



APPROVAL SHEET  
FOR  
MAGNETIC BUZZER

深圳市銳創達電子有限公司

TAT ELECTRONICS CO. LTD.

CUSTOMER:

PART NUMBER: BM9650E-0327-16

CUSTOMER PART NO.:

CUSTOMER	APPROVED	CHECKED
	钟云莎	蒋寅
SIGNECTURE (Customer)	SIGNECTURE (Company)	

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<b>Specification for Electro-Magnetic Buzzer (Pin Type)</b>		Update/09B18	Page 2 of 4
		Des.	Chk.
<b>Model No.:</b>	BM9650E-0327-16	Li YanFei	Jiang Yin
		3/18/2020	3/18/2020

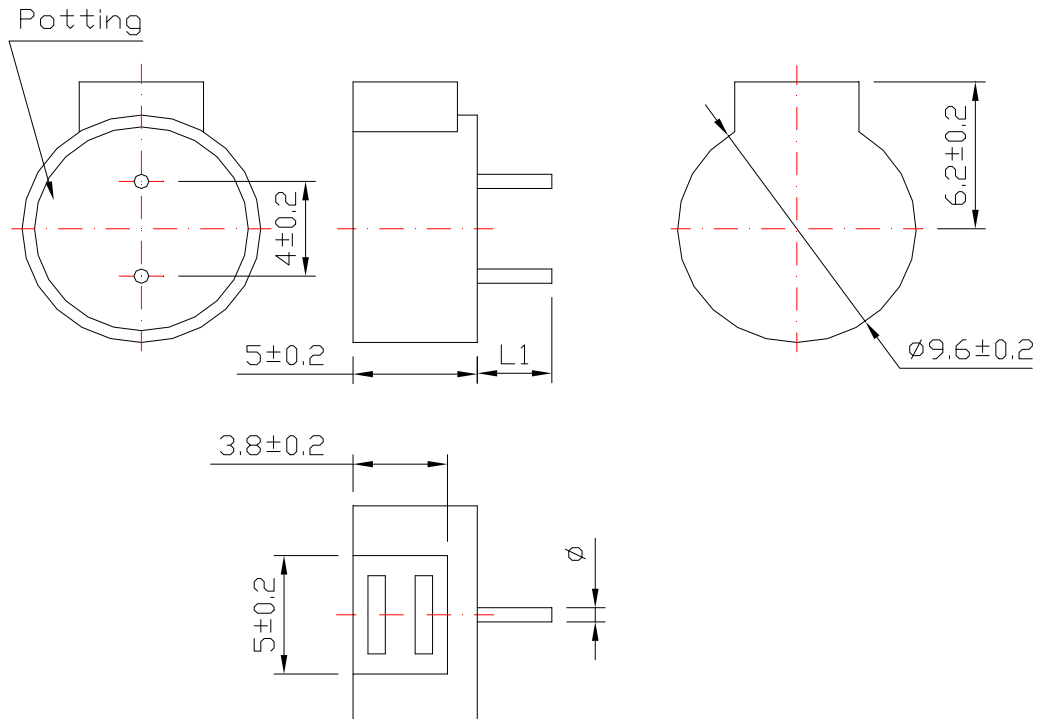
## 1. SPECIFICATION

### Electro-Magnetic Buzzer

1	Dimension	$\Phi 9.6 \times H5.0$
2	Net Weight	Approx 1.5g
3	Rated Voltage	3 Vo-p
4	Operating Voltage	2~5Vo-p
5	Rated Current	Max.80mA , at 2.731KHz 50% duty Square Wave 3Vo-p
6	Sound Output	Min. 90dB, at 2.731KHz 50% duty Square Wave 3Vo-p
7	Coil Resistance	$16 \pm 3\Omega$
8	Resonant Frequency	2731Hz
9	Operating Temperature	$-20^{\circ}\text{C} \sim +70^{\circ}\text{C}$
10	Store Temperature	$-30^{\circ}\text{C} \sim +80^{\circ}\text{C}$
11	Pin	$L1=5.0 \pm 0.5$ , $\Phi=0.6 \pm 0.1\text{mm}$
12	Buzzer surface of top	Printing “ + ”

### Dimensions

Unit: mm



\*Unit: mm; Tolerance:  $\pm 0.5\text{mm}$  Except Specified

\*Housing Material: Black PBT



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## 2. Reliability Test

After any following tests the part shall meet specifications without any degradation in appearance and performance except SPL. SPL shall not deviate more than -10 dB from the initial value

### 2.1 Ordinary Temperature Life Test

The part shall be subjected to 96 hours at  $25 \pm 10^\circ\text{C}$ . Input rated voltage Resonant frequency, 1/2 duty Square wave.

### 2.2 High Temperature Test

The part shall be capable of with standing a storage temperature of  $+85^\circ\text{C}$  for 96 hours.

### 2.3 Low Temperature Test

The part shall be capable of with standing a storage temperature of  $-40^\circ\text{C}$  for 96 hours.

