



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-M20220

客户料号

PART NO : _____

审核	秦皓	主办	唐俐雅 Oct.19,2018
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客户承认栏			
承认		拒收	

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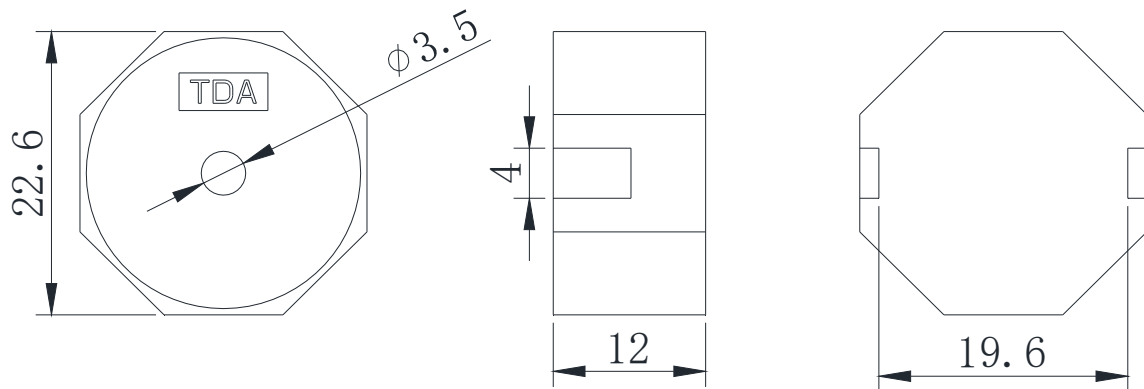
A. SCOPE

This specification applies piezo buzzer, **TDA-M20220**

B. SPECIFICATION

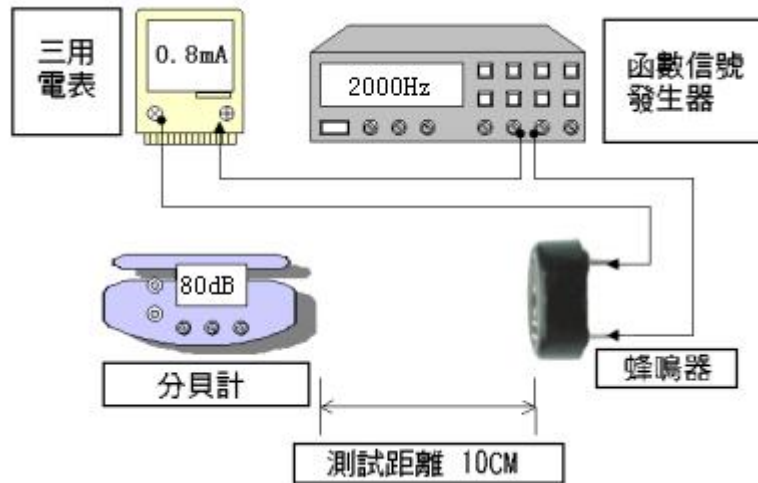
No.	Item	Unit	Specification	Condition
1	Oscillation Frequency	Hz	2000	square wave
2	Operating Voltage	Vp-p	30max	
3	Current Consumption	mA	MAX. 3	at 5Vp-p
4	Sound Pressure Level	dB	MIN. 80	at 10cm, 5Vp-p, 2000Hz
5	Operating Temperature	°C	-30 ~ +120	
6	Storage Temperature	°C	-40 ~ +120	
7	Dimension	mm	22.6xH12	See appearance drawing
8	Weight (MAX)	gram	3.5	
9	Housing Material		LCP	
10	Leading Pin		Tin Plated Brass(Sn)	See appearance drawing
11	Environmental Protection Regulation		RoHS	

