



# Product Specification

|               |                     |
|---------------|---------------------|
| Product Name: | Magnetic Transducer |
| Part Number:  | EMX-7T01PD          |
| Version:      | 1.02                |
| Date:         | 2019-11-6           |
| Note:         |                     |

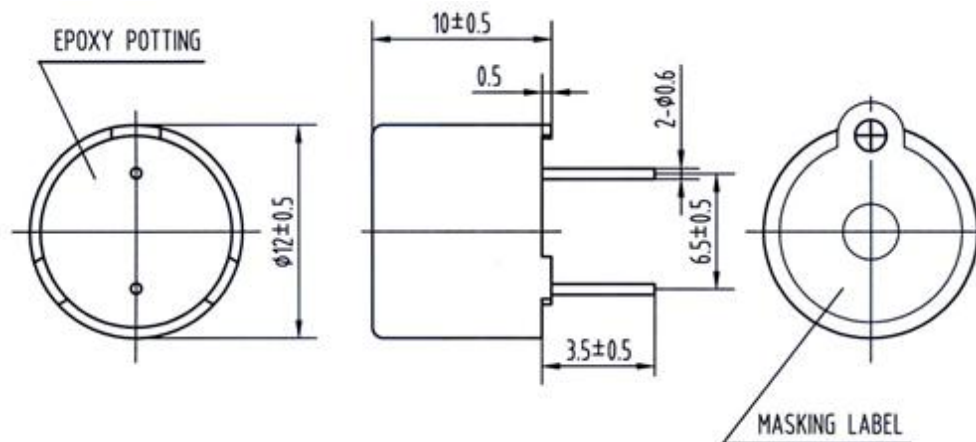
East is an ISO 9001 , IATF16949 and ISO 14001 Certified Company

## Revision History

| Rev. | Description                       | Author/Date       | Checked By | Approver |
|------|-----------------------------------|-------------------|------------|----------|
| 1.02 | Quality management system revised | 汤礼东<br>2019-11-6  | 吕文斌        | 王建成      |
| 1.01 | Add Coil Impedance                | 汤礼东<br>2014-10-29 | 李建华        | 王建成      |
| 1.0  | Released                          | 汤礼东<br>2012-3-27  | 陈启旺        | 王建成      |

