# **TDA**®

# SPECIFICATION

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

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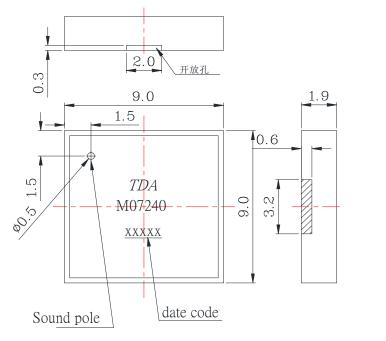
### A. SCOPE

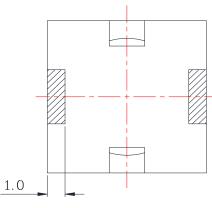
This specification applies piezo buzzer, TDA-M07240

### **B. SPECIFICATION**

No.	Item	Unit	Specification	Condition
1	Oscillation Frequency	Hz	4000	square wave
2	Operating Voltage	Vp-p	20max	square wave
3	Current Consumption	mA	MAX. 2	at 3Vp-p
4	Sound Pressure Level	dB	MIN. 65	at 10cm 3Vp-p 4000Hz
5	Operating Temperature	$^{\circ}\!\mathbb{C}$	-40 ~ +85	
6	Storage Temperature	$^{\circ}\!\mathbb{C}$	-40 ~ +85	
7	Dimension	mm	9x9xH1.9	See appearance drawing
8	Weight (MAX)	gram	0.5	
9	Housing Material		LCP ( Black )	
10	Leading Pin		Tin Plated Brass(Sn)	See appearance drawing
11	Environmental Protection Regulation		RoHS	

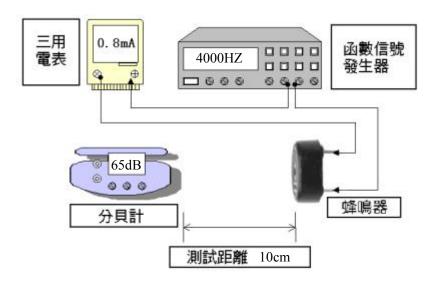
# **C. APPEARANCE DRAWING**



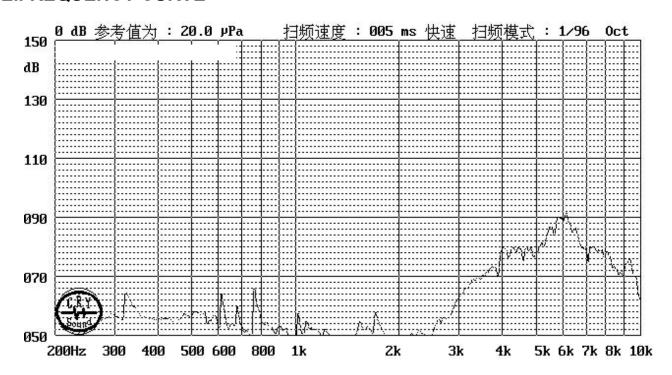


Unit:mm Tolerance : ±0.5mm

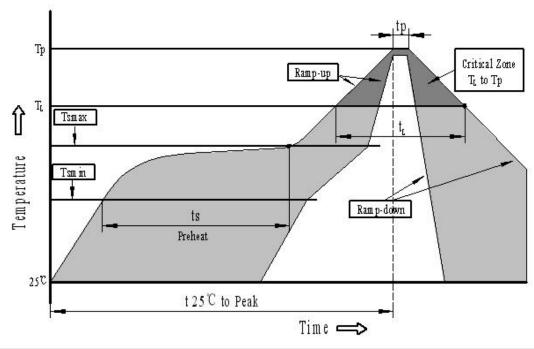
#### D. RECOMMEND DIRVING CIRCUIT



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



# F.RECOMMENDED TEMP. PROFILE FOR REFLOW OVEN



Profile Feature	Pb-Free Assembly
Average ramp-up rate(T <sub>L</sub> to Tp)	3°C/second max.
Preheat	
-Temperature Min.(Ts <sub>min</sub> )	150℃
-Temperature Min.(Ts <sub>max</sub> )	200℃
-Temperature Min.(ts)	$60{\sim}180$ seconds
Ts <sub>max</sub> to T <sub>L</sub>	
-Ramp-up Rate	3°C/second max.
Time maintained above:	
- Temperature(T <sub>L</sub> )	217℃
-Time(T <sub>L</sub> )	60∼150 seconds
Peak temperature(Tp)	245°C+0/-5°C
Time within 5℃of actual Peak temperature (tp)	6 seconds max.
Ramp-down Rate	6°C/second max.
Time 25℃ to Peak Temperature	8 minutes max.

#### **G. RELIABLY TEST**

NO.	ITEM	TESTING CONDITION	VARIANCE AFTER TEST	
1	High temp.	The part shall be capable of withstanding a storage		
'	storage life	temperature is +85 5°C for 96 hours		
2	Low temp. storage life	The part shall be capable of withstanding a storage temperature is -40℃ for 96hours		
3	Temp. Cycle	The sector below to be at the first state of the fi	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.	
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.	current consumption should be in±10%compared with initial ones.	
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.	The SPL should be in ±10dB compared with initial one.	
8	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).	
9	Terminal Strength Pulling Test	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.	
10	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.PACKING STANDARD** Ø330 16 1 Reel: 2000PCS 4.0 2.4 2.0 0 0 0 0 $\bigcirc$ $\circ$ $16.0\pm0.2$ 7.5 12 Carton Box (5 Inner Box) Inner Box (1Layer Reel) 340mm 175<sub>mm</sub> Inner Box 340mmx340mmx40mm 1x2000PCS=2000PCS Carton Box 350mmx355mmx175mm 5x2000PCS=10,000PCS

#### 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	2015.02.06	Initial condition	TDA-M07240	V1.0
2	2018.05.28	Update product specification and increase product storage notice	TDA-M07240	V1.1
3	Aug.27,2018	Version upgrade	TDA-M07240	V2.0