

请承认书

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

常州	昊 翔	电	子	有	限	公	司
Changzhou <i>HaoXiang</i> Electronic Co., LTD							
客户名	3 称						
CUSTOME	R NAMER :						
产品名	3 称						
COMMODITY : SMD PIEZO BUZZER							
产品型号							
MODEL NO	MODEL NO : TDA-M18220D						
客户米	斗 号						
PART NO	:						
审核	秦皓		主	办		潘莲 De	c.14,2021
					-		
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常州	昊 翔	电	子	有	限	公	司
市 川 ————	<u></u>						

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南通工厂:

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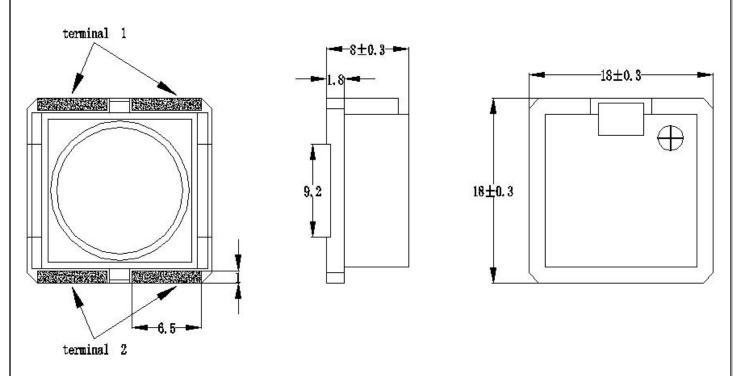
A. SCOPE

This specification applies piezo buzzer, TDA-M18220D

B. SPECIFICATION

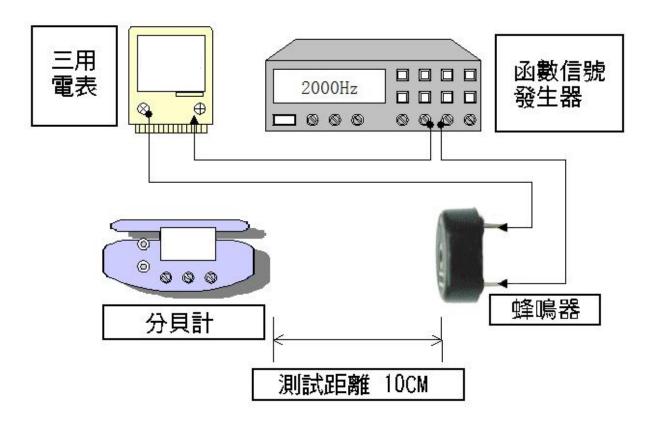
No.	Item	Unit	Specification	Condition	
1	Oscillation Frequency	Hz	2000	square wave	
2	Operating Voltage	Vo-p	18max		
3	Current Consumption	mA	MAX. 3	at 5Vp-p	
4	Sound Pressure Level	dB	MIN. 90	at 10cm 12Vo-p 2000Hz	
5	Operating Temperature	${\mathbb C}$	-40 ~ +105		
6	Storage Temperature	$^{\circ}$	-40 ~ +105		
7	Dimension	mm	18x18 xH8	See appearance drawing	
8	Housing Material		LCP		
9	Leading Pin		Gold plated(AU)	See appearance drawing	
10	Environmental Protection Regulation		RoHS		

C. APPEARANCE DRAWING

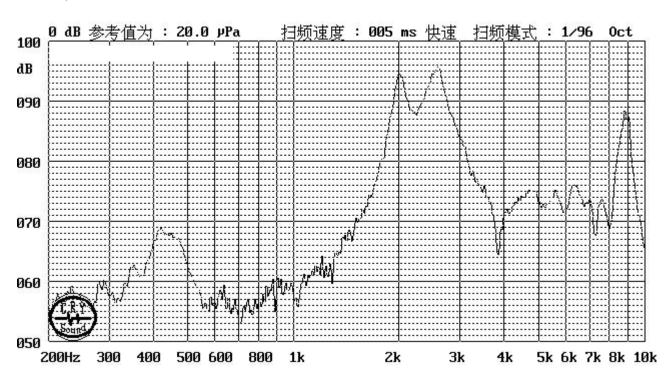


Unit:mm Tolerance : \pm 0.5mm

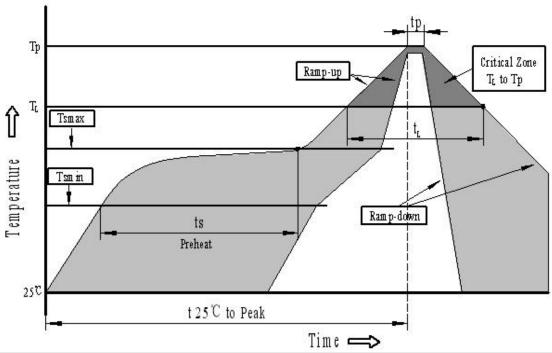
D. RECOMMEND DIRVING CIRCUIT



E.FREQUENCY CURVE



F.RECOMMENDED TEMP. PROFILE FOR REFLOW OVEN



Profile Feature	Pb-Free Assembly		
Average ramp-up rate(T _L to Tp)	3°C/second max.		
Preheat			
-Temperature Min.(Ts _{min})	150℃		
-Temperature Min.(Ts _{max})	200℃		
-Temperature Min.(ts)	60∼180 seconds		
Ts _{max} to T _L			
-Ramp-up Rate	3°C/second max.		
Time maintained above:			
- Temperature(T∟)	217℃		
-Time(T _L)	60∼150 seconds		
Peak temperature(Tp)	245℃+0/-5℃		
Time within 5℃of actual Peak temperature (tp)	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 +105℃ for 96 hours		
2	Low temp. storage life	The part shall be capable of withstanding a storage temperature is -40°C for 96hours	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.	
3	Temp. Cycle	The part shall be subjected to 5 cycles. One cycle shall be consist of: 105°C 20°C 20°C 20°C 3hours		
4	Humidity Test	40±2℃, 90∼95% RH, 96hours		
5	Vibration Test	The part shall be subjected to a vibration cycle is 10Hz in a period of 1 minute. Total peak amplitude shall be 1.52mm(9.3g). The vibration test shall consist of 2 hours per plane in each three mutually perpendicular planes for a total time of 6 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	Shock	Sounder shall be measured after being applied shock (980m/s²) for each three mutually perpendicular directions to each of 3 times by half sine wave.		
7	Drop Test	Dropped naturally from 700mm height onto the surface of 10mm thick wooden board. 2 directions-upper and side of the part are to be applied.		
8	Recommende d temp. Profile for Reflow Oven	Shown in Fig.1		

Warranty: For a period of one year from date of manufacture under normal operations.

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

H.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.

I. 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 55% 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.

K. REVISION

No.	DATE	DESCRIPTION	REMARK	VERSION
1	Dec.14,2021	Initial condition	TDA-M18220D	V2.0