



Product Specification

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| | |
|---------------|-------------------------|
| Product Name: | SMD Magnetic Transducer |
| Part Number: | SFM-1224B |
| Version: | 1.03 |
| Date: | 2019-11-6 |
| Note: | |

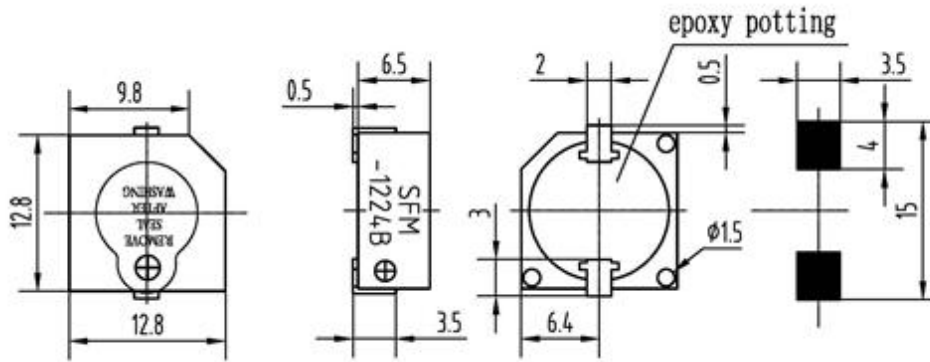
East is an ISO 9001 , IATF16949 and ISO 14001 Certified Company

Revision History

| Rev. | Description | Author/Date | Checked By | Approver |
|------|------------------------------------|-------------------|------------|----------|
| 1.03 | Quality management system revised | 汤礼东 2019-11-6 | 吕文斌 | 王建成 |
| 1.02 | Quality Certificate Symbol revised | 刘宁 2015-2-4 | 汤礼东 | 王建成 |
| 1.01 | Add Coil Impedance | 汤礼东 2014-10-29 | 李建华 | 王建成 |

1. Part Number SFM-1224B

2. Dimension Drawing (Unit: mm)



SFM-TERMINAL VERSION

RECOMMENDED SMD FOOT PATTERN

Solder paste thickness is not below 0.2mm

The seal will be removed after reflow soldering

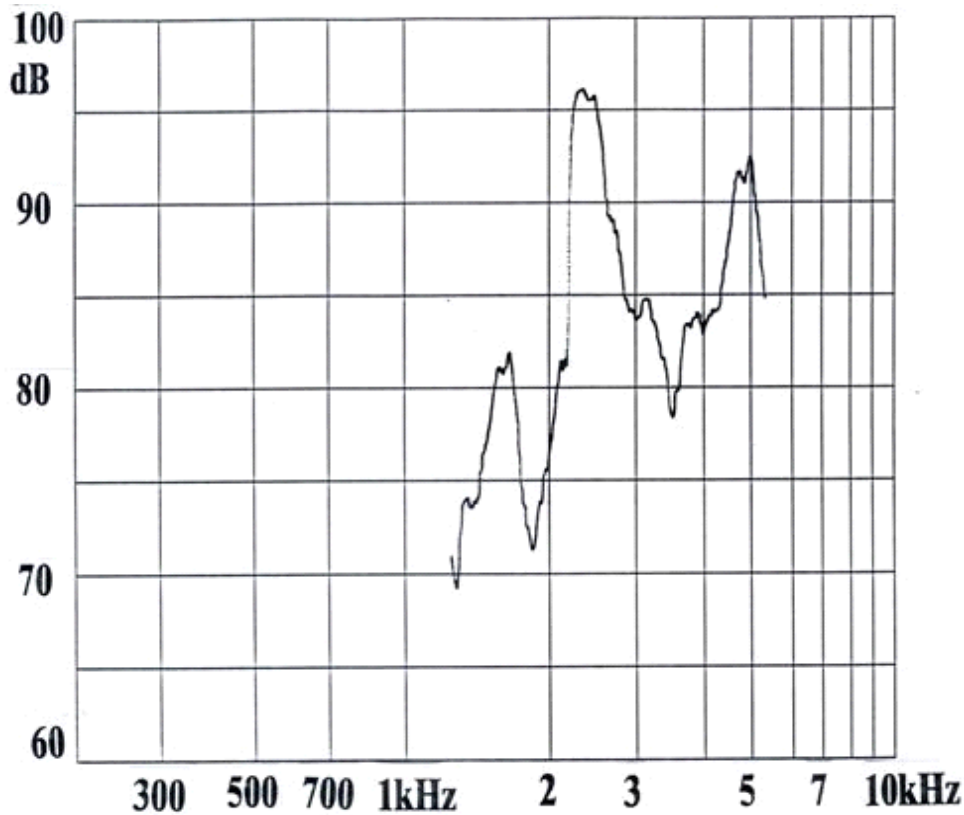
3. Specification

| No. | Item | Specification |
|------|---|--------------------------------|
| 3-1 | Min. Sound Pressure Level | 87dB/2400Hz/5V /10cm |
| 3-2 | Rated Voltage | 5V |
| 3-3 | Operating Voltage | 4~7V |
| 3-4 | Max. Consumption (At 5V _{DC}) | 40mA/2400Hz/10Vp-p square wave |
| 3-5 | Resonant Frequency | 2400Hz |
| 3-6 | Coil Resistance | 50±7Ω |
| 3-7 | Coil Impedance | 110Ω |
| 3-8 | Operating Temperature | -40~+85°C |
| 3-9 | Storage Temperature | -40~+85°C |
| 3-10 | Case Material/Color | PPS/Grey |
| 3-11 | Weight | 2.0g |
| 3-12 | 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±10°C), normal humidity (60±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±2°C, relative humidity 60~70% and normal atmospheric pressure

