



**APPROVAL SHEET**  
**FOR**  
**MAGNETIC BUZZER**

**常州富鸿达电子有限公司**

**CHANG ZHOU FHD ELECTRONICS CO., LTD.**

CLUE No.:

MODEL No.: BM5025SZ-0340-12

OUR PART No.: 119-5025AZ-SP

DOCUMENT No.: FESG-00099-A0

CUSTOMER	APPROVED	CHECKED

Add: Xujia Industrial Park, ZhenLu Town, Changzhou City, Jiangsu China.

江苏省常州市天宁区郑陆镇工业大道2号

Tel: +86-519-83822009

Fax: +86-519-88739926

Email:sales@czfhd.com;

<http://www.czfhd.com>

	<b>Specification for Electro-Magnetic Buzzer(SMD Type)</b>				Page 2 of 7
				Des.	Chk.
<b>Model No.:</b>	BM5025SZ-0340-12	<b>Part No.</b>	119-5025AZ-SP	Chen Hong	
				8/18/2021	8/18/2021

### 1. Document revision history

修改时间	版本	修改页次	修改内容	确认人
2018/11/26			料号升级：老料号 119-502527-00 升级为 119-5025AZ-SP	陈红

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## 2. Technical Parameter

### Measuring condition

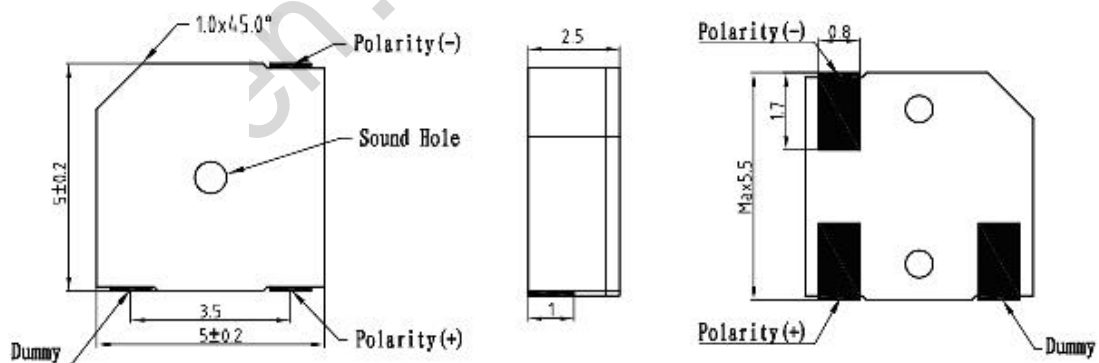
Part shall be measured under a condition (Temperature: 5~35°C, Humidity: 45% ~ 85%R.H., Atmospheric pressure: 860 ~ 1060hPa) unless the standard condition (Temperature: 25±3°C, Humidity: 60±10%R.H. Atmospheric pressure: 860 ~1060hPa) is regulated to measure.



1	Rated Voltage	3.0Vo-p
2	Operating Voltage	2.5~4. 5Vo-p
3	Rated Current	Max.100mA ,at 4000Hz 50% duty Square Wave 3Vo-p
4	Sound Output at 10cm	Min. 75dB,at 4000Hz 50% duty Square Wave 3Vo-p
5	Coil Resistance	12±3Ω
6	Resonant Frequency	4000Hz
7	Operating Temperature	-20°C~+70°C
8	Store Temperature	-40°C~+85°C
9	Net Weight	Approx 0.1g
10	RoHS	Yes

