



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 NAMER : _____

产品名称

COMMODITY : SMD PIEZO BUZZER

产品型号

MODEL NO : TDA-M15220

客户料号

PART NO : _____

审核

秦皓

主办

曹升薪 Nov.15,2018

客户承认栏

承认

拒收

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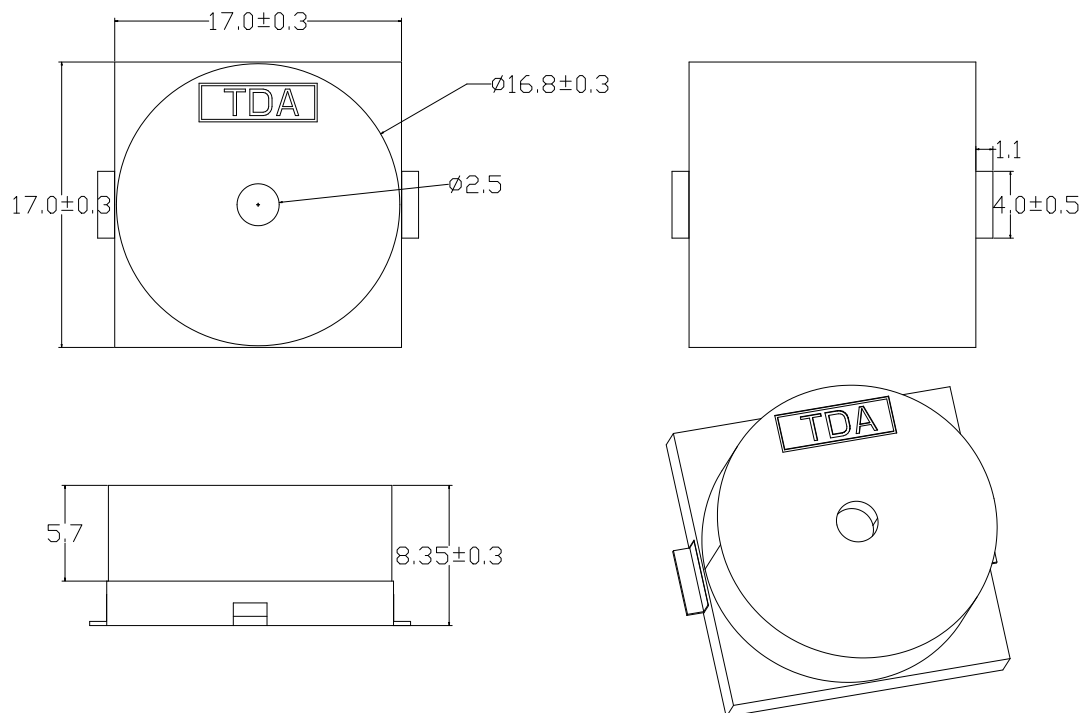
A. SCOPE