4. Typical Frequency Response Curve



Note: Input Voltage 5V
Distance 10 cm

5. Reliability Test

| No. | Item | Method of Test | Tolerance after Testing |
|-----|---------------------------------------|---|---|
| 5-1 | Operating Temperature | -40~+85°C | Sound pressure level initial value ± 10 dB 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 -40°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) | |
| | | Conduct the test for the directions of X Y and Z for 0.5 hour | |

| | | | |
|------|----------------------------------|--|--|
| 5-7 | Vibration test | 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 | Reflow soldering heat resistance | a) Pre-heating conditions shall be +140°C to 160°C for 160 to 200 seconds. (See Figure5-9) b) Heating conditions shall be within 60 seconds at +200°C min., but peak temperature shall be lower than +260°C. (See Figure 5-9) | |
| 5-10 | Test of soldering | Dip the connecting pins in soldering at 230±5°C for 3±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

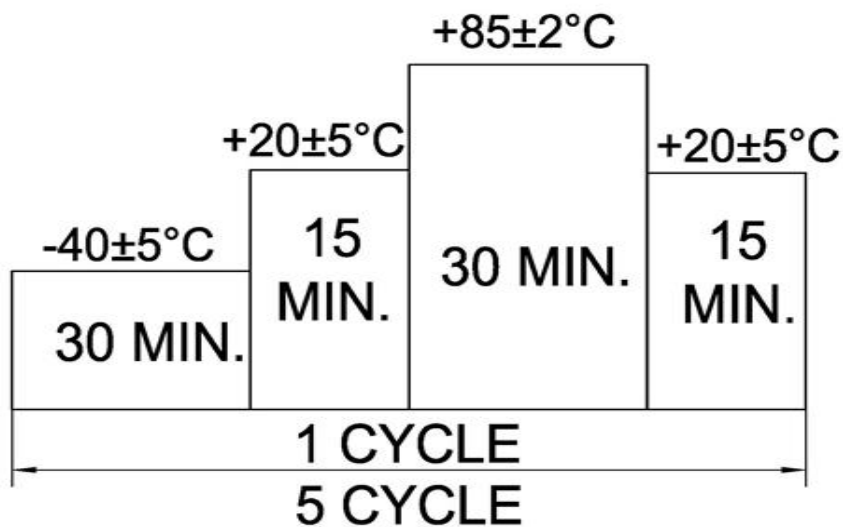
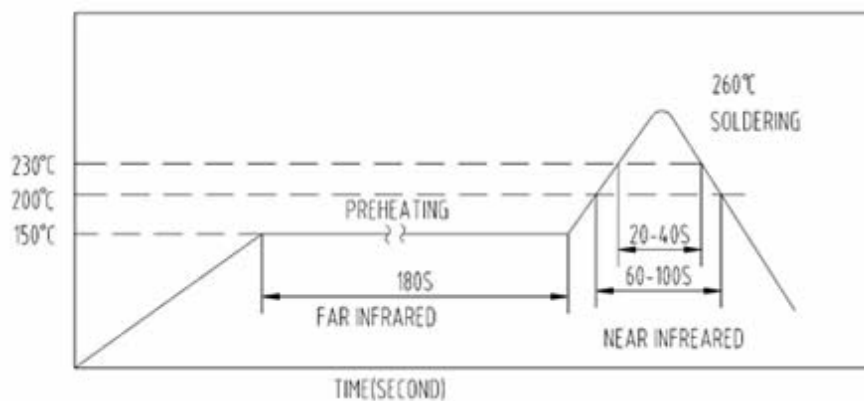
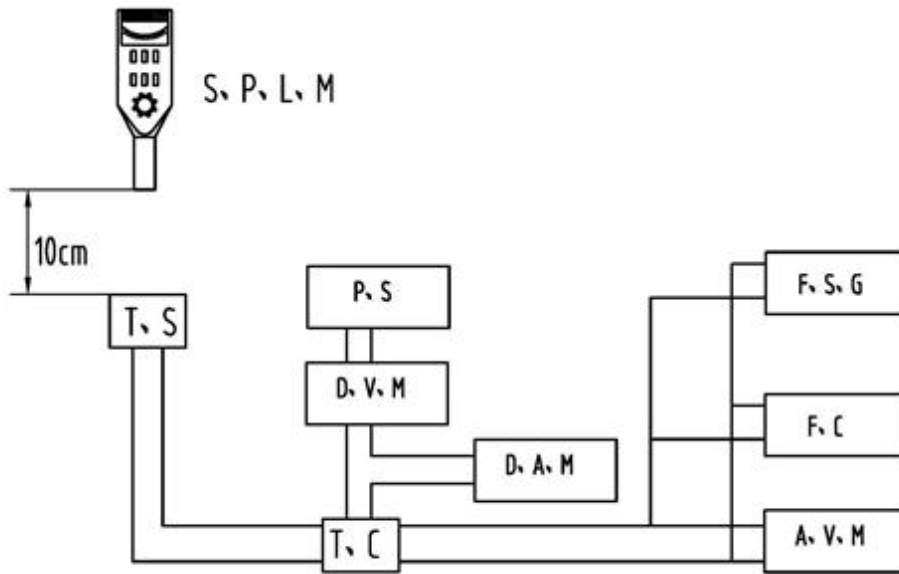