### 2.4 Humidity Test

Temperature:  $+40^\circ\text{C} \pm 3^\circ\text{C}$  Relative Humidity: 90%~95% Duration: 48 hours and expose to room temperature for 6 hours

### 2.5 Temperature Shock Test

Temperature:  $70^\circ\text{C}$  /1hour  $\rightarrow$   $25^\circ\text{C}$ /3hours  $\rightarrow$   $-30^\circ\text{C}$ /1hour  $\rightarrow$   $25^\circ\text{C}$ /3hours (1cycle)  
Total cycle: 10 cycles

### 2.6 Drop Test

Standard Packaging From 1.2m (Drop on hard wood or board of 5cm thick, three sides, six plain.)

### 2.7 Vibration Test

Vibration: 1000cycles /min. Amplitude: 1.5mm, Duration: 1 hour in each 3 axes

### Note:

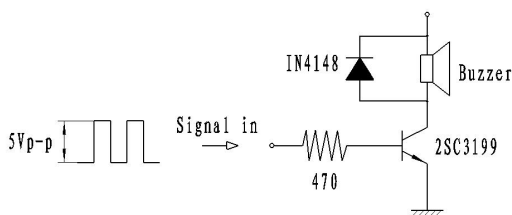
As this product is not protected from foreign material entering, please make sure that any foreign materials (e.g. magnetic powder, washing solvent, flux, corrosive gas) do not enter this product in your production processes. The functional degradation (e.g. SPL down) may occur if foreign material enter it.

## 3. Electrical And Acoustical Measuring Condition

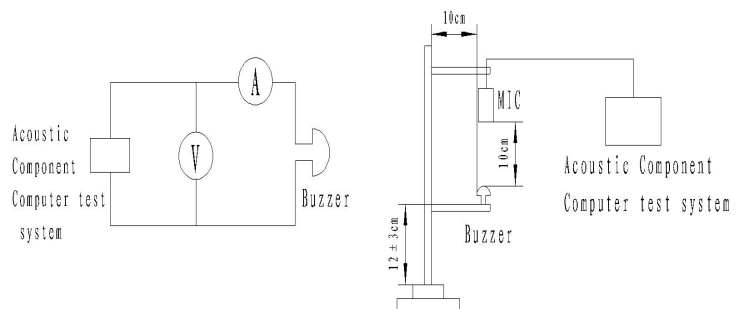
### 3.1 Recommended Driving Circuit

Resonant frequency, 1/2 duty cycle.

Square wave. Signal amplitude should be large enough to saturate the transistor.



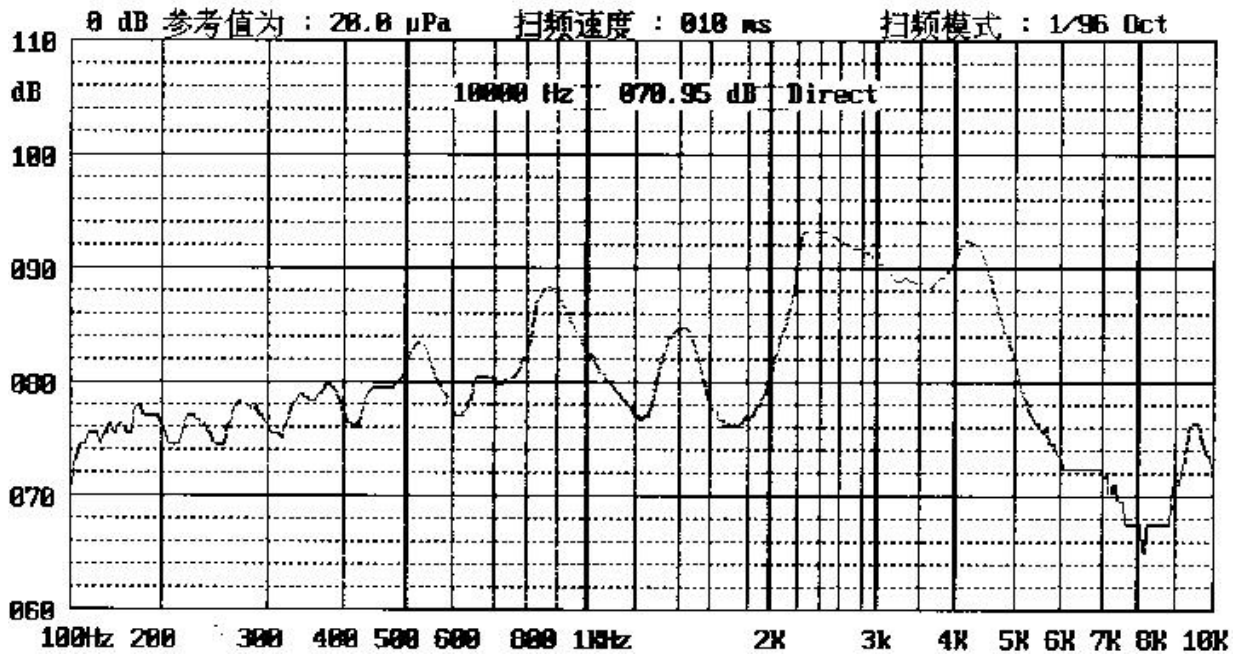
### 3.2 Recommended Setting





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#### 4. Frequency Response



3Vo-p 50% duty Square wave, 10cm

#### 5. Recommended the wave soldering temperature

