

# 規格承認書

PECIFICATION FOR APPROVAL

客戶  
CUSTOMER : 立創  
項目  
ITEM : 电磁无源一体蜂鸣器（外部驱动）  
型號  
TYPE : GMC12038YA-16R2048  
描述  
DESCRIPTION :  $\phi$  12.0 x 3.8mm 2048Hz 16  $\Omega$   $\geq$ 73dB PPO 材质 P=6.5 mm  
客戶料號  
CUSTOMER NO. :  
規格書號  
SPECIFICATION NO.:  
版本  
EDITION NO. : V1.2  
日期  
DATE : 2019-12-27

## 客戶承認

### CUSTOMER CONFIRM AND SIGN

檢查 TESTED BY	審核 CHECKED BY	承認 APPROVED BY

## 東莞市贏海電子有限公司

### DONGUAN INGHAI ELECTRONICS CO.,LTD

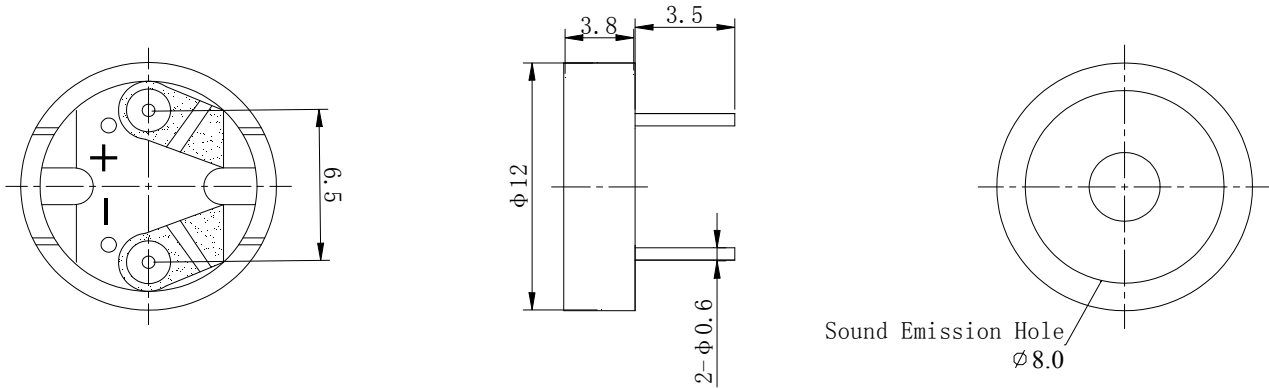
製作 ISSUED BY	審查 CHECKED BY	確認 APPROVED BY
周明	李林	

地址：廣東省東莞市長安鎮廈邊元灶頭工業區 16-6 號  
電話 / TEL: 0769-83060958 傳真 / FAX: 0769-81608993  
網址: HTTP://WWW.INGHAI.COM

# DONGGUAN INGHAI ELECTRONICS CO.,LTD

**Model NO:** GMC12038YA-16R2048

**A: DIMENSIONS** Unit:mm Tolerance:  $\pm 0.5$



## B: SPECIFICATIONS

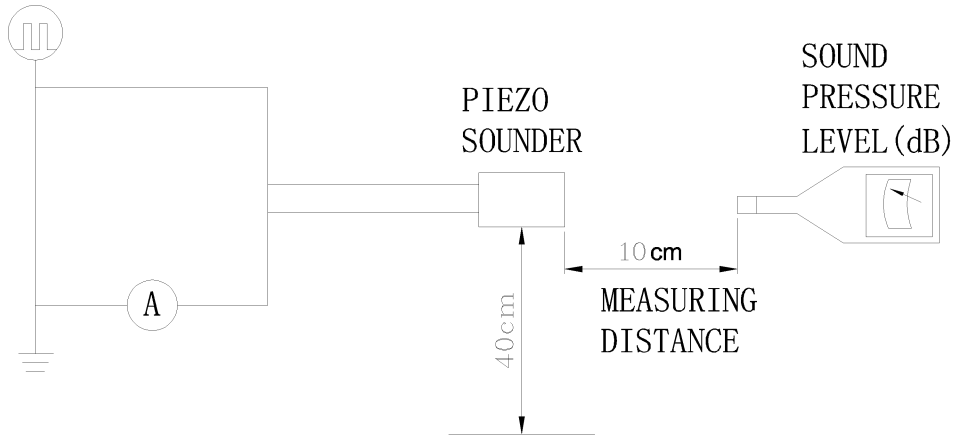
Model NO	GMC12038YA
Rated Voltage	3.0Vo-p
Operating Voltage	2.0 ~4.5Vo-p
Max.Rated Current	Max.50mA
Coil Resistance	$16 \pm 15\%$
Sound Pressure level(dB)/at10cm	Min.73dB
Resonant Frequency	2048Hz
Operating Temperature	-20 °C~+70 °C
Storage Temperature	-30 °C~+80 °C
Case material and color	PPO / Black