## 3. Dimensions

Unit: mm



\*Unit: mm; Tolerance: ± 0.3mm Except Specified

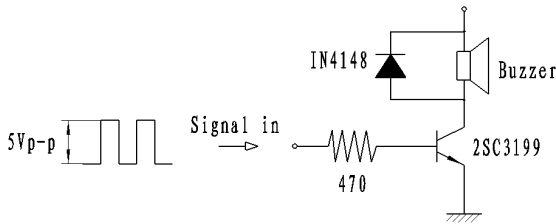
\*Housing Material: Black LCP

\*Terminal plate: 3soldering pads, tin Plating Brass

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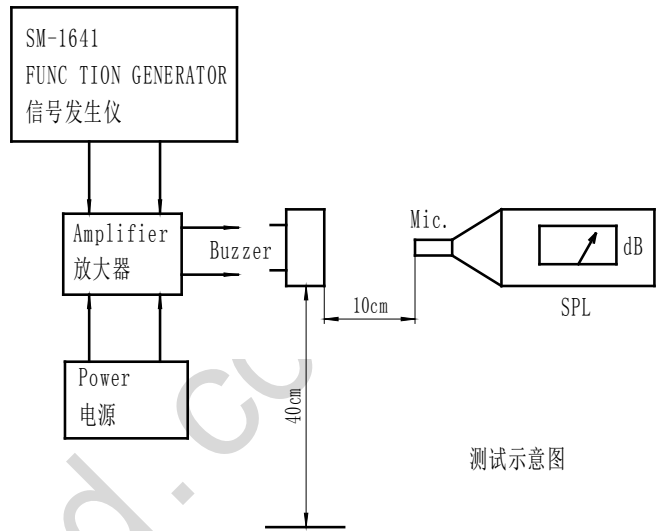
#### 4. Electrical And Acoustical Measuring Condition

##### Recommended Driving Circuit



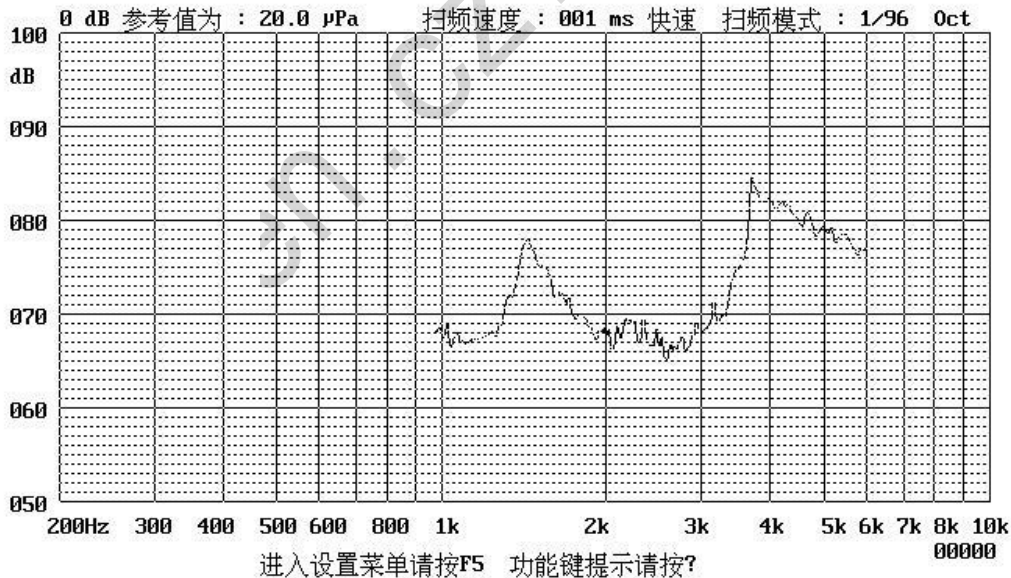
Resonant frequency, 1/2 duty cycle. Square wave.  
Signal amplitude should be large enough to saturate the transistor.

