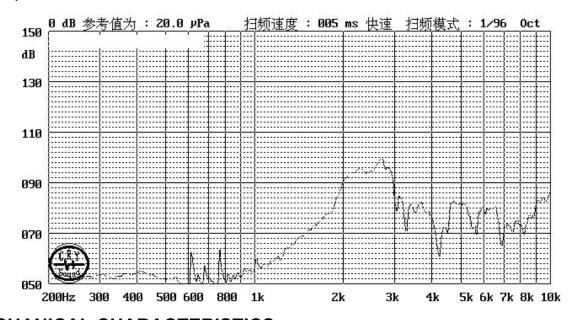


Unit:mm TOL: ±0.5mm

### D. RECOMMEND DIRVING CIRCUIT



#### **E.FREQUENCY CURVE**



#### F. MECHANICAL CHARACTERISTICS

NO	Item	Test Condition	Evaluation standard
1	,	Stripped wires of lead wires are immersed in rosin for 5 seconds and then immersed in solder bath of 270±5°C for 3±0.5 seconds.	90%min stripped wires shall be wet with solder.(except the edge of terminal)
2	Soldering Heat Resistance	Stripped wires are immersed up to 1.5mm from insulation in solder bath of $300\pm5^{\circ}$ C for $\pm0.5$ seconds or $260\pm5^{\circ}$ C for $10\pm1$ seconds.	No interference in operation
3	Terminal Strength Pulling	The force 10±1 seconds of 9.8N is applied to each terminal in axial direction	No damage and cutting off
4	Vibration	Buzzer shall be measured after being applied vibration of 1.5mm with 10 to 55Hz band of vibration frequency to each of 3 per-pendicular directions for 2 hours.	· · · · · · · · · · · · · · · · · · ·

## **G. ENVIRONMENT TEST**

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	NO	Item	Test Condition	Evaluation standard
	1	High temp. test	After being placed in a chamber at80 ℃ for 96 hours	
	2	Low temp. test	After being placed in a chamber at -40 ℃ for 96 hours	Being placed for 4 hours
3 Humidity test		Humidity test	After being placed in a chamber at 40°C and 85±5%	at 25℃,buzzer shall be
	3	numuny test	relative humidity for 96hours	measured. The value of
			70℃	oscillation frequency
	4	Temp. cycle test (5cycle)	25°C 25°C 0.5 0.5H 0.25 0.5H 0.5H 0.5H 0.25 3hours	and current consumption should be in ±10% compared with initial one. The SPL should be in ±10dB compared with initial one.

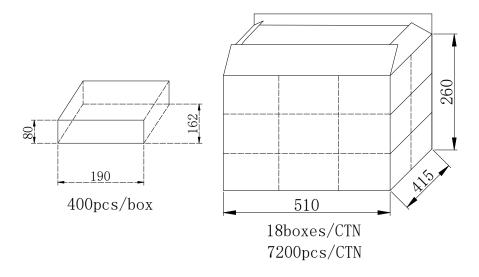
# H. RELIABILTY TEST

NO	Item	Test condition	Evaluation standard	
1	Operating life test	<ol> <li>Continuous life test         96 hours continuous operation at 60°C with maximum         rated voltage applied.</li> <li>Intermittent life test         A duty cycle of 1 minute on, 5mintes off, a minimum of         1000 times at room temp.( 25±2°C) and maximum         rated voltage applied</li> </ol>	Being placed for 4 hours at 25°C, buzzer shall be measured. The value of oscillation frequency and current consumption should be in ±10% compared with initial one. The SPL should be in ±10dB compared with initial one.	

#### **TEST CONDITION**

**Standard Test Condition :** a) Temperature :  $+5 \sim +35^{\circ}$ C b) Humidity : 45-85% c) Pressure : 860-1060mbar **Judgment Test Condition:** a) Temperature :  $+25\pm2^{\circ}$ C b) Humidity : 60-70% c) Pressure : 860-1060mbar

#### I. PACKING STANDARD



#### J. NOTE CAUTIONS

- **a.** Can not be applied DC bias voltage and a sounding body or pronunciation elements, otherwise its insulation resistance will decrease and the use of performance degradation.
- **b.** Can not be imposed over pronunciation body or pronunciation components allows the use of voltage range of the voltage on the.
- **C.** Please pay attention in welding process, don't let soldering flux invasion into the sound chamber, otherwise flux can cause defect conduction.
- **d.** Use should handle with care, avoiding direct pressure contact, or inadvertently falling down, to prevent the occurrence of fault, or the generation characteristics of abnormal movements.

#### K. NOTICE ON PRODUCT STORAGE

**a**. Please store the products in room where the temperature / humidity is stable. And avoid such places where there are large temperature changes. Please store the products under the following conditions :

Temperature: -10 to +40 (degree C)

Humidity: 15 to 85% R.H.

- **b**. Expire date (Shelf life) of the products is 6 months after delivery under the conditions of a sealed and an unopened package. Please use the products within 6 months after delivery. If you store the products for a long time (more than 6months), use carefully because the products may be degraded in the solder-ability and/or rusty. Please confirm solder-ability and characteristics for the products regularly.
- **C**. Please use the products immediately after the package is opened, because the characteristics may be reduced in quality, and/or be degraded in the solder-ability due to storage under the poor condition.

# **L.REVISION**

No.	DATE	DESCRIPTION	REMARK	VERSION
1	2014.10.30	Initial condition	TDA-23220	V1.0
2	Jul.12,2018	Version upgrade	TDA-23220	V2.0