# SPECIFICATION FOR APPROVAL 承 认 书

| Description          | : | Magnetic Buzzer   |
|----------------------|---|-------------------|
| Vender's Part No.    | : | FDB-140070F-12031 |
| Customer's. Part No. | : |                   |
| Serial No.           | : | FDM-2340          |
| Version No.          | : | 1.1               |

| CUSTOMER'S APPROVED SIGNATURE |  |  |
|-------------------------------|--|--|
|                               |  |  |
|                               |  |  |
|                               |  |  |



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| Approved By | Checked By | Made By |
|-------------|------------|---------|
|             |            |         |
|             |            |         |
|             |            |         |

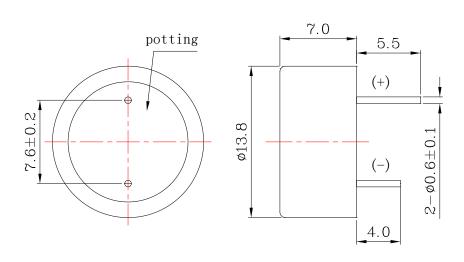
### A. SCOPE

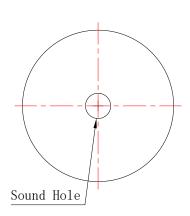
This specification applies magnetic buzzer, FDB-140070F-12031

# **B. SPECIFICATION**

| No. | ltem                                   | Unit         | Specification        | Condition                |
|-----|--|--------------|----------------------|--------------------------|
| 1   | Oscillation Frequency                  | KHz          | $3.1 \pm 0.3$        |                          |
| 2   | Operating Voltage                      | VDC          | 8~16                 |                          |
| 3   | Rated Voltage                          | VDC          | 12                   |                          |
| 4   | Current Consumption                    | mA           | MAX. 30              | at Rated Voltage         |
| 5   | Sound Pressure Level                   | dB           | MIN. 85              | at 10cm at Rated Voltage |
| 6   | Tone/Pulse Rate                        |              | Constant             |                          |
| 7   | Operating Temperature                  | $^{\circ}$ C | -20 ~ +70            |                          |
| 8   | Storage Temperature                    | $^{\circ}$   | -30 ~ +80            |                          |
| 9   | Dimension                              | mm           | Ф13.8 х Н7           | See appearance drawing   |
| 10  | Weight (MAX)                           | gram         | 2.0                  |                          |
| 11  | Housing Material                       |              | PPO( Black )         |                          |
| 12  | Leading Pin                            |              | Tin Plated Brass(Sn) | See appearance drawing   |
| 13  | Environmental<br>Protection Regulation |              | RoHS                 |                          |

# C. APPEARANCE DRAWING





Tol: ± 0.5 Unit: mm



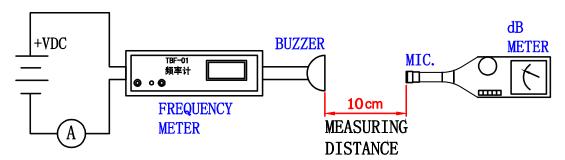
#### **D.TESTING METHOD**

## **Standard Measurement conditions**

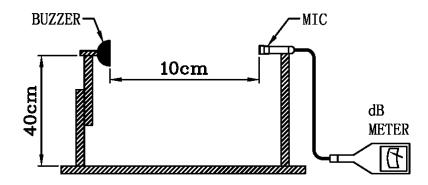
Temperature:25±2°C Humidity:45-65%

#### **Acoustic Characteristics:**

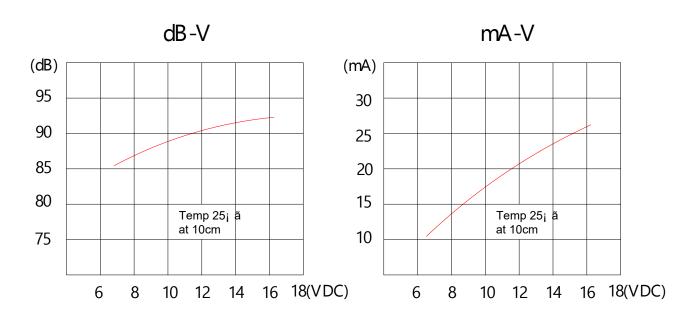
The oscillation frequency, current consumption and sound pressure are measured by the measuring instruments shown below



In the measuring test, buzzer is placed as follows:



#### E. VOLTAGE / CURRENT / SOUND PRESSURE CHARACTERISTICS





#### F. RELIABILITY TEST

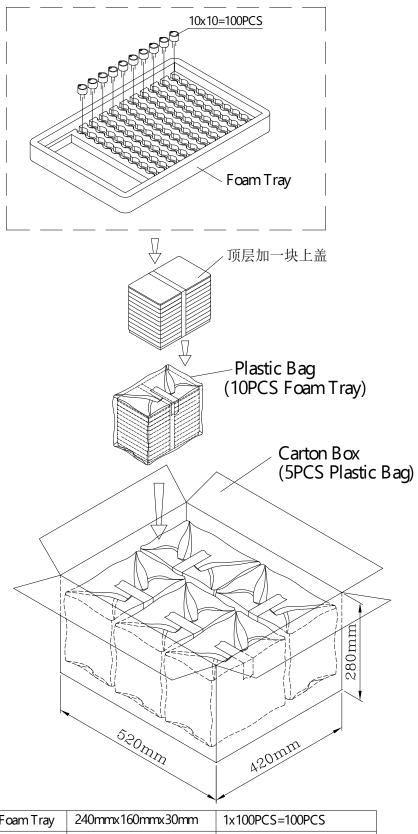
| NO.  | ITEM                               | TEST CONDITION AND REQUIREMENT   |  |  |
|------|------------------------------------|--|--|--|
| 1    | High Temperature<br>Test (Storage) | After being placed in a chamber with 80   2°C for 96 hours and then being placed in normal condition for 2 hours.  Allowable variation of SPL after test:   10dB.  |  |  |
| 2    | Low Temperature<br>Test (Storage)  | After being Placed in a chamber with -30   2°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   2°C for 96 hours and then being placed in normal condition for 2 hours.  Allowable variation of SPL after test:   10dB.   |  |  |
|      |                                    | The part shall be subjected to 5 cycles. One cycle shall be consist of:  +70°C   |  |  |
| 4 Te | Temperature Cycle<br>Test          | +25°C +25°C<br>-20°C   |  |  |
|      |                                    | Allowable variation of SPL after test: 10dB.   |  |  |
| 5    | Drop Test                          | Drop on a hard wood board of 4cm thick, any directions ,6 times, at the height of 75cm.  |  |  |
| 6    | Vibration Test                     | Allowable variation of SPL after test:   10dB.  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<br>Test              | Lead terminals are immersed in rosin for 5 seconds and then immersed in solder bath of +300   5°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℃ b) 湿度:45-85% c) 气压: 860-1060mbar Judgment Test Condition : a) Temperature : +25 ± 2℃ b) Humidity : 60-70% 争议时测试条件 : a) 温度 : +25 ± 2℃ b) 湿度 : 60-70% a) Temperature :  $+25 \pm 2^{\circ}$ C b) Humidity : 60-70% c) Pressure: 860-1060mbar c) 气压: 860-1060mbar



# **G. PACKING STANDARD**



| Foam Tray   | 240mmx160mmx30mm  | 1x100PCS=100PCS    |
|-------------|-------------------|--------------------|
| Plastic Bag |                   | 10x100PCS=1000PCS  |
| Carton Box  | 520mmx420mmx280mm | 5x1000PCS=5,000PCS |

