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Model No. : CBEG2433AB-1	Revision No.	评估版
	Drawing No.	OEM2989R

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## 1. Scope

This product specification is applied to the piezoelectric sounder in alarm systems. Please contact us when using this product for any other applications than described in the above.

本规格书适用于压电式声响器，通常它用在系统中做报警或提示的声响器用，如果将该产品用于其它领域，请与我们联系。

## 2. General

2.1 Out-Diameter : Ø28.5 mm

外径: Ø28.5 mm

2.2 Height : 12 mm

高度: 12 mm

2.3 Weight : 4 g

重量: 4克

2.4 Operating Temperature range:

-20~+70°C without loss of function

工作温度: -20~+70°C

2.5 Store Temperature range:

-30~+80°C without loss of function

储藏温度: -30~+80°C

## 3. Electrical and Acoustic Characteristics.

Test condition : 15 ~ 35 °C, 25% ~ 85% RH, 860~1060 mbar

测试条件: 15~35 °C, 25%~85%RH, 860~1060mbar

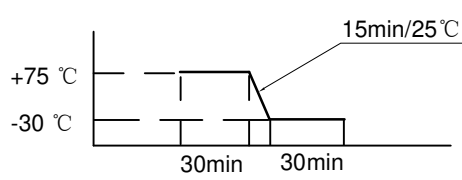
	Items 项目	Specification 规格
1	Rated Voltage 额定电压	9VDC
2	Max.Allowable Voltage 最大输入电压	30VDC
3	Max.Rated Current 额定电流	10mA at 9VDC
4	Resonant Frequency 谐振频率	3.3±0.5KHz
5	Min.Sound Pressure Level 额定声压	95dB at 9VDC/10cm
6	Capacitance 容量	Cm:17±30% Cf:2.2±30%
7	Case Material/Color 壳体材质/颜色	ABS/Blue

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## 4. Reliability Test

After test(1~7item), the transducer S.P.L. difference shall be within  $\pm 10\text{dB}$ , and the appearance not exist any change to be harmful to normal operation(e.g. cracks,rusts,damages and especially distortion).

