



# Product Specification

**Ningbo East Electronics Limited**

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|               |              |
|---------------|--------------|
| Product Name: | Piezo Buzzer |
| Part Number:  | FM-220A-901A |
| Version:      | 1.02         |
| Date:         | 2019-8-20    |
| Note:         |              |

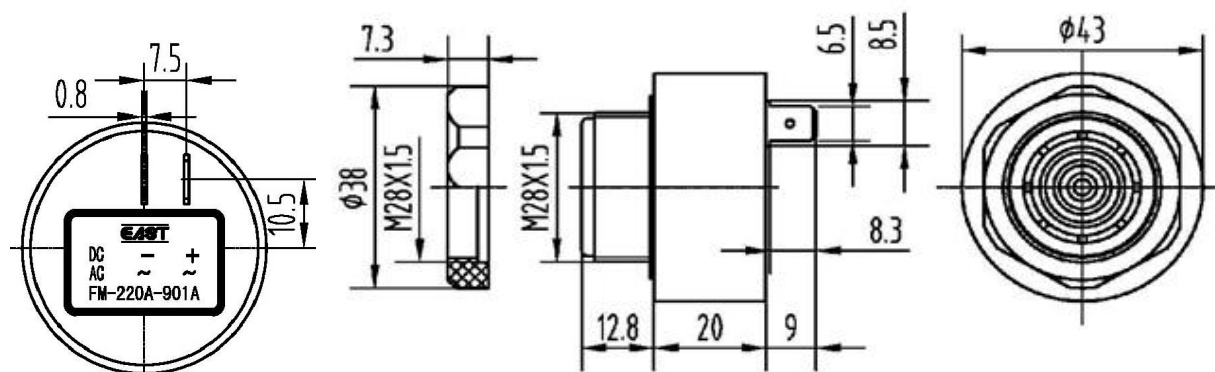
**East is an ISO 9001 , IATF16949 and ISO 14001 Certified Company**

## 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>2015-2-12 | 汤礼东        | 王建成      |
| 1.0  | Released                           | 陈启旺<br>2012-4-26 | 汤礼东        | 王建成      |

## 1. Part Number FM-220A-901A

## 2. Dimension Drawing (Unit: mm)



## 3.Specification

| No.  | Item                      | Specification                 |
|------|---------------------------|-------------------------------|
| 3-1  | Min. Sound Pressure Level | 90dB/220V <sub>AC</sub> /30cm |
| 3-2  | Rated Voltage             | 220V <sub>AC</sub>            |
| 3-3  | Operating Voltage         | 60~250V <sub>AC</sub>         |
| 3-4  | Max. Consumption          | 20mA/220V <sub>AC</sub>       |
| 3-5  | Oscillating Frequency     | 2.9±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                    | 43g                           |
| 3-10 | Pin Strength              | More than 10N                 |

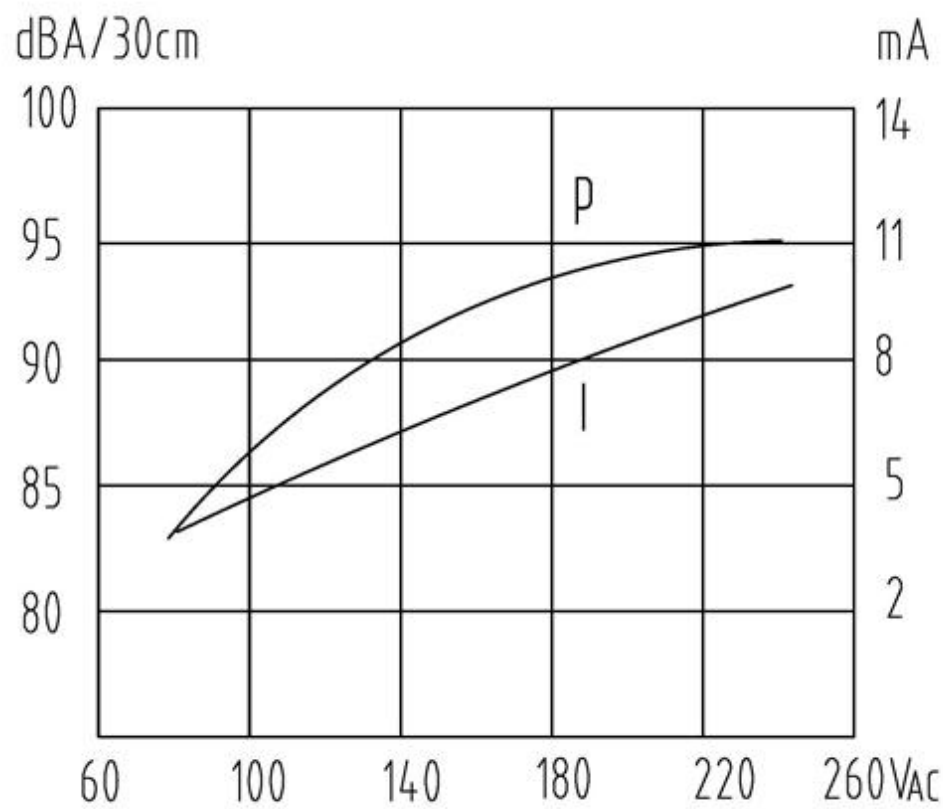
### NOTES:

1.Fast Pulse  $f_F=3.0\text{Hz}\pm 20\%$

2.This product is epoxy-potting type.