C. APPEARANCE DRAWING

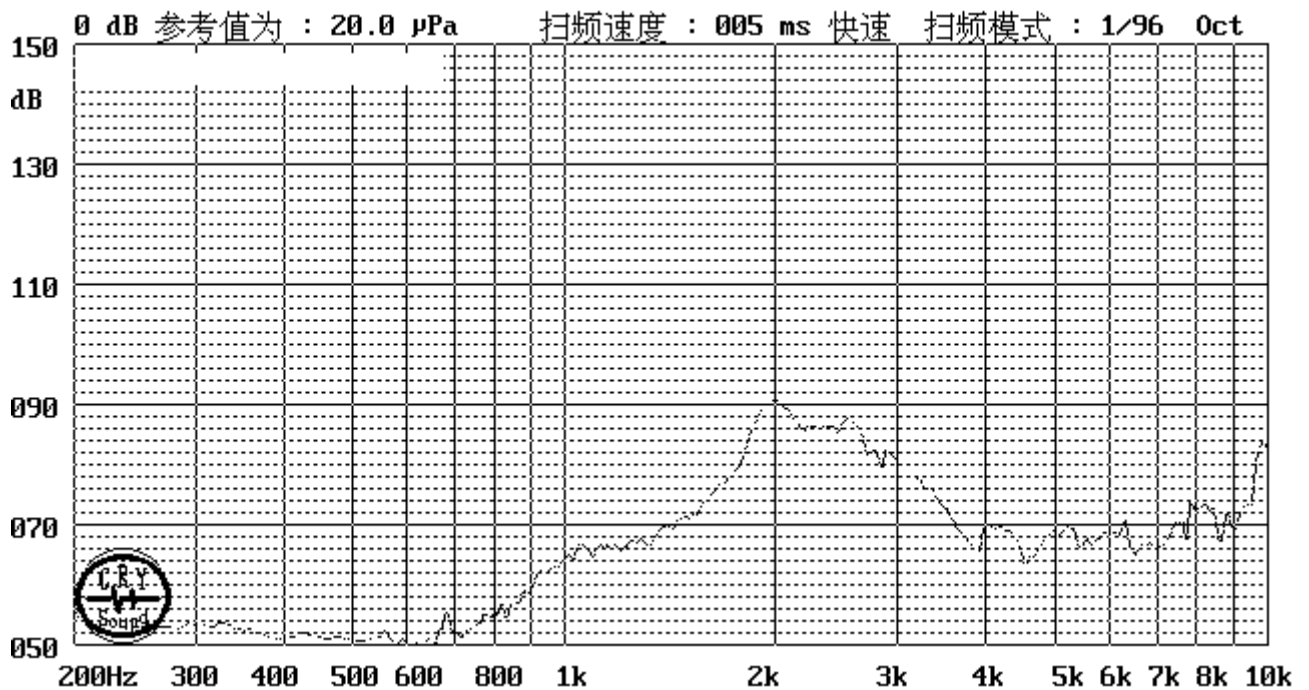


Unit:mm Tolerance : ± 0.5 mm

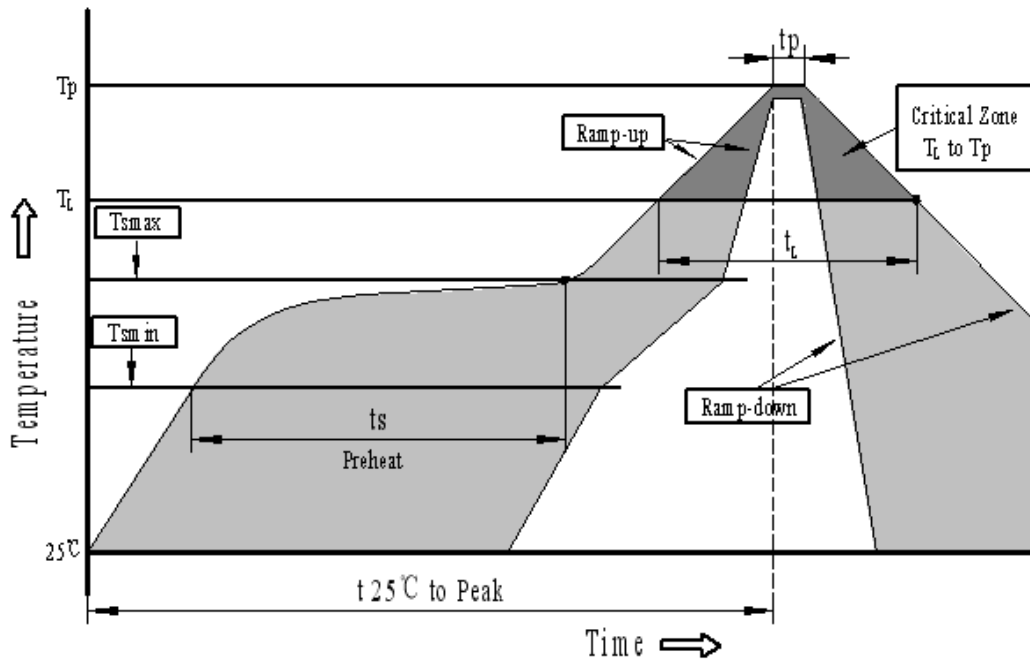
D. RECOMMEND DIRVING CIRCUIT



E. FREQUENCY CURVE

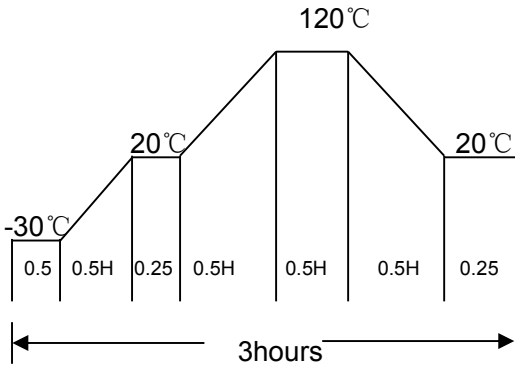
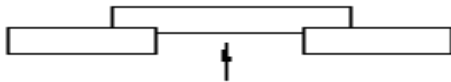


F.RECOMMENDED TEMP. PROFILE FOR REFLOW OVEN



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 +120°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	<p>The part shall be subjected to 5 cycles. One cycle shall be consist of:</p>  <p>The diagram shows a temperature profile over a 3-hour period. It starts at -30°C for 0.5 hours, then ramps up to 20°C over 0.5H. It stays at 20°C for 0.25 hours, then ramps up to 120°C over 0.5H. It stays at 120°C for 0.5H, then ramps down to 20°C over 0.5H. It stays at 20°C for 0.25 hours. The total duration is 3 hours.</p>	
4	Humidity Test	40±2°C, 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/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	<p>The part shall be pushed with a force of 9.8N for 10±1 seconds behind the part.</p>  <p>The diagram shows a rectangular component with a vertical arrow pointing upwards from its center, indicating the direction of the applied force.</p>	After the test part shall meet specifications without any degradation in appearance and performance.
9	Recommend ed 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