This specification applies piezo buzzer, **TDA-M15220**

B. SPECIFICATION

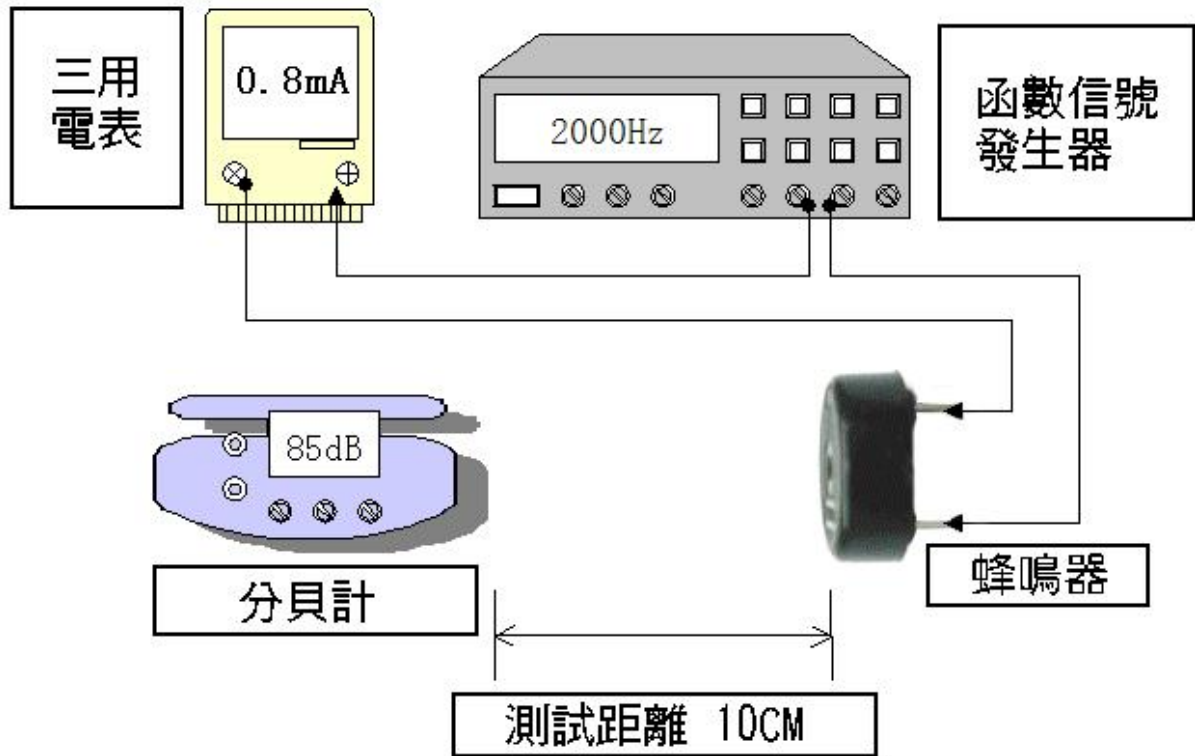
No.	Item	Unit	Specification	Condition
1	Oscillation Frequency	Hz	2000	square wave
2	Operating Voltage	Vp-p	25max	
3	Current Consumption	mA	MAX. 1.5	at 5Vp-p
4	Sound Pressure Level	dB	MIN. 70	at 10cm 5Vp-p 2000Hz
5	Operating Temperature	°C	-30 ~ +85	
6	Storage Temperature	°C	-40 ~ +85	
7	Dimension	mm	17x17 xH8.35	See appearance drawing
8	Weight (MAX)	gram	1.5	
9	Housing Material		LCP	
10	Leading Pin		Tin Plated Brass(Sn)	See appearance drawing
11	Environmental Protection Regulation		RoHS	

