



# 请承认书

Version No.: V2.0

常州昊翔电子有限公司  
Changzhou HaoXiang Electronic Co., LTD

客户名称

CUSTOMER NAME : \_\_\_\_\_

产品名称

COMMODITY : SMD PIEZO BUZZER

产品型号

MODEL NO : TDA-M15240B

客户料号

PART NO : \_\_\_\_\_

审核	秦皓	主办	康楠 Jun.20,2019
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客户承认栏			
承认		拒收	

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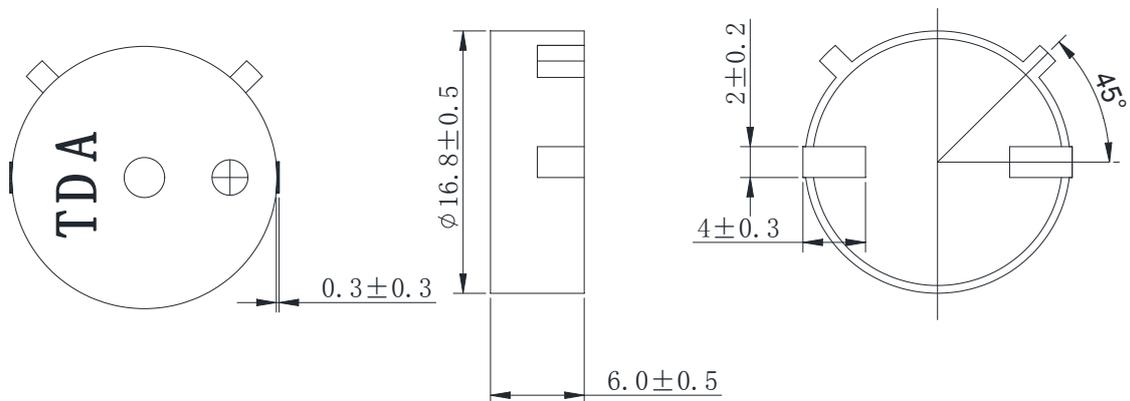
## A. SCOPE

This specification applies piezo buzzer, **TDA-M15240B**

## B. SPECIFICATION

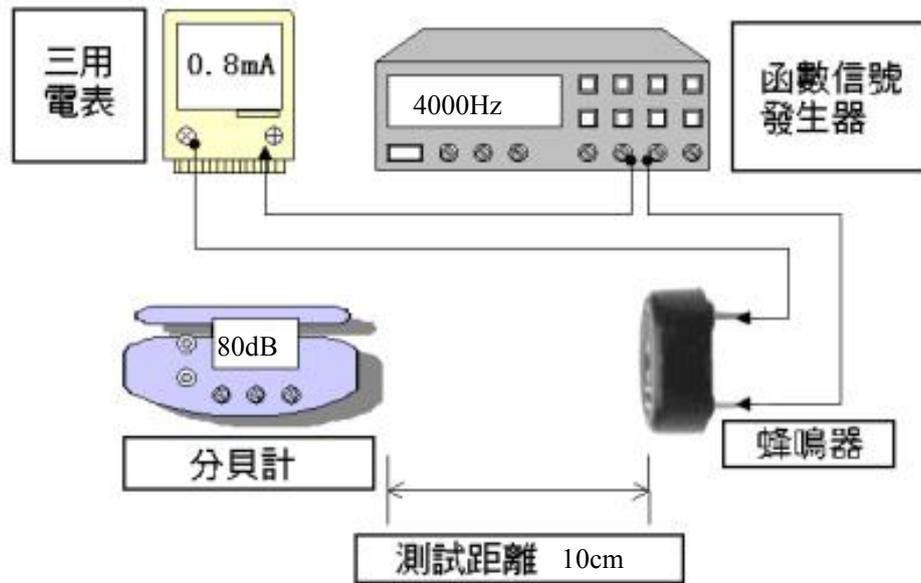
No.	Item	Unit	Specification	Condition
1	Oscillation Frequency	Hz	4000	square wave
2	Operating Voltage	Vp-p	25 max	
3	Current Consumption	mA	MAX. 2	at 5Vp-p
4	Sound Pressure Level	dB	MIN. 80	at 10cm 5Vp-p 4000Hz
5	Operating Temperature	°C	-30 ~ +85	
6	Storage Temperature	°C	-40 ~ +85	
7	Dimension	mm	φ 16.8 xH 6	See appearance drawing
8	Weight (MAX)	gram	1.2	
9	Housing Material		PPS	
10	Leading Pin		Tin Plated Brass(Sn)	See appearance drawing
11	Environmental Protection Regulation		RoHS	