## 1. Part Number EMX-7T01PD

## 2. Dimension Drawing (Unit: mm)



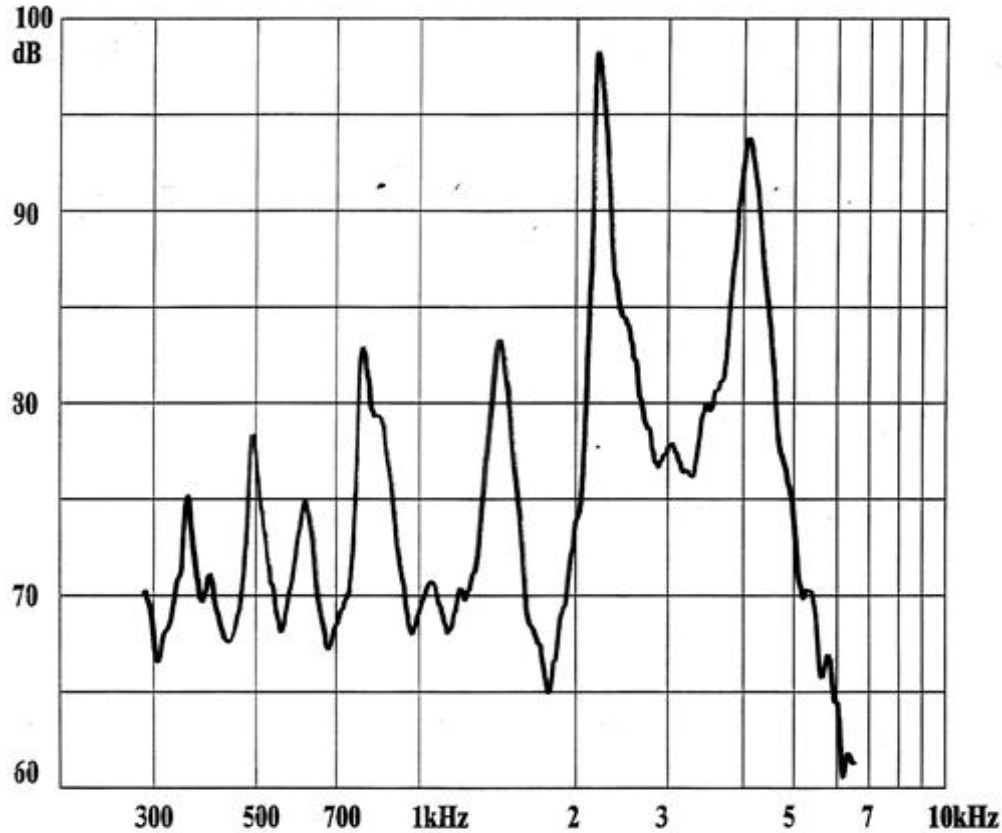
## 3. Specification

| No.  | Item                                      | Specification                 |
|------|---|-------------------------------|
| 3-1  | Min. Sound Pressure Level                 | 83dB/2400Hz/1.5V /10cm        |
| 3-2  | Rated Voltage                             | 1.5V                          |
| 3-3  | Operating Voltage                         | 1~2V                          |
| 3-4  | Max. Consumption (At 1.5V <sub>DC</sub> ) | 50mA/2400Hz/3Vp-p square wave |
| 3-5  | Resonant Frequency                        | 2400Hz                        |
| 3-6  | Coil Resistance                           | 16±4Ω                         |
| 3-7  | Coil Impedance                            | 40Ω                           |
| 3-8  | Operating Temperature                     | -20~+70°C                     |
| 3-9  | Storage Temperature                       | -30~+85°C                     |
| 3-10 | Weight                                    | 1.7g                          |
| 3-11 | Pin Strength                              | More than 10N                 |

### NOTES:

- 1、 Value applying rated voltage(resonant frequency, 1/2duty, square wave)
- 2、 Test should be made under the conditions of room temperature ( $20 \pm 10^\circ\text{C}$ ), normal humidity ( $60 \pm 20\%$ ) and normal atmospheric pressure. In this case, however, that the judgment is questionable, the test conditions are to be changed to room temperature  $20 \pm 2^\circ\text{C}$ , relative humidity 60~70% and normal atmospheric pressure

#### 4. Typical Frequency Response Curve



**Note:** Input Voltage 1.5V  
Distance 10 cm

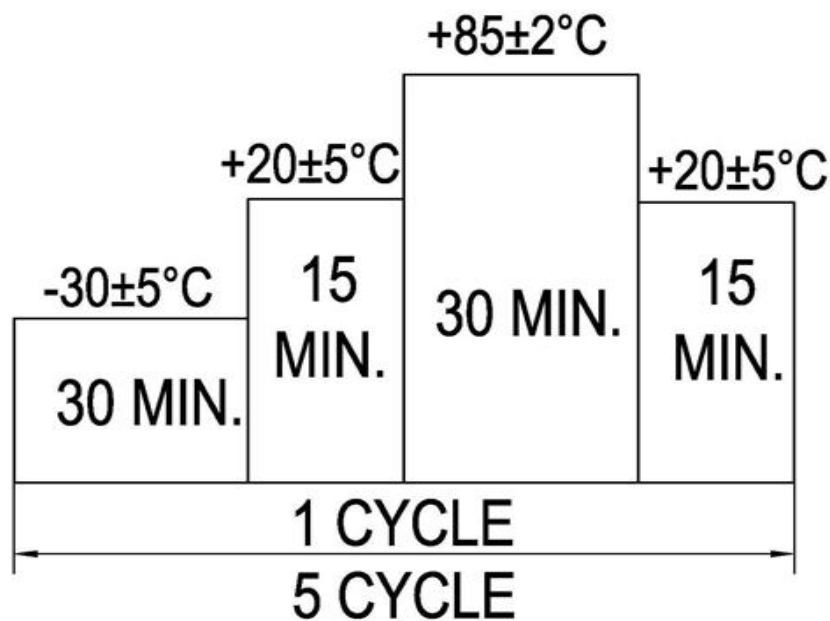
#### 5. Reliability Test

| No. | Item                              | Method of Test   | Tolerance after Testing   |
|-----|-----------------------------------|--|---|
| 5-1 | Operating Temperature             | -20~+70°C  | Sound pressure level initial value $\pm 10$ dB<br>Max. consumption value $\pm 20\%$ |
| 5-2 | Storage in high temperature       | Storage in +85°C test box 96 hours then exposed to the room temperature for 2 hours                |   |
| 5-3 | Storage in low temperature        | Storage in -30°C test box 96 hours then exposed to the room temperature for 2 hours                |   |
| 5-4 | Life test in the room temperature | Operate the product continuously 5 seconds on 5 seconds off 300 hours at rated voltage             |   |
| 5-5 | Temperature / humidity cycle test | Storage in +40°C, 93 $\pm$ 3%RH test box 96 hours then exposed to the room temperature for 2 hours |   |