C. APPEARANCE DRAWING

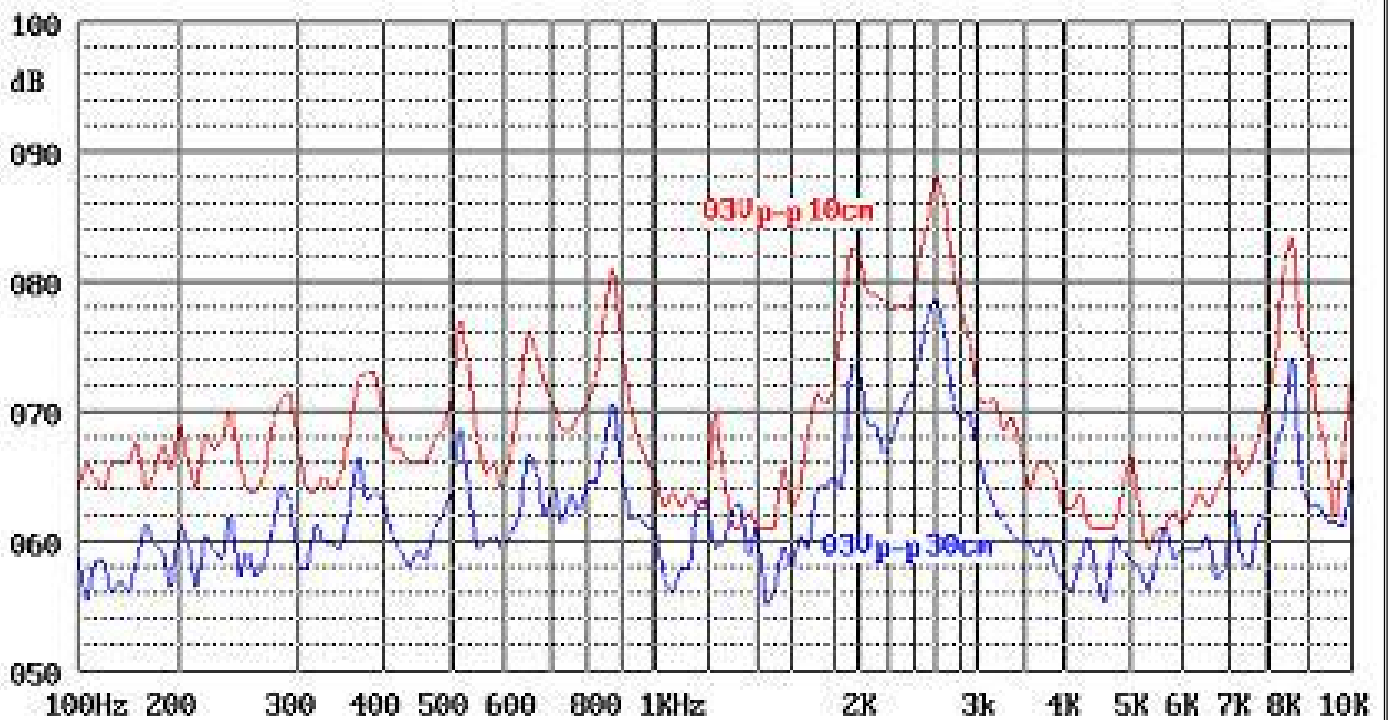


Unit:mm Tolerance : ± 0.5 mm

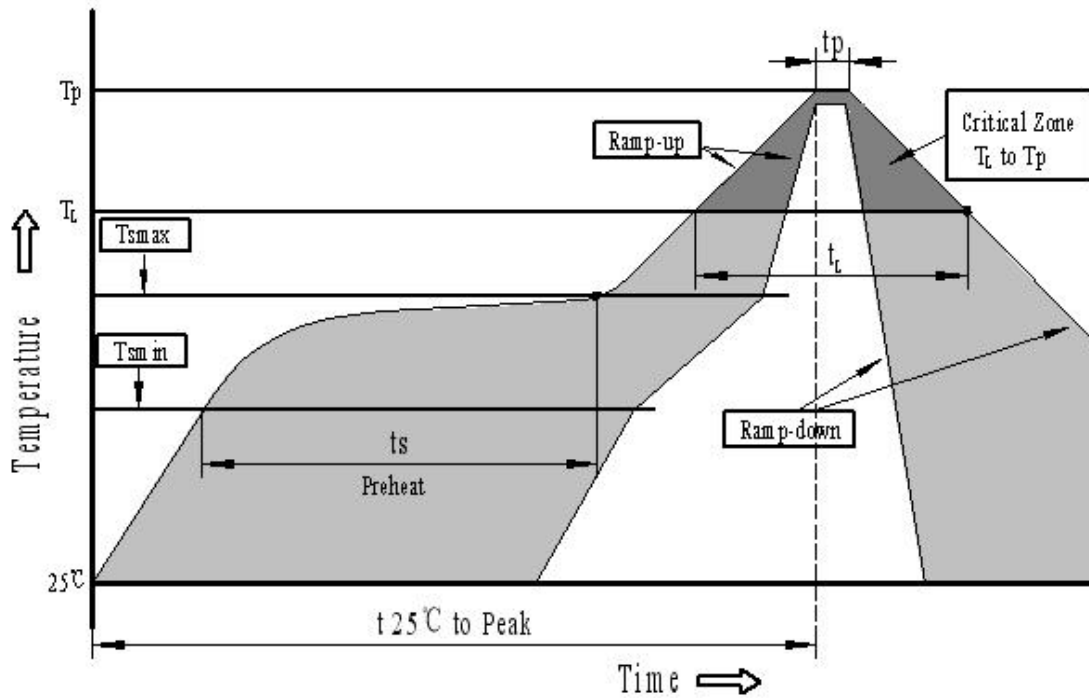
D. RECOMMEND DIRVING CIRCUIT



E. FREQUENCY CURVE

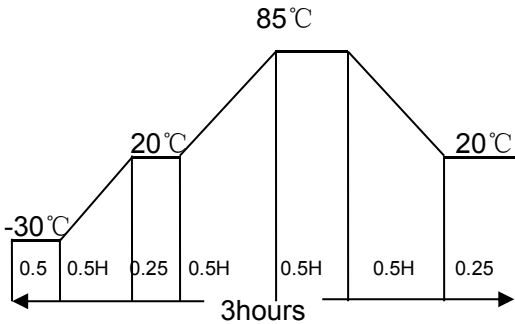



F.RECOMMENDED TEMP. PROFILE FOR REFLOW OVEN



Profile Feature	Pb-Free Assembly
Average ramp-up rate(T_L to 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: 	
4	Humidity Test	40±2°C, 90~95% RH, 96hours	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.
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.	
6	Shock	Sounder shall be measured after being applied shock (980m/s ²) 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	Lead pull	The part shall be pushed with a force of 9.8N for 10±1 seconds behind the part. 	After the test part shall meet specifications without any degradation in appearance and performance.
9	Recommended temp. Profile for Reflow Oven	Shown in Fig.1	