## C. APPEARANCE DRAWING

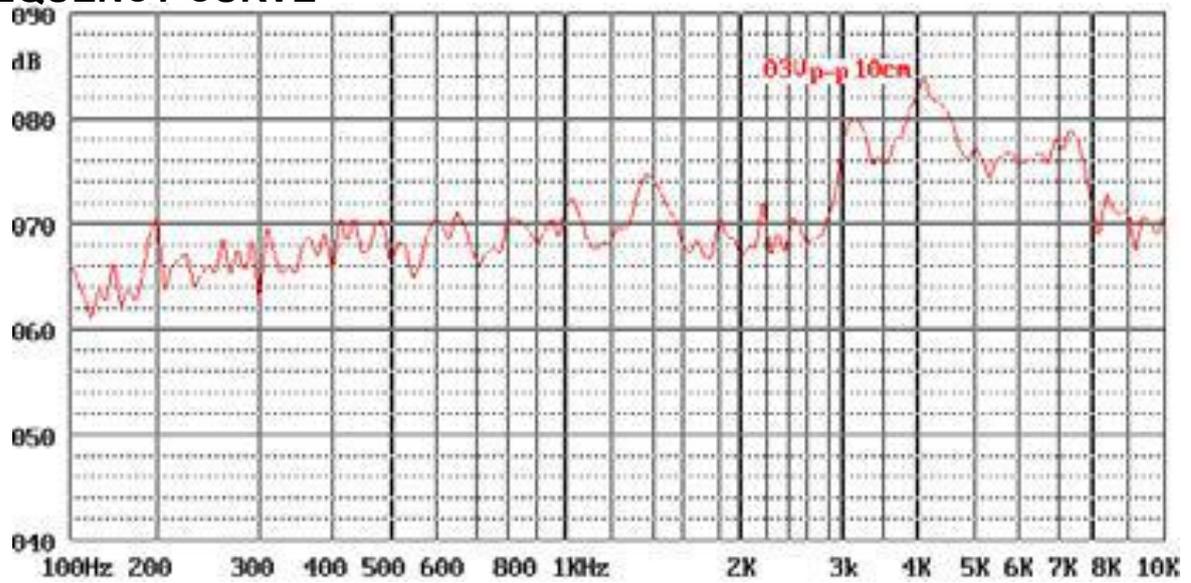


**Unit:mm Tolerance :  $\pm 0.5$ mm**

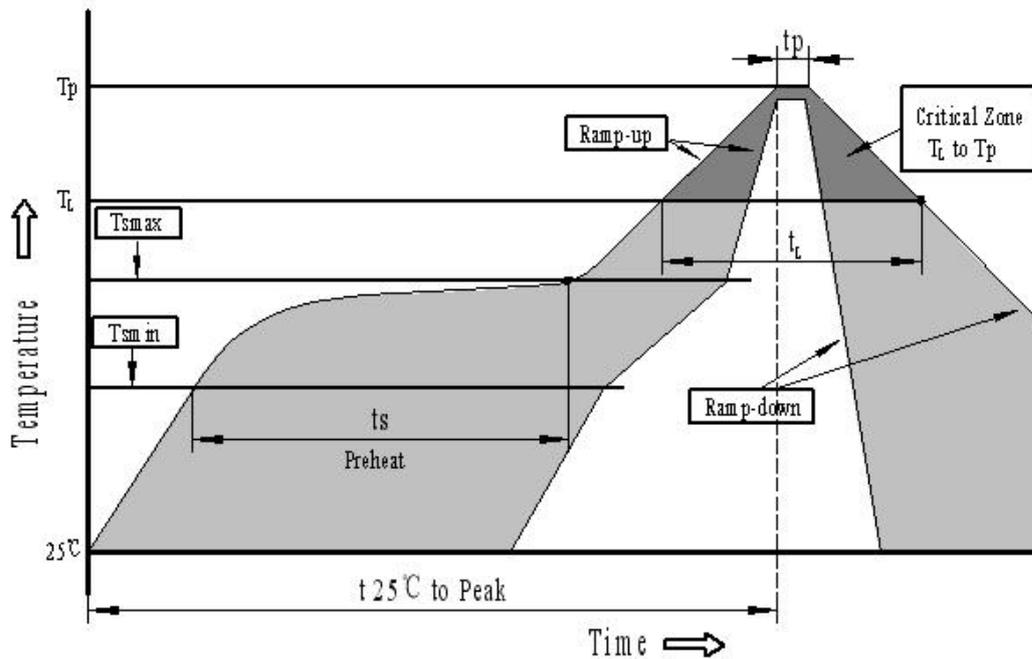
## D. RECOMMEND DIRIVING CIRCUIT



## E. FREQUENCY CURVE



## F.RECOMMENDED TEMP. PROFILE FOR REFLOW OVEN



Profile Feature	Pb-Free Assembly
Average ramp-up rate( $T_L$ to $T_p$ )	3°C/second max.
Preheat	
-Temperature Min.( $T_{smin}$ )	150°C
-Temperature Min.( $T_{smax}$ )	200°C
-Temperature Min.( $t_s$ )	60~180 seconds
$T_{smax}$ to $T_L$	
-Ramp-up Rate	3°C/second max.
Time maintained above:	
- Temperature( $T_L$ )	217°C
-Time( $T_L$ )	60~150 seconds
Peak temperature( $T_p$ )	245°C+0/-5°C
Time within 5°C of actual Peak temperature ( $t_p$ )	6 seconds max.
Ramp-down Rate	6°C/second max.
Time 25°C to Peak Temperature	8 minutes max.

## G.RELIABLY TEST

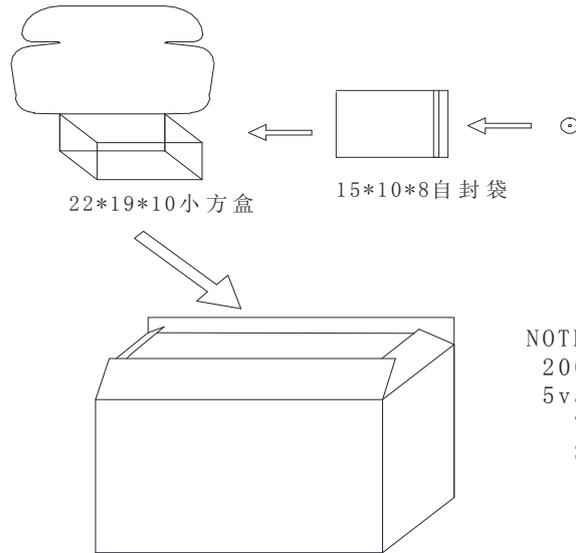
NO.	ITEM	TESTING CONDITION	VARIANCE AFTER TEST
1	High temp. storage life	The part shall be capable of withstanding a storage temperature is +85°C for 96 hours	Being placed for 4 hours at 25°C, buzzer shall be measured. The value of oscillation frequency and current consumption should be in ±10% compared with initial one. The SPL should be in ±10dB compared with initial one.
2	Low temp. storage life	The part shall be capable of withstanding a storage temperature is -40°C for 96hours	
3	Temp. Cycle	The part shall be subjected to 5 cycles. One cycle shall be consist of: <p>The diagram shows a temperature profile over 3 hours. It starts at -30°C for 0.5 hours, ramps up to +25°C in 0.5 hours, holds at +25°C for 0.25 hours, ramps up to +85°C in 0.5 hours, holds at +85°C for 0.5 hours, ramps down to +25°C in 0.5 hours, holds at +25°C for 0.25 hours, and finally ramps down to -30°C in 0.5 hours. The total duration is 3 hours.</p>	