##### Recommended Setting



测试示意图

#### 5. Frequency Response



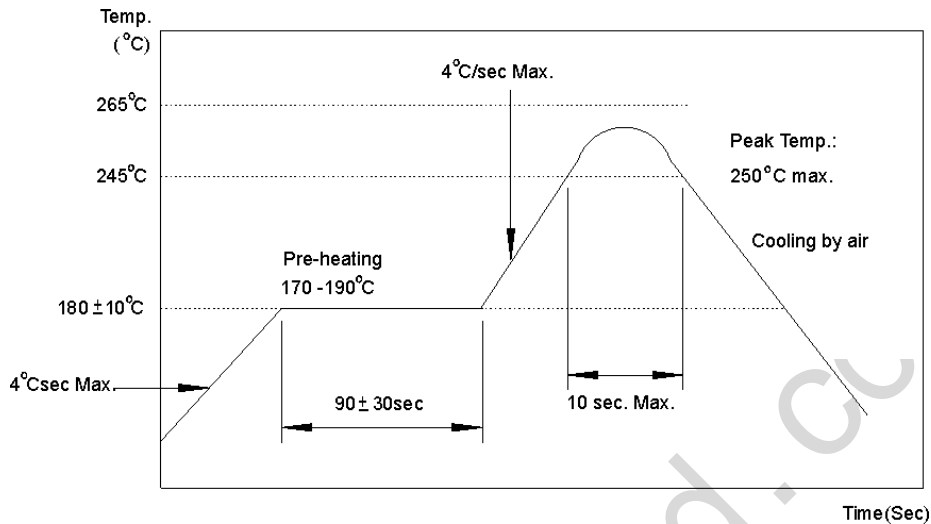
3Vo-p 50% duty Square wave, 10cm

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## 6. Surface mounting condition

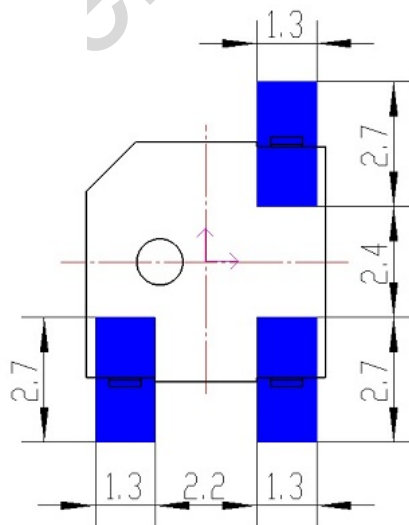
### 6.1 Reflow soldering

Recommendable reflow soldering condition is as follows.



- Note:** (1) In automated mounting of the SMD sound transducers on PCB, any bending, expanding and pulling forces or shocks against the SMD sound transducers shall be kept minimum to prevent them from electrical failures and mechanical damages of the devices.
- (2) In the reflow soldering, too high soldering temperatures and too large temperature Gradient such as rapid heating or cooling may cause electrical failures and mechanical damages of the devices.

### 6.2 Recommended Soldering pattern



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## 7. 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

### 7.1 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.

### 7.2 High Temperature Test

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

### 7.3 Low Temperature Test

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

### 7.4 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

### 7.5 Temperature Shock Test

Temperature:  $60^\circ\text{C}$  /1hour  $\rightarrow$   $25^\circ\text{C}$ /3hours  $\rightarrow$   $-20^\circ\text{C}$ /1hour  $\rightarrow$   $25^\circ\text{C}$ /3hours (1cycle)  
Total cycle: 10 cycles

### 7.6 Drop Test

Standard Packaging From 75cm (Drop on hard wood or board of 5cm thick, three sides, six plain.)

### 7.7 Vibration Test

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

### 7.8 Reflow Test

Use recommendable reflow soldering condition (as shown in 5.1)

- (1) No abnormality should be found after reflow
- (2) Good soldering to meet soldering requirements

## 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.

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### 8. Packing

包装要求	编带包装: 详见图纸要求	
	外箱料号: F6-021, 外箱尺寸 35*18.5*36cm(5 盘装) 内箱料号: F6-054, 内箱尺寸 76*45.5cm 载带料号: F6-S50201, 上封带料号: F6-SF133 3000PCS/盘 每个载盘用一个大 PE 袋装好再放入内盒; PE 袋料号: F6-610	
唛头要求	内盒: 按客户订单	外箱: 按客户订单

