



# Product Specification

|               |                         |
|---------------|-------------------------|
| Product Name: | SMD Magnetic Transducer |
| Part Number:  | SFM-1324-05             |
| Version:      | 1.02                    |
| Date:         | 2019-11-6               |
| Note:         |                         |

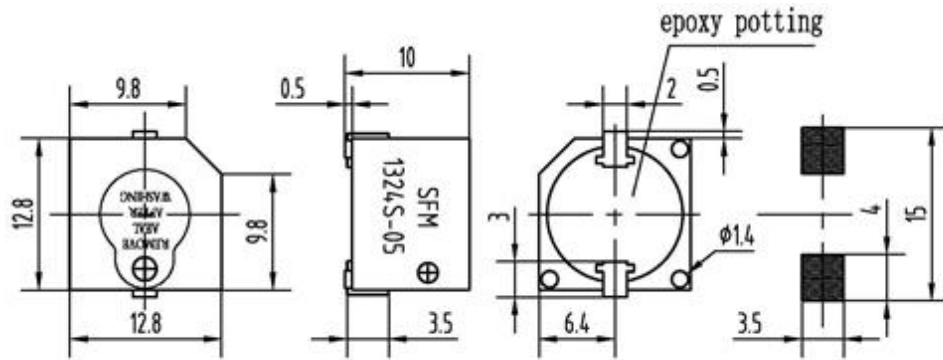
East is an ISO 9001 , IATF16949 and ISO 14001 Certified Company