在1-7项试验后，声响器的声压变化值在  $\pm 10\text{dB}$  之内，外观无变化（例如：无开裂、生锈、损伤、变形等现象）。

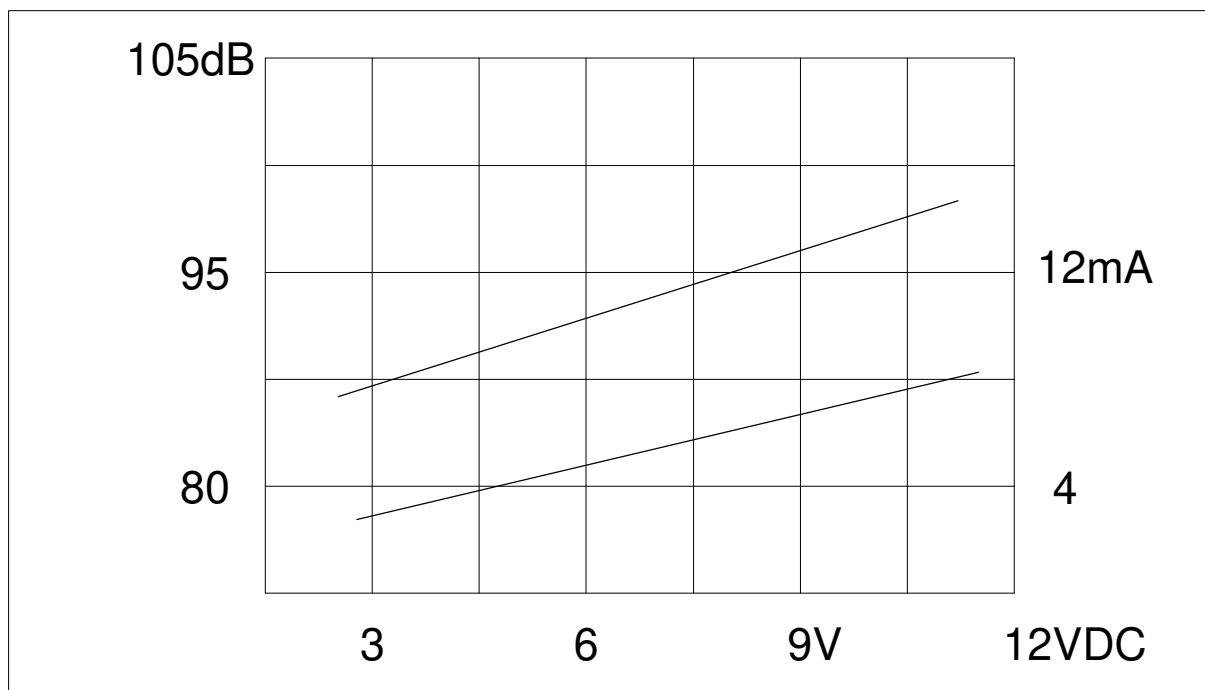
	Item	Specification
1	Leave Test in High Temperature 高温放置试验	<p>Leave buzzer at <math>+80\pm 2\text{ }^\circ\text{C}</math> for 96hours, finally being placed in natural condition for 4h, sounder shall be measured.</p> <p>将产品置于 <math>+80\pm 2\text{ }^\circ\text{C}</math> 试验箱中，先放置 96小时，然后在正常大气压条件下恢复4小时后，进行测量</p>
2	Leave Test in Low Temperature 低温放置试验	<p>Leave buzzer at <math>-30\pm 2\text{ }^\circ\text{C}</math> for 96hours, finally being placed in natural condition for 4h, sounder shall be measured.</p> <p>将产品置于 <math>-30\pm 2\text{ }^\circ\text{C}</math> 试验箱中，先放置 96小时，然后在正常大气压条件下恢复4小时后，进行测量</p>
3	Humidity Test 潮湿试验	<p>After being placed in a chamber with 90 to 95%R.H. at <math>+40\pm 2\text{ }^\circ\text{C}</math> for 96h and then being placed in natural condition for 4h , sounder shall be measured.</p> <p>将产品置于湿度为 90-95%R.H，温度为 <math>+40\pm 2\text{ }^\circ\text{C}</math> 试验箱中96小时，然后在正常大气压条件下恢复4小时后，进行测量</p>
4	Thermal Shock Test 热冲击试验	<p>After being worked in a chamber at <math>-30\pm 2\text{ }^\circ\text{C}</math> for 30min, then sounder shall be placed in a chamber at <math>+75\pm 2\text{ }^\circ\text{C}</math> for 30min(1 cycle is the below diagram).</p> <p>After 5above cycles, sounder shall be measured after being placed in natural condition for 4 hour,sounder shall be measured.</p> <p>将产品置于 <math>-30\pm 2\text{ }^\circ\text{C}</math> 试验箱中，先工作 30分钟，然后将产品置于 <math>+75\pm 2\text{ }^\circ\text{C}</math> 试验箱中，再工作 30分钟，经过5个循环后，在正常大气压条件下恢复4小时，进行测量</p> 

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#### 4. Reliability Test

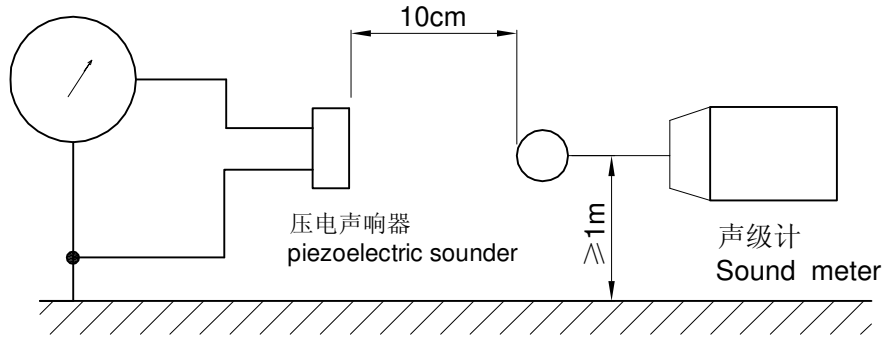
	Item	Specification
5	Vibration Resistance 振动试验	Sounder shall be measured after being applied vibration of amplitude of 1.5mm with 10 to 30Hz band of vibration frequency to each of 3 perpendicular directions for 2 hour. 振幅为1.5mm, 频率为10-30Hz, 三个不同轴方向各振动2小时, 试验后进行测量.
6	Drop Test 跌落试验	Sounder packed in the carton are dropped in six direction from the height of 80cm to the concrete floor. 跌落高度80cm, 6个不同方向整箱跌落到水泥地, 试验后进行测量.
7	Solderability 可焊性试验	Lead terminals are immersed in rosin for 5 seconds and the immersed in solder bath of $+260 \pm 5^{\circ} \text{C}$ for $3 \pm 0.5$ seconds. 插针浸入松香5秒, 然后再浸入 $+260 \pm 5^{\circ} \text{C}$ 的锡炉中 $3 \pm 0.5$ 秒, 插针表面应覆盖一层光滑明亮的焊料.
8	Terminal Strength Pulling 插针强度试验	The force 10 seconds of 9.8N is applied to each terminal in axial direction. 插针应承受9.8N拉力, 拉力时间10秒, 插针无松动和脱落现象.

