



# Product Specification

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|               |              |
|---------------|--------------|
| Product Name: | Piezo Buzzer |
| Part Number:  | FM-12F-901A  |
| Version:      | 1.02         |
| Date:         | 2019-8-20    |
| Note:         |              |

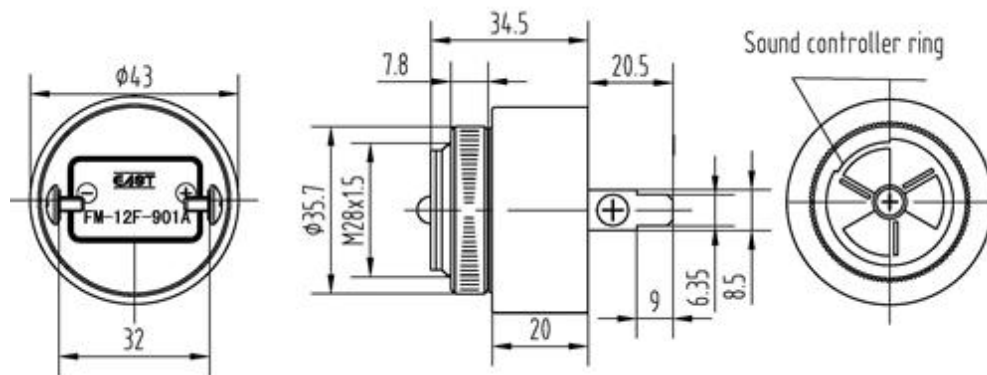
**East is an ISO 9001 , IATF16949 and ISO 14001 Certified Company**

## Revision History

| Rev. | Description                        | Author/Date      | Checked By | Approver |
|------|------------------------------------|------------------|------------|----------|
| 1.02 | Quality management system revised  | 汤礼东<br>2019-8-20 | 吕文斌        | 王建成      |
| 1.01 | Quality Certificate Symbol revised | 吕文斌<br>2015-2-10 | 汤礼东        | 王建成      |
| 1.0  | Released                           | 陈启旺<br>2012-3-28 | 汤礼东        | 王建成      |

## 1. Part Number FM-12F-901A

## 2. Dimension Drawing (Unit: mm)



## 3. Specification

| No.  | Item                      | Specification                |
|------|---------------------------|------------------------------|
| 3-1  | Min. Sound Pressure Level | 90dB/12V <sub>DC</sub> /60cm |
| 3-2  | Rated Voltage             | 12V <sub>DC</sub>            |
| 3-3  | Operating Voltage         | 6~16V <sub>DC</sub>          |
| 3-4  | Max. Consumption          | 20mA/12V <sub>DC</sub>       |
| 3-5  | Oscillating Frequency     | 3.0±0.5 kHz                  |
| 3-6  | Tone Nature               | Fast Pulse                   |
| 3-7  | Operating Temperature     | -20~+70°C                    |
| 3-8  | Case Material/Color       | Fire-resistance ABS/Black    |
| 3-9  | Weight                    | 41g                          |
| 3-10 | Pin Strength              | More than 10N                |

### NOTES:

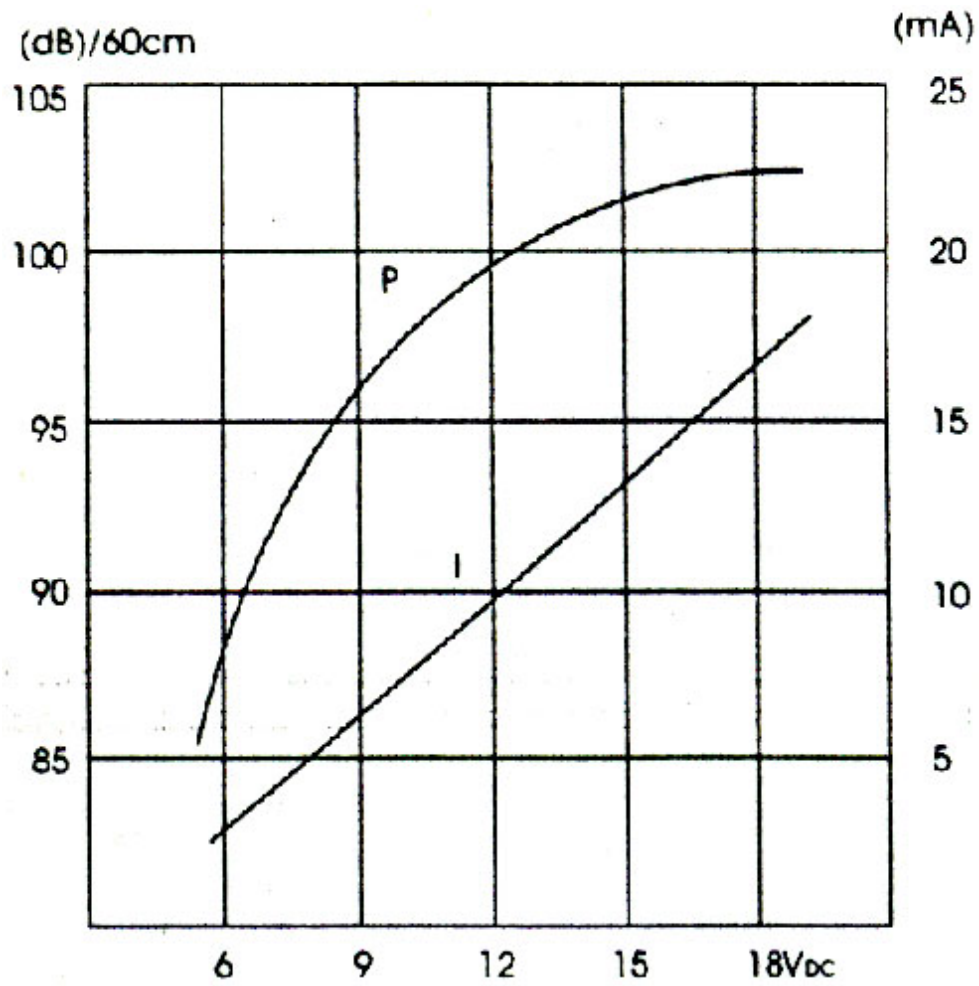
1. Fast Pulse  $f_F=5.0\text{Hz}\pm 20\%$ .