## 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>2012-4-3   | 陈启旺        | 王建成      |

## 1. Part Number SFM-1324-05

## 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*

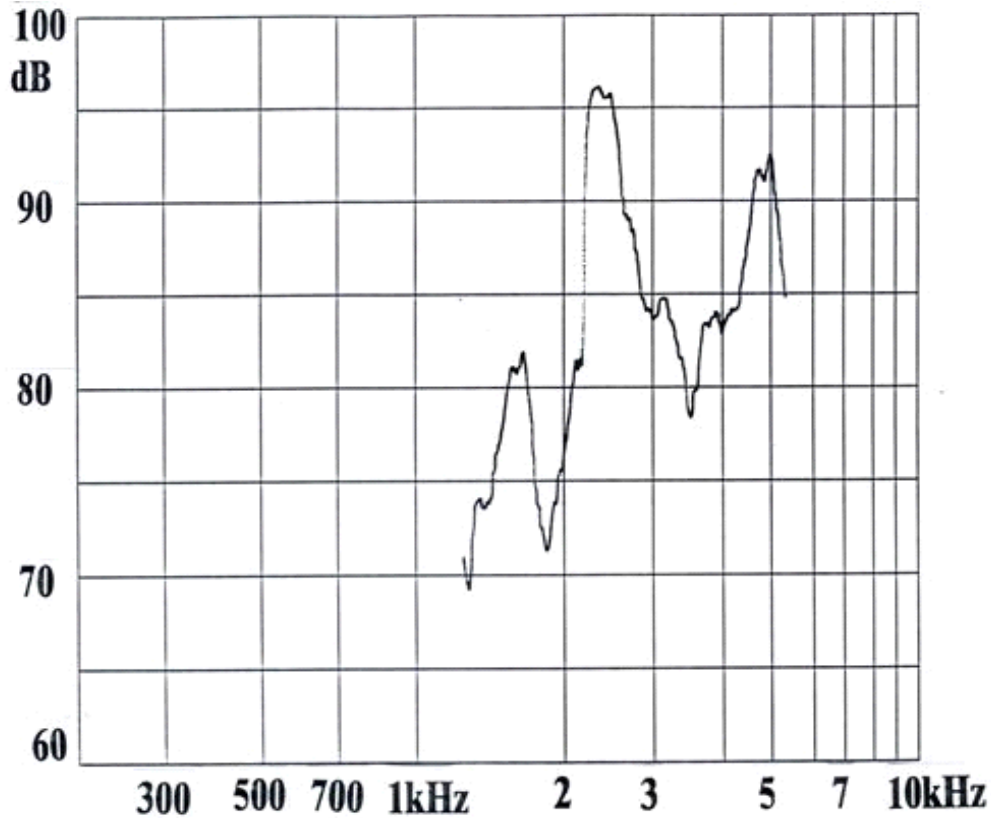
## 3. Specification

| No.  | Item                                    | Specification                  |
|------|---|--------------------------------|
| 3-1  | Min. Sound Pressure Level               | 85dB/2400Hz/5V /10cm           |
| 3-2  | Rated Voltage                           | 5V                             |
| 3-3  | Operating Voltage                       | 4~7V                           |
| 3-4  | Max. Consumption (At 5V <sub>DC</sub> ) | 40mA/2400Hz/10Vp-p square wave |
| 3-5  | Resonant Frequency                      | 2400Hz                         |
| 3-6  | Coil Resistance                         | 45±5Ω                          |
| 3-7  | Coil Impedance                          | 110Ω                           |
| 3-8  | Operating Temperature                   | -40~+85°C                      |
| 3-9  | Storage Temperature                     | -45~+85°C                      |
| 3-10 | Case Material/Color                     | PPS/Grey                       |
| 3-11 | Weight                                  | 2.5g                           |
| 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 $\pm 10$ dB<br><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 -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) |   |

|      |                                  |  |  |
|------|----------------------------------|--|--|
| 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 Fro 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)<br>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

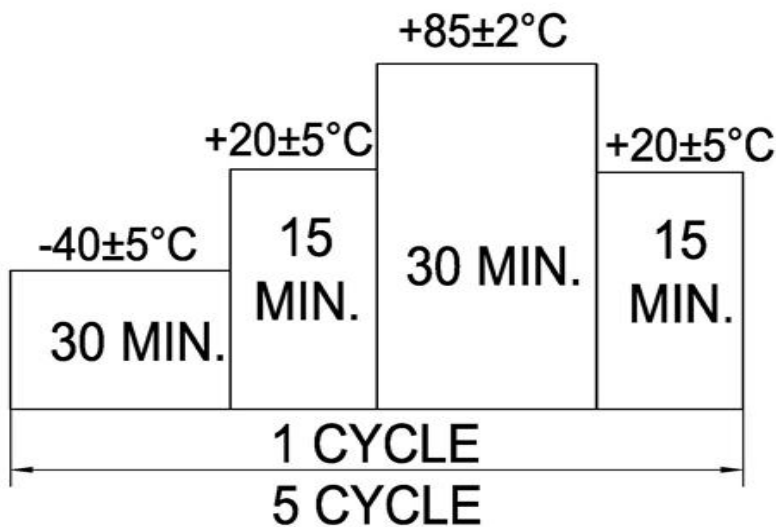
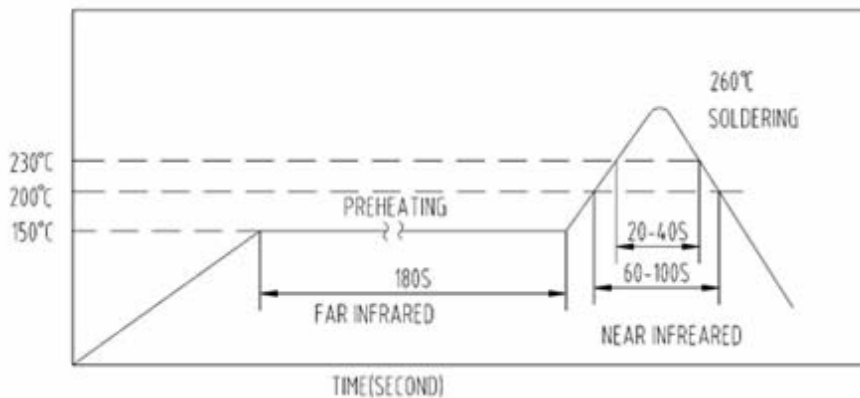