#### 5. Measurement Block Diagram & Response curve



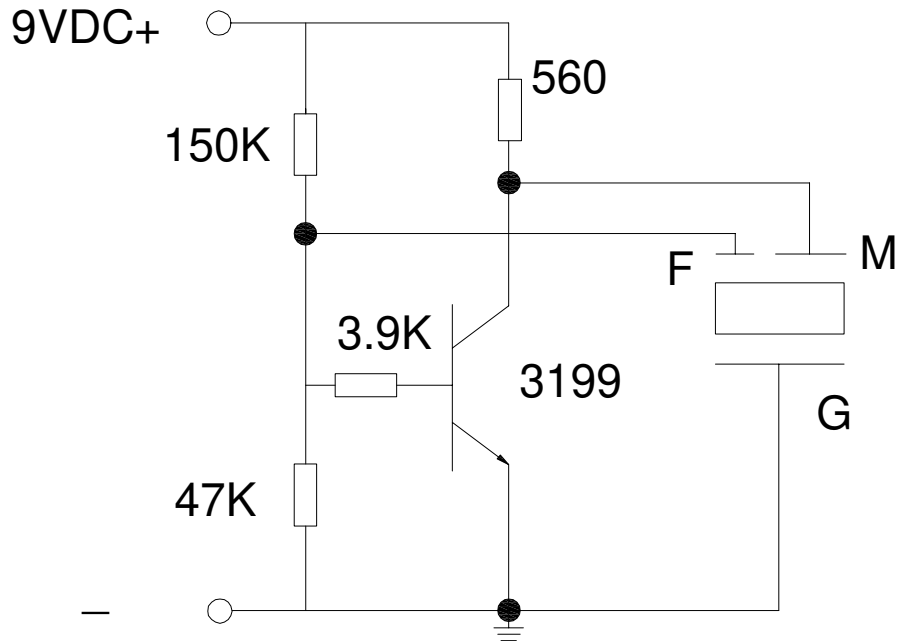
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### Test Circuit