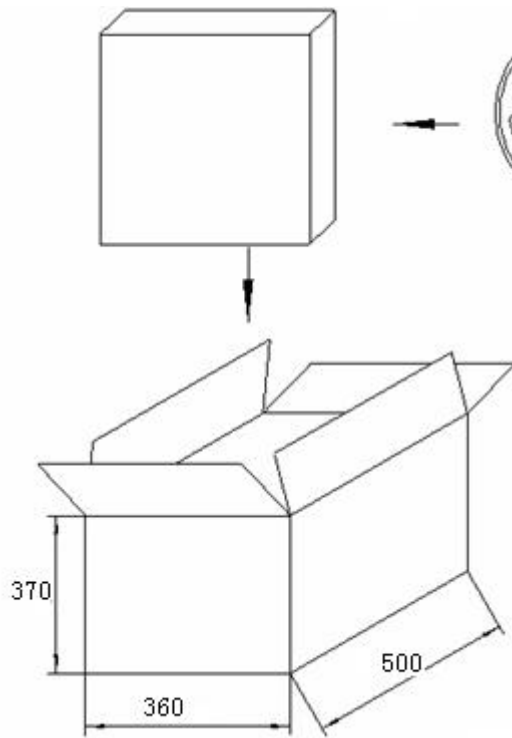
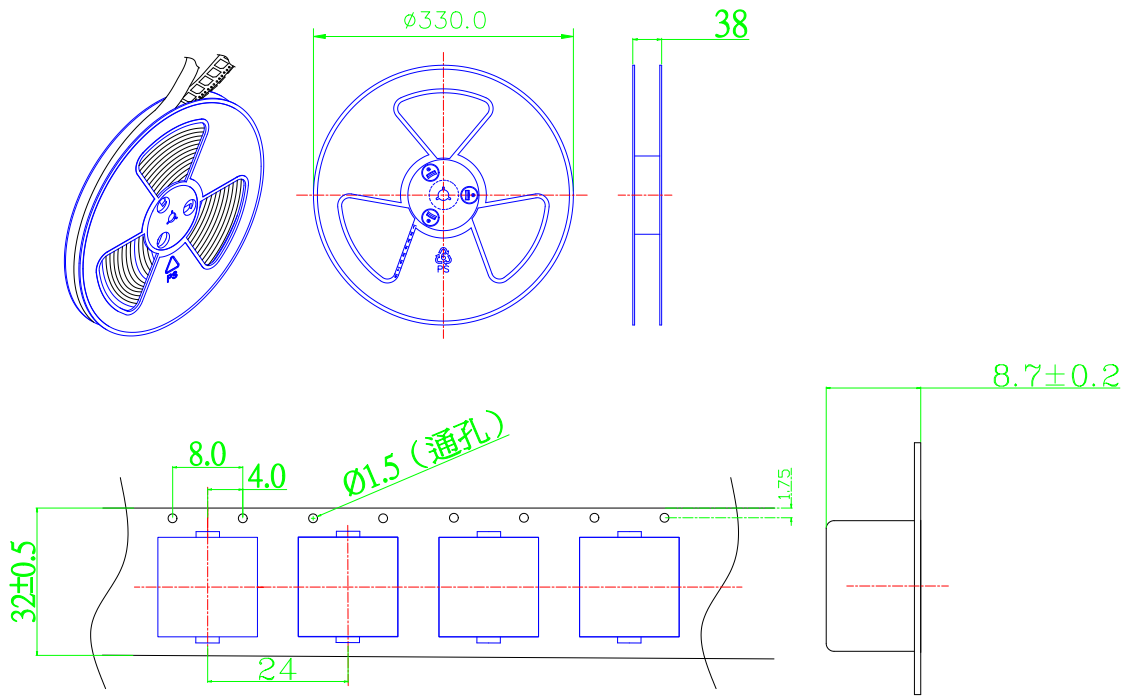
Warranty:For a period of one year from date of manufacture under normal operations.

TEST CONDITION

Standard Test Condition : a) Temperature : +5 ~ +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



NOTES:

1. 300 PCS per tray
2. Total 10 trays per carton
3. Total 3000PCS per carton
4. Volume: 50cm*36cm*37cm

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.

K. REVISION

No.	DATE	DESCRIPTION	REMARK	VERSION
1	2015.11.26	Initial condition	TDA-M15220	V1.0
2	Nov.15,2018	Version upgrade	TDA-M15220	V2.0