2. These series is epoxy-potting type.

3. Adjust the volume through the top sound adjusting board.

4. 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

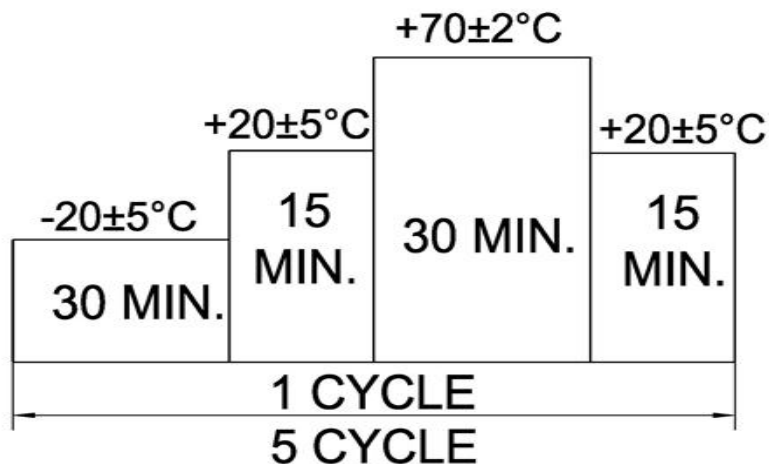


**Note:**Distance 60 cm

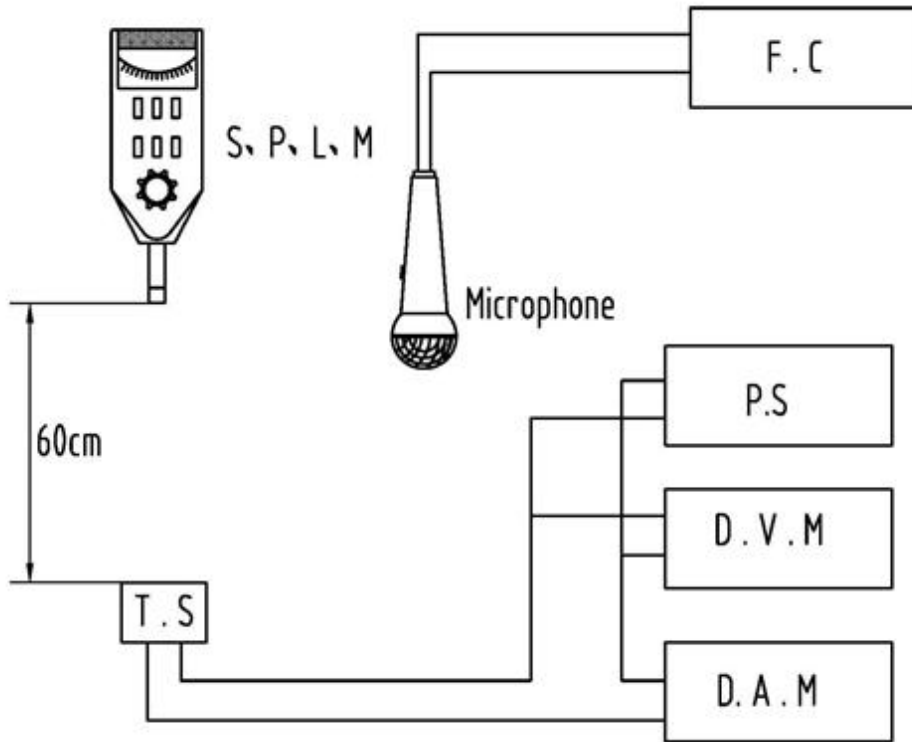
## 5. Reliability Test

| No. | Item                                  | Method of Test   | Tolerance after Testing   |
|-----|---------------------------------------|--|---|
| 5-1 | Operating Temperature                 | -20~+70°C  | Sound pressure level initial value $\pm 10\text{dB}$<br>Max. consumption value $\pm 20\%$<br>Oscillating frequency value $\pm 20\%$ |
| 5-2 | Storage in high temperature           | Storage in +70°C test box 96 hours then exposed to the room temperature for 2 hours  |   |
| 5-3 | Storage in low temperature            | Storage in -20°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   |   |

Figure 5-6



## 6. Electrical Testing Method



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

## 7. Packing Information

**Packing: 200 pcs per export carton**

**Carton Size: 41× 30.5× 33 cm**

**G. Weight: 9.9 kgs N. Weight:8.2 kgs**