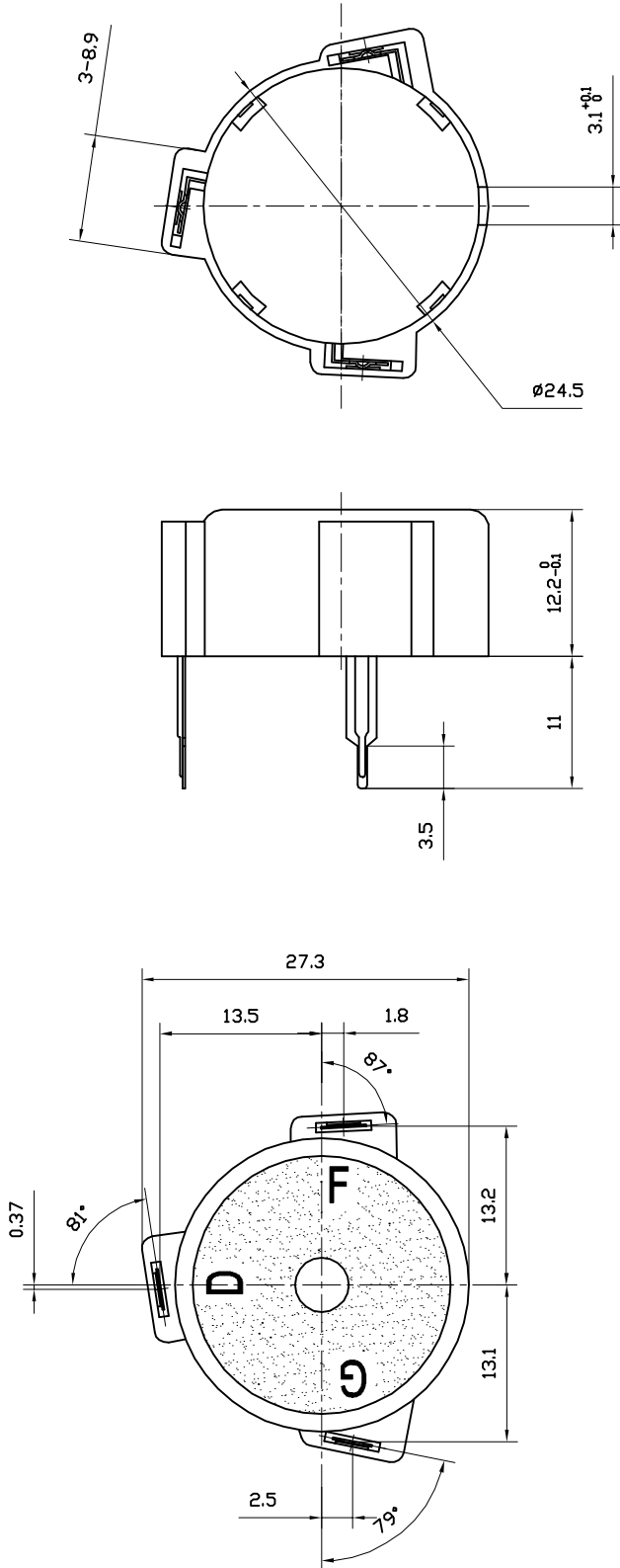
MIC : ND10 普通声级计或等同品  
 MIC : ND10 S.P.L. or equivalent  
 S.G. : DF1010 振荡器或等同品  
 S.G. : DF1010 Oscillater or equivalent

### Test Circuit



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### 6. Dimensions



FIRST ANGLE PROJECTION

UNIT : mm  
Tolerance :  $\pm 0.5$

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## 7. 包装标准 Packaging Standard

产品的外包装是纸箱, 它应该清楚的标明型号, 数量, 出厂检验批号.  
在运输及储存的过程中, 产品必须不会受到机械损伤.

Each minimum package unit of products shall be in a carton box and it shall be clearly marked with Part Number, quantity and outgoing inspection number.

There shall be no mechanical damage on products during transportation and/or in storage.

## 8. 警告 Cautions

如果产品使用于下列高可靠性的装置时, 请与我们联系, 以免对人的生命, 财产和身体造成损害.

Please contact us before using our products for the undermentioned applications requiring especially high reliability in order to prevent defects which might directly cause damage to other party's life, body or property (listed below).

- (1) Aircraft equipment 飞行设备
- (2) Aerospace equipment 航天设备
- (3) Undersea equipment 潜水设备
- (4) Medical equipment 医疗设备
- (5) Transportation equipment (automobiles, trains, ships) 交通设施
- (6) Traffic signal equipment 交通信号设备
- (7) Disaster prevention/crime prevention equipment 防灾害/ 防犯罪设备
- (8) Data-processing equipment 数据处理设备
- (9) Applications of similar complexity or reliability requirements comparable to the applications listed in the above 以及与上述相类似或可靠性要求更高的设备

## 9. 注意事项 Cautions for Use

- 9.1 如果产品所承受的机械应力超过规定的值, 元件可能被破坏.

The component may be damaged if mechanical stress over this specification is applied.

- 9.2 请注意保护工作电路不会因失误, 跌落和温度变化而产生浪涌电压.

Please pay attention to protect operating circuit from surge voltage provided by something of force such as failing, shock and temperature changing.

- 9.3 请注意永远不要给压电声响器施加直流电压.

Please pay attention never to be applied DC voltage to piezo sounder.

- 9.4 该声响器不适合洗涤, 因为它不密封.

Washing of the component is not acceptable. Because it is not sealed.

- 9.5 在使用烙铁的情况下, 应注意烙铁头的温度应该保持在 +350 °C 以下, 并且焊接时间控制在 3 秒内.

In case of using solder iron for soldering, the top of soldering iron's temperature should be kept less than +350 °C. Moreover the soldering time should be also kept with in 3 seconds.

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## 10. Revision

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