Figure 5-9

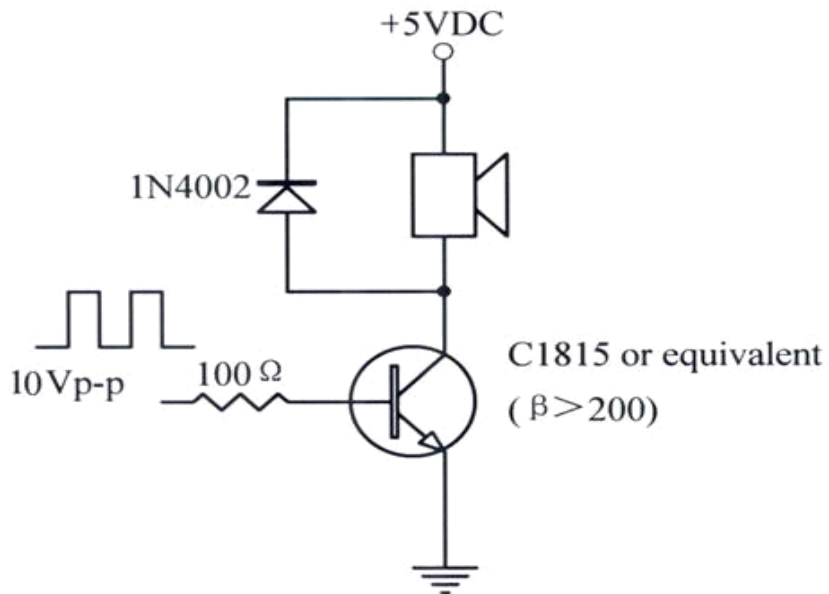


6. Electrical Testing Method



| | |
|---------|----------------------------|
| 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

| No. | Item | Description |
|-----|---------------------------------|--|
| 7-1 | Tape type information | a) The design for such tape packing was executed under standard IEC - 286-3 b) The material of the tape is polystyrene in black color. Detailed dimensions are as below: (See Figure7-1) |
| 7-2 | Dimensions of the rolling plate | a) The material of the rolling plate is paper. b) The dimensions of the rolling plate are as below(See Figure7-2) |
| 7-3 | Packing dimensions and quantity | a) The rolling plate is packed with 450 pcs of the transducer per plate. b) The dimension of the outer carton is 400X 350X 350mm containing 10 inner boxes with a total quantity of 4500 pcs of transducer. c) The total gross weight per carton is 11Kgs, while net weight is 9Kgs. |

Figure 7-1(Unit:mm)

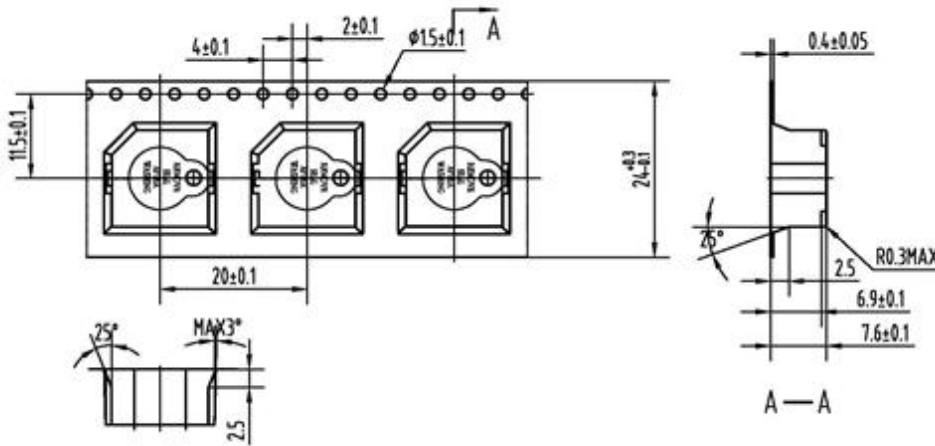


Figure 7-2(Unit:mm)

