



Product Specification

Ningbo East Electronics Limited

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| | |
|---------------|--------------|
| Product Name: | Piezo Buzzer |
| Part Number: | FM-12HE-903 |
| Version: | 1.0 |
| Date: | 2020-6-15 |
| Note: | |

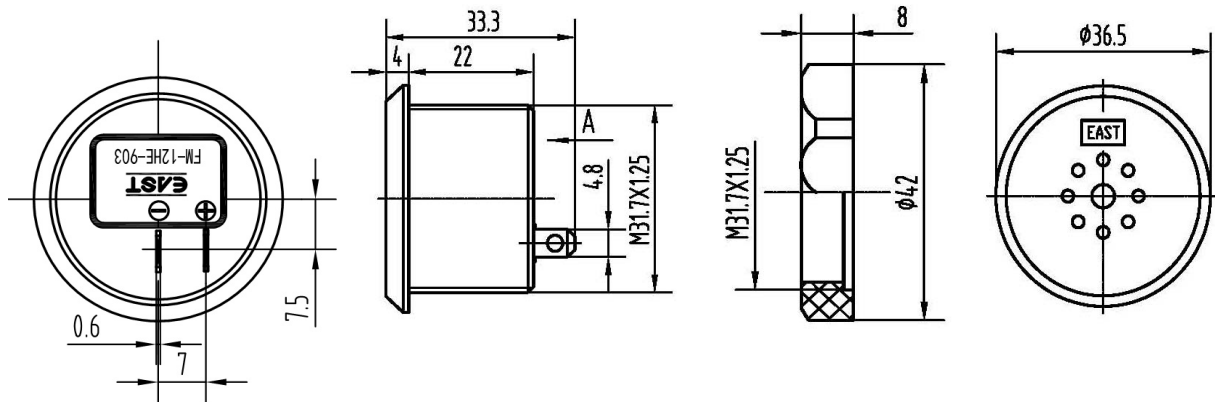
East is an ISO 9001 , IATF16949 and ISO 14001 Certified Company

Revision History

| Rev. | Description | Author/Date | Checked By | Approver |
|------|-------------|-----------------|------------|----------|
| 1.0 | Released | 俞凯 2020-6-15 | 汤礼东 | 王建成 |

1. Part Number FM-12HE-903

2. Dimension Drawing (Unit: mm)



3. Specification

| No. | Item | Specification |
|------|---------------------------|-------------------------------|
| 3-1 | Min. Sound Pressure Level | 85dB/12V _{DC} /100cm |
| 3-2 | Rated Voltage | 12V _{DC} |
| 3-3 | Operating Voltage | 5~28V _{DC} |
| 3-4 | Max. Consumption | 10mA/12V _{DC} |
| 3-5 | Oscillating Frequency | 3.0±0.5 kHz |
| 3-6 | Tone Nature | Slow Pulse |
| 3-7 | Operating Temperature | -20~+70°C |
| 3-8 | Case Material/Color | PC/Black |
| 3-9 | Weight | 23g |
| 3-10 | Pin Strength | More than 10N |

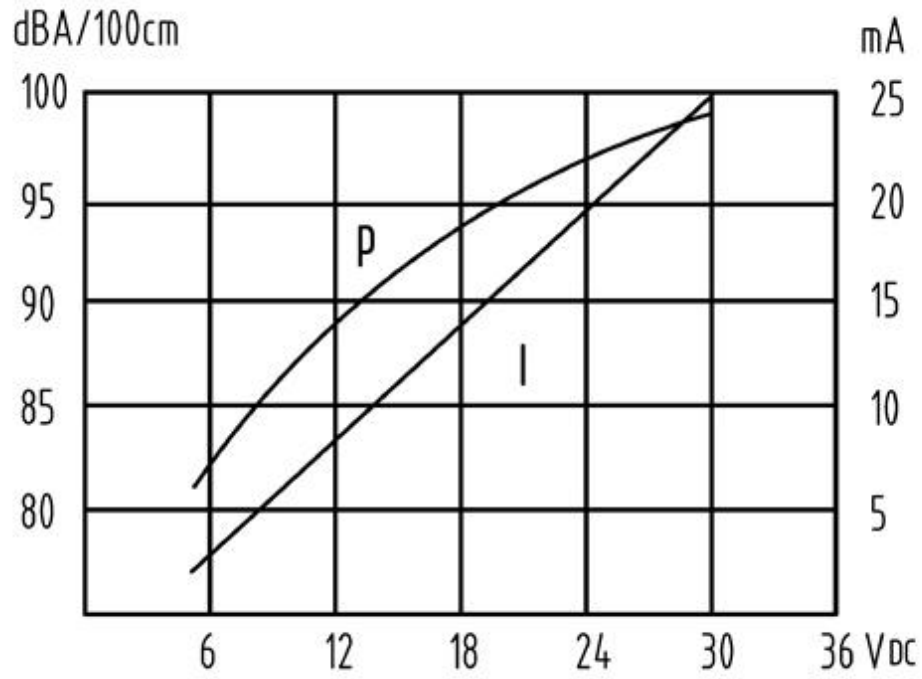
NOTES:

1. Slow Pulse $f_F=1.6\text{Hz}\pm 20\%$

2. This series 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

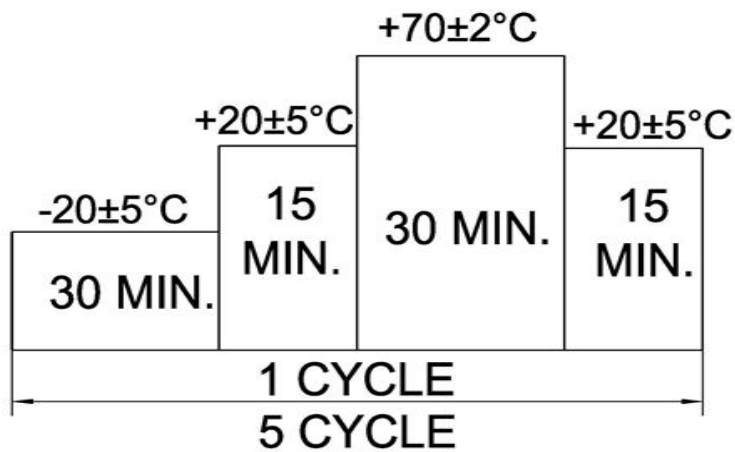


Note:Distance 100 cm

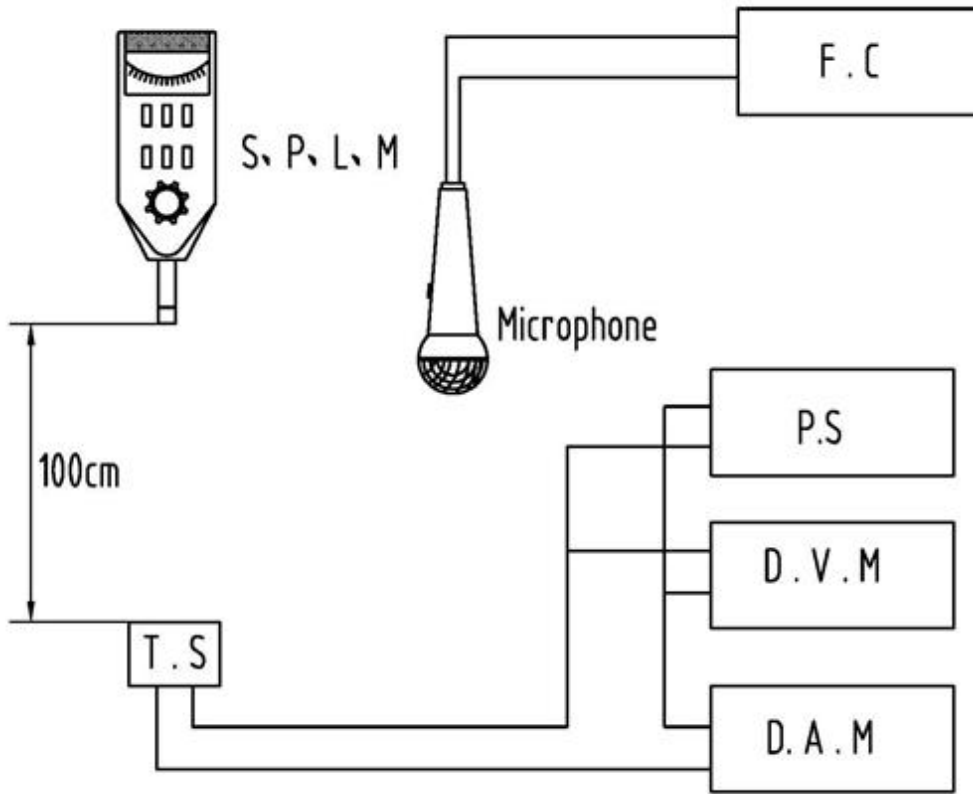
5. Reliability Test

| No. | Item | Method of Test | Tolerance after Testing |
|-----|---------------------------------------|--|---|
| 5-1 | Operating Temperature | -20~+70°C | Sound pressure level initial value $\pm 10\text{dB}$ Max. consumption value $\pm 20\%$ 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: 300 pcs per export carton

Carton Size: 47× 30.5×27 cm

G. Weight: 8.4 kgs N. Weight: 6.9 kgs