



HYDZ<sup>®</sup>

**MESSRS :**

**SPECIFICATION FOR APPROVAL**

**承 认 书**

Description : **Magnetic Buzzer**

Vender's Part No. : **HYG13B**

Customer's. Part No. :

Serial No. :

Version No. : **1.1**

CUSTOMER'S APPROVED SIGNATURE		

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## A. SCOPE

This specification applies magnetic buzzer, **HYG13B**

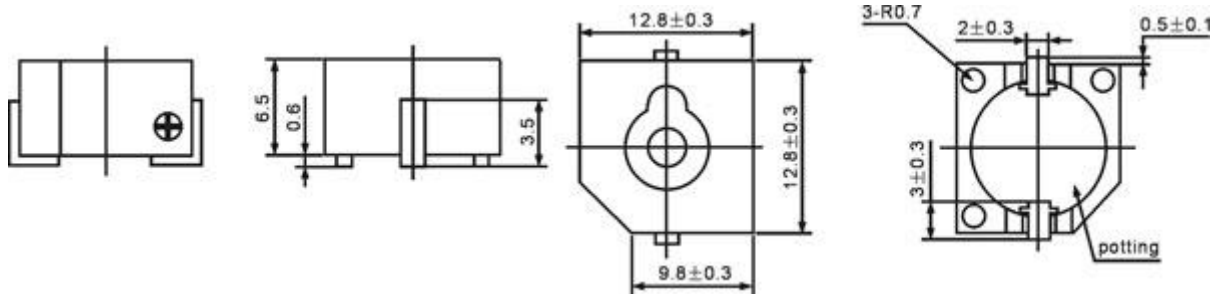
## B. SPECIFICATION

No.	Item	Unit	HYG13B-03	HYG13B-05	HYG13B-12
1	Rated Voltage	VDC	3	5	12
2	Operating Voltage	VDC	2~4	4~7	8~16
3	Oscillation Frequency	KHz	2.6±0.3		
4	Current Consumption	mA	MAX. 30		
5	Sound Pressure Level	dB	MIN. 85		
6	Tone Nature		Single		
7	Operating Temperature	°C	-20 ~ +70		
8	Storage Temperature	°C	-30 ~ +85		
9	Dimension	mm	12.8x 12.8x H6.5		
10	Weight (MAX)	gram	2		
11	Housing Material		PPS( Black )		
12	Leading Pin		Plated Brass(Au)		
13	Environmental Protection Regulation		RoHS		

## C. APPEARANCE DRAWING

Tol : ± 0.3

Unit: mm



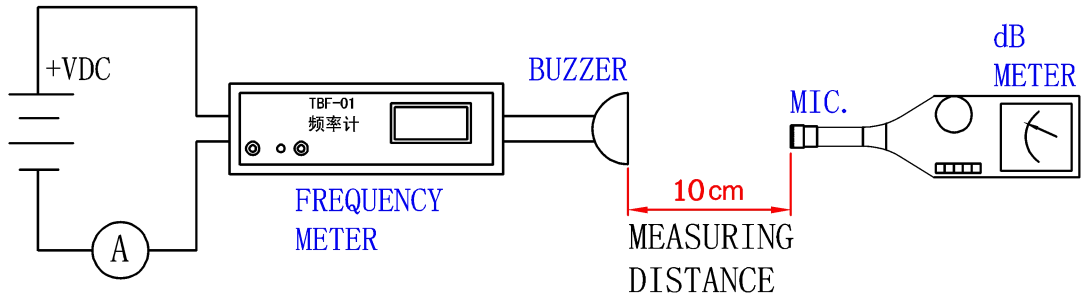
## D. TESTING METHOD

### Standard Measurement conditions

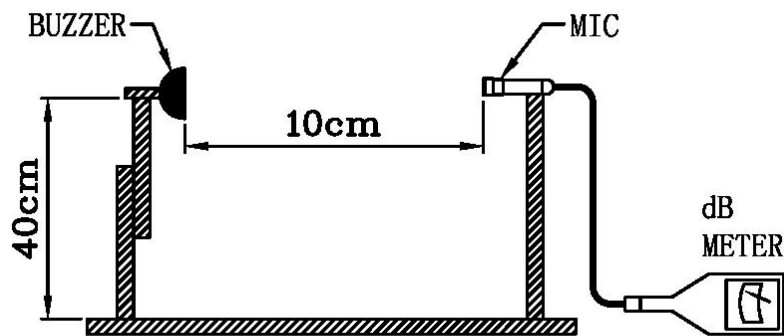
Temperature:  $25 \pm 2^\circ\text{C}$  Humidity: 45-65%