4	Humidity Test	40±2°C, 90~95% RH, 96hours	
5	Vibration Test	After being applied vibration of amplitude of 1.5mm with 10 to 55 Hz band of vibration frequency to each of 3 perpendicular directions for 2 hours .	The value of oscillation frequency and current consumption should be in ±10% compared with initial ones. The SPL should be in ±10dB compared with initial one.
6	Drop Test	Drop on a hard wood board of 4cm thick, any directions ,6 times, at the height of 75cm .	
7	Solderability Test	Lead terminals are immersed in rosin for 5 seconds and then immersed in solder bath of +245 5°C for 3 1 seconds .	90% min. lead terminals shall be wet with solder (Except the edge of terminals).
8	Terminal Strength Pulling Test	The force of 9.8N(1.0kg) is applied to each terminal in axial direction for 10 seconds.	No visible damage and cutting off.
9	Recommended temp. Profile for Reflow Oven	Shown in Fig.1	
<b>Warranty:</b> For a period of one year from date of manufacture under normal operations.			

### TEST CONDITION

**Standard Test Condition :** a) Temperature : +5 ~ +35°C    b) Humidity : 45-85%    c) Pressure : 860-1060mbar

**Judgment Test Condition:** a) Temperature : +25±2°C    b) Humidity : 60-70%    c) Pressure : 860-1060mbar

## H.PACKING STANDARD



## I. 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.

## J. 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.