3.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

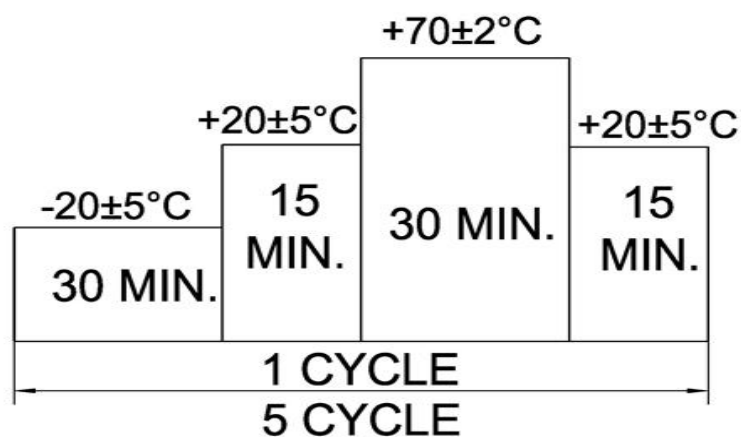


**Note:**Distance 30 cm

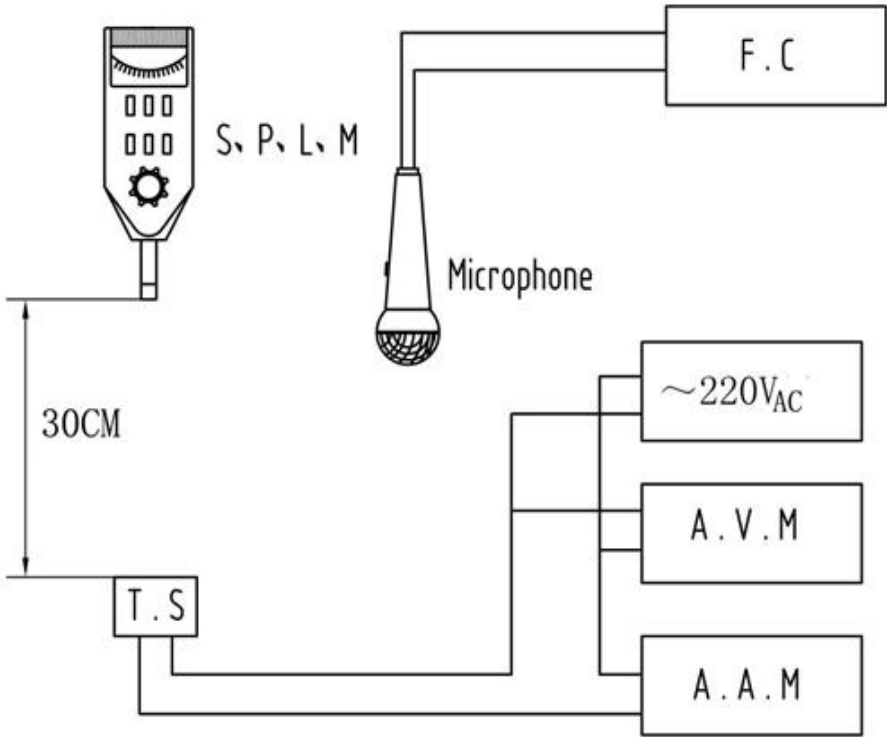
## 5. Reliability Test

| No. | Item                                  | Method of Test                                                                                                                                                                                                                               | Tolerance after Testing                                                                                                                              |
|-----|---------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| 5-1 | Operating Temperature                 | -20~+70°C                                                                                                                                                                                                                                    | Sound pressure level<br>initial value $\pm 10\text{dB}$<br><br>Max. consumption<br>value $\pm 20\%$<br><br>Oscillating frequency<br>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          |
| A.V.M   | AC Voltage Meter           |
| A.A.M   | AC Ampere Meter            |

7. Packing Information

Packing: 200 pcs per export carton  
Carton Size: 47× 30.5× 29 cm  
G. Weight: 10.2 kgs N. Weight: 8.6 kgs