### Acoustic Characteristics:

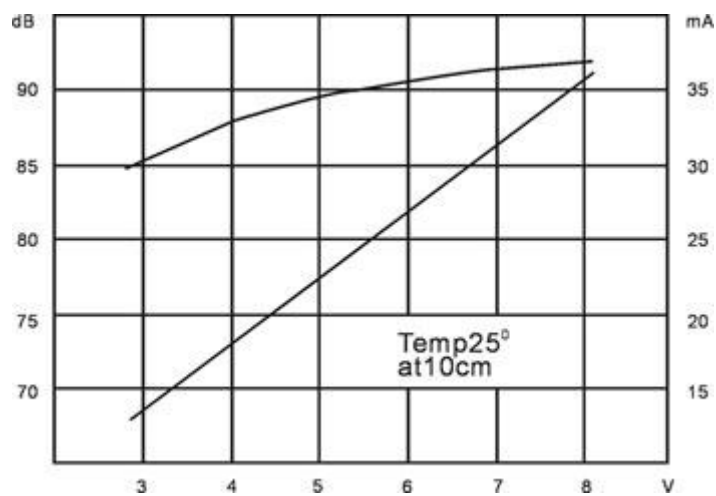
The oscillation frequency, current consumption and sound pressure are measured by the measuring instruments shown below



In the measuring test, buzzer is placed as follows:



## E. VOLTAGE / CURRENT / SOUND PRESSURE CHARACTERISTICS

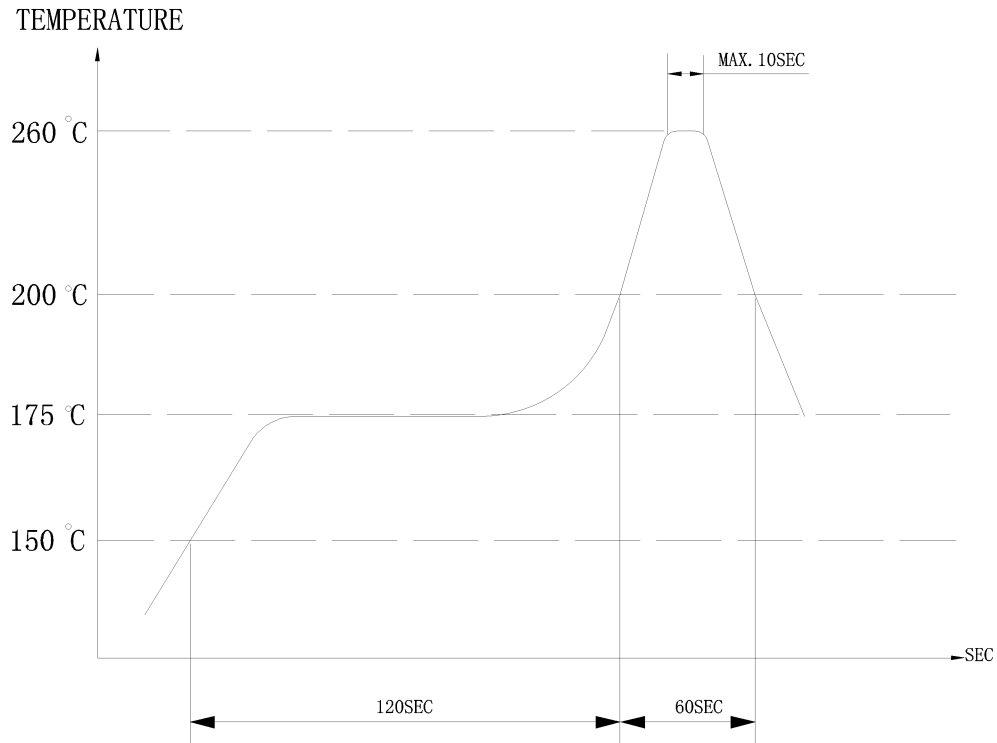


## F. Soldering Condition

(1) Recommendable reflow soldering condition is as follows

(Reflow soldering is twice)

Note: It is requested that reflow soldering should be executed after heat of product goes down to normal.



