

# 请承认书

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

常州	昊 翔	电	子	有际	公公	司
Changzho	u HaoXi	ang	Elect	ronic	Co.,	LTD
客户名	3 称					
CUSTOME	R NAMER :					_
产品名	名 称					
COMMODI			PIEZO	BUZZE	R	_
产品型	业 号					
MODEL NO			TDA-12	240PB		_
客户料	斗 号					
PART NO	;					_
軍 核	秦皓		王		唐俐雅	Nov.1,2018
	客户	承	认	•		
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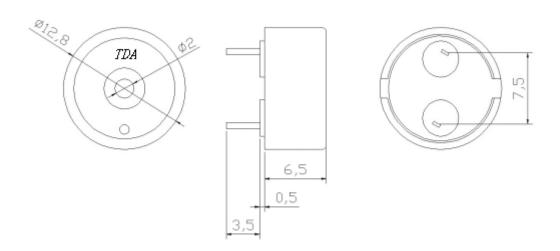
## A. SCOPE

This specification applies piezo buzzer, TDA-12240PB

## **B. SPECIFICATION**

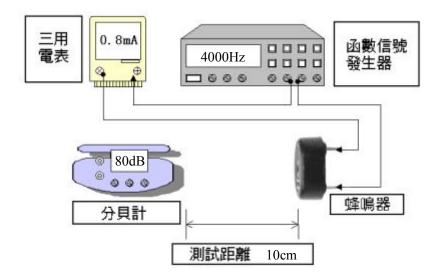
No.	Item	Unit	Specification	Condition	
1	Oscillation Frequency	Hz	4000	square wave	
2	Operating Voltage	Vp-p	25max		
3	Current Consumption	mA	MAX.5	at 5Vp-p	
4	Sound Pressure Level	dB	MIN. 80	at 10cm 5Vp-p 4000Hz	
5	Operating Temperature	$^{\circ}\!\mathbb{C}$	-20 ~ +70		
6	Storage Temperature	$^{\circ}\!\mathbb{C}$	-30 ~ +80		
7	Dimension	mm	Ø12.8xH7.0	See appearance drawing	
8	Weight (MAX)	gram	0.8		
9	Housing Material		PBT		
10	Leading Pin		Tin Plated Brass(Sn)	See appearance drawing	
11	Environmental Protection Regulation		RoHS		

## **C. APPEARANCE DRAWING**

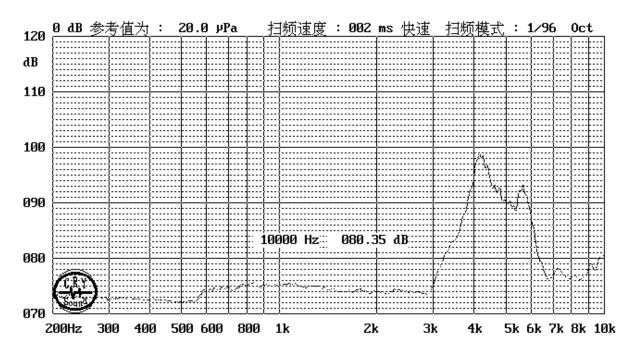


Unit:mm Tolerance :  $\pm 0.5$ mm

#### D. RECOMMEND DIRVING CIRCUIT



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



## F. MECHANICAL CHARACTERISTICS

NO	Item	Test Condition	Evaluation standard	
1	Solderability	Stripped wires of lead wires are immersed in rosin for 5 seconds and then immersed in solder bath of 230±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 260±5℃ for 10±1 seconds.	No interference in operation	
3		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.	frequency and current consumption should be	
5	Drop test	Dropped naturally from 75cm height onto the surface of 40mm thick wooden board of 3 directions for 1times.	in±10%compared with initial ones. The SPL should be in ±10dB compared with initial one.	

## **G. ENVIRONMENT TEST**

NO	Item	Test Condition	Evaluation standard
1	High temp. test	After being placed in a chamber at+80°C for 96 hours	
2	Low temp. test	After being placed in a chamber at -30 ℃ for 96 hours	
3	Humidity test	After being placed in a chamber at +40 $^{\circ}\mathrm{C}$ and 85±5% relative humidity for 96hours	Being placed for 4 hours at 25℃,buzzer shall be
4	Temp. cycle test	The part shall be subjected to 5 cycles. One cycle shall be consist of:  70°C  25°C  -20°C  0.5 0.5H 0.25 0.5H 0.5H 0.5H 0.25  3hours	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.

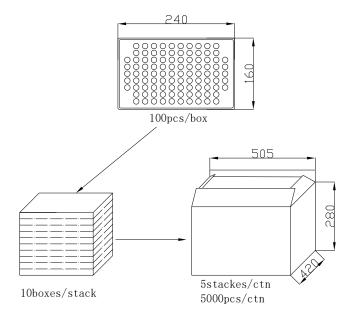
#### H. RELIABILTY TEST

NO	Item	Test condition	Evaluation standard	
1	Operating life test	<ol> <li>Continuous life test         96 hours continuous operation at 70°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 :  $+25\pm 2 ^{\circ}$ 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	Jun.4,218	Initial condition	TDA-12240PB	V1.0
2	Nov.1,2018	Version upgrade	TDA-1224PB	V2.0