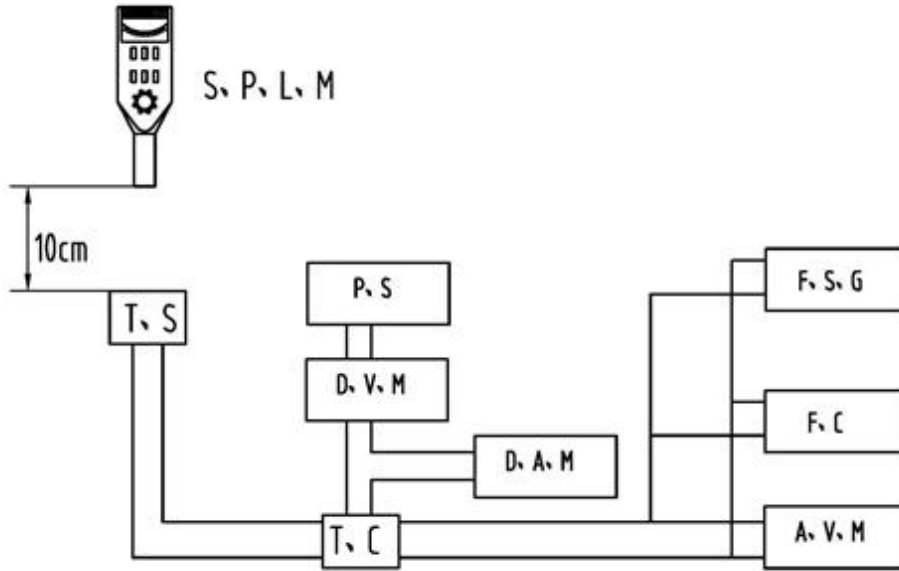
|      |                                       |  |  |
|------|---------------------------------------|--|--|
| 5-6  | Temperature (high and low) cycle test | Conduct the test for 5 cycles without applying power then expose to the room temperature for 2 hours.(See Figure 5-6)  |  |
| 5-7  | Vibration test                        | Conduct the test for the directions of X Y and Z for 0.5 hour each (total 1.5 hours). To-and Fri sweep time(from 10 to 55Hz and then 55 to 10) under single amplitude of 0.75mm is 3 minute, then expose to the room temperature for 2 hours |  |
| 5-8  | Drop test                             | Drop a product naturally from the height of 700mm onto the surface of 100mm thick wooden board. Two directions: upper and side of the product are to be applied for this drop test once respectively   |  |
| 5-9  | Soldering heat resistance test        | Dip the connecting pins in soldering at $260\pm 5^{\circ}\text{C}$ for $10\pm 1$ seconds   |  |
| 5-10 | Test of soldering                     | Dip the connecting pins in soldering at $230\pm 5^{\circ}\text{C}$ for $3\pm 0.5$ seconds  | Solder shall be attached around over 95% of the dipped portion |

**NOTE:** The pins are allowed to deform after drop test.

Figure 5-6

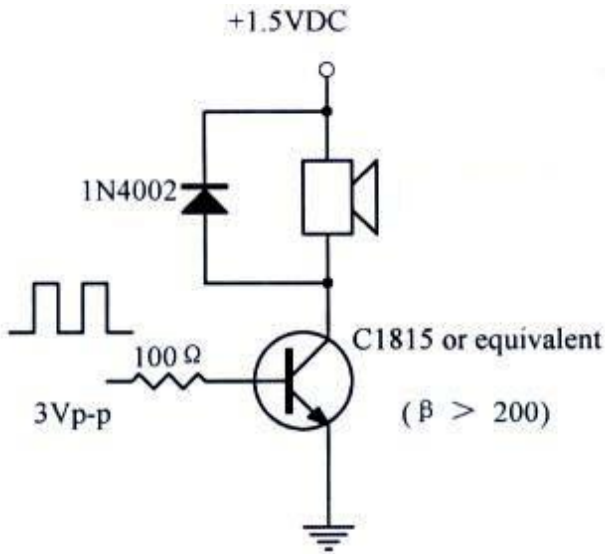


## 6. Electrical Testing Method



|         |                            |
|---------|----------------------------|
| S.P.L.M | Sound Pressure Level Meter |
| T.S     | Testing Sample             |
| F.C     | Frequency Counter          |
| T.C     | Test Circuit               |
| F.S.G   | Frequency Signal Generator |
| A.V.M   | AC Voltage Meter           |
| P.S     | Power Supply               |
| D.V.M   | DC Voltage Meter           |
| D.A.M   | DC Ampere Meter            |

### TEST CIRCUIT:



## 7. Packing Information

**Packing: 3000 pcs per export carton**

**Carton Size: 47× 25× 28 cm**

**G. Weight: 6.6 kgs N. Weight: 5.1 kgs**