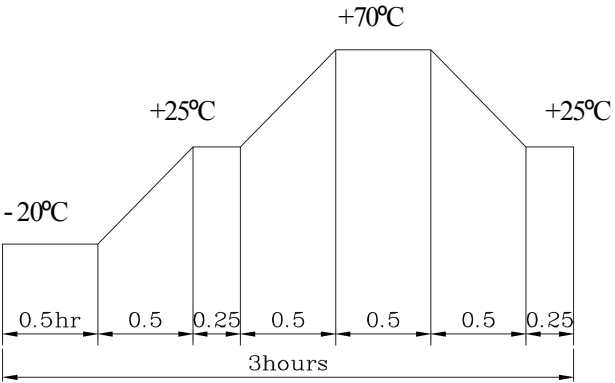
Heat resistant line

(Used when heat resistant reliability test is performed)

(2) Manual soldering

Manual soldering temperature 350 °C within 5 sec.

## G. RELIABILITY TEST

NO.	ITEM	TEST CONDITION AND REQUIREMENT
1	High Temperature Test (Storage)	After being placed in a chamber with 85 °C for 96 hours and then being placed in normal condition for 2 hours. Allowable variation of SPL after test: 10dB.
2	Low Temperature Test (Storage)	After being Placed in a chamber with -30 °C for 96 hours and then being placed in normal condition for 2 hours. Allowable variation of SPL after test: 10dB.
3	Humidity Test	After being Placed in a chamber with 90-95% R.H. at 40 °C for 96 hours and then being placed in normal condition for 2 hours. Allowable variation of SPL after test: 10dB.
4	Temperature Cycle Test	The part shall be subjected to 5 cycles. One cycle shall be consist of:  <p>The diagram shows a temperature cycle profile over 3 hours. It starts at -20°C for 0.5 hours, then ramps up to +25°C in 0.5 hours, holds at +25°C for 0.25 hours, ramps up to +70°C in 0.5 hours, holds at +70°C for 0.5 hours, ramps down to +25°C in 0.5 hours, holds at +25°C for 0.25 hours, and finally ramps down to -20°C in 0.5 hours. The total duration is 3 hours.</p>
5	Drop Test	Drop on a hard wood board of 4cm thick, any directions ,6 times, at the height of 75cm . Allowable variation of SPL after test: 10dB.
6	Vibration Test	After being applied vibration of amplitude of 1.5mm with 10 to 55 Hz band of vibration frequency to each of 3 perpendicular directions for 2 hours . Allowable variation of SPL after test: 10dB.
7	Solderability Test	Lead terminals are immersed in rosin for 5 seconds and then immersed in solder bath of +300 °C for 3 1 seconds . 90% min. lead terminals shall be wet with solder (Except the edge of terminals).
8	Terminal Strength Pulling Test	The force of 9.8N(1.0kg) is applied to each terminal in axial direction for 10 seconds. No visible damage and cutting off.

### TEST CONDITION.

Standard Test Condition	:	a) Temperature : +5 ~ +35°C	b) Humidity : 45-85%	c) Pressure : 860-1060mbar
一般测试条件	:	a) 温度 : +5 ~ +35°C	b) 湿度 : 45-85%	c) 气压 : 860-1060mbar
Judgment Test Condition	:	a) Temperature : +25 ± 2°C	b) Humidity : 60-70%	c) Pressure : 860-1060mbar
争议时测试条件	:	a) 温度 : +25 ± 2°C	b) 湿度 : 60-70%	c) 气压 : 860-1060mbar