### Measuring condition

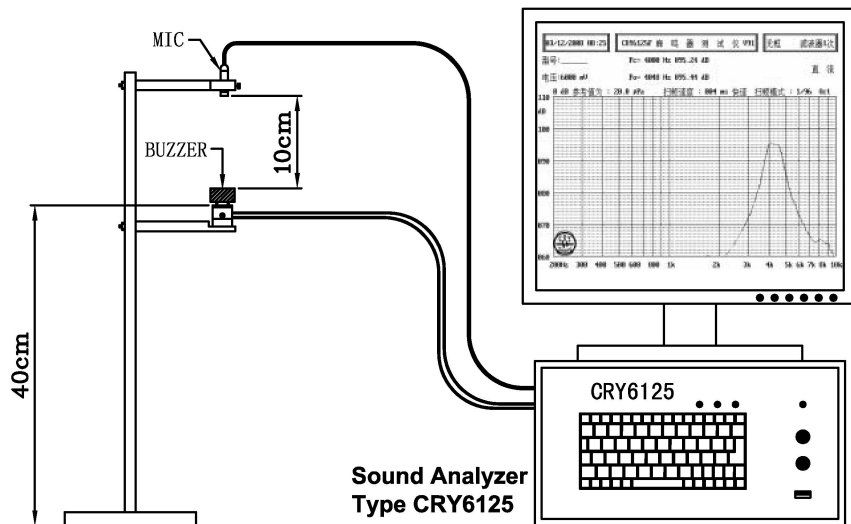
Part shall be measured under a condition (Temperature: 5 ~ 35°C, Humidity: 45% ~ 85%R.H., Atmospheric pressure: 860 ~ 1060hPa) unless the standard condition (Temperature: 25 $\pm$ 3°C, Humidity: 60 $\pm$ 10%R.H. Atmospheric pressure: 860 ~ 1060hPa) is regulated to measure.

### C: Acoustic Characteristics:

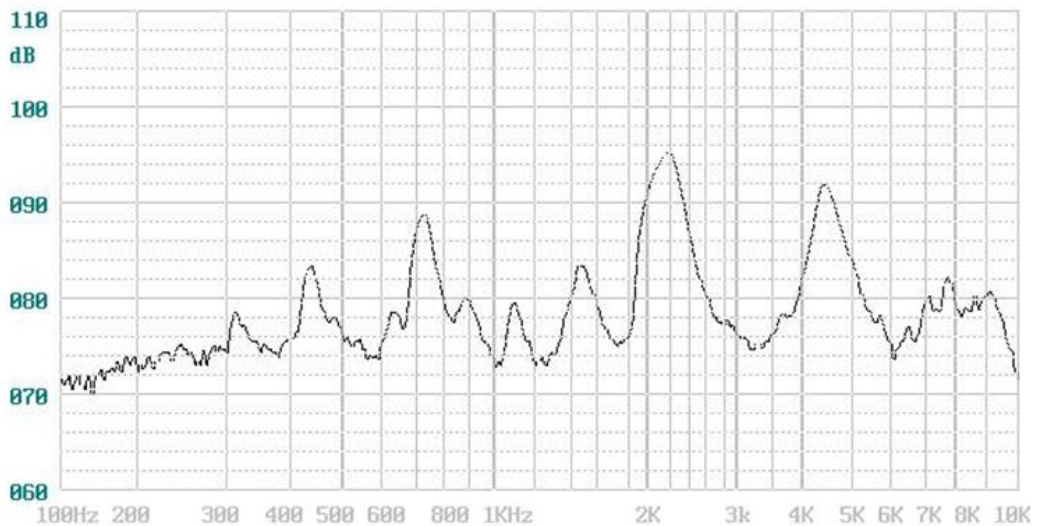
The oscillation frequency, current consumption and sound pressure are measured by the measuring instruments shown below



In the measuring test, buzzer is placed as follows:



### D: Typical Frequency Response Curve



## E: 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

### 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. High Temperature Test

The part shall be capable of with standing a storage temperature of  $+80^\circ\text{C}$  for 96 hours.

### 3. Low Temperature Test

The part shall be capable of with standing a storage temperature of  $-30^\circ\text{C}$  for 96 hours.

### 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

### 5. Temperature Shock Test

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

### 6. Drop Test

Standard Packaging From 120mm (Drop on hard wood or board of 5cm thick, three sides, six plain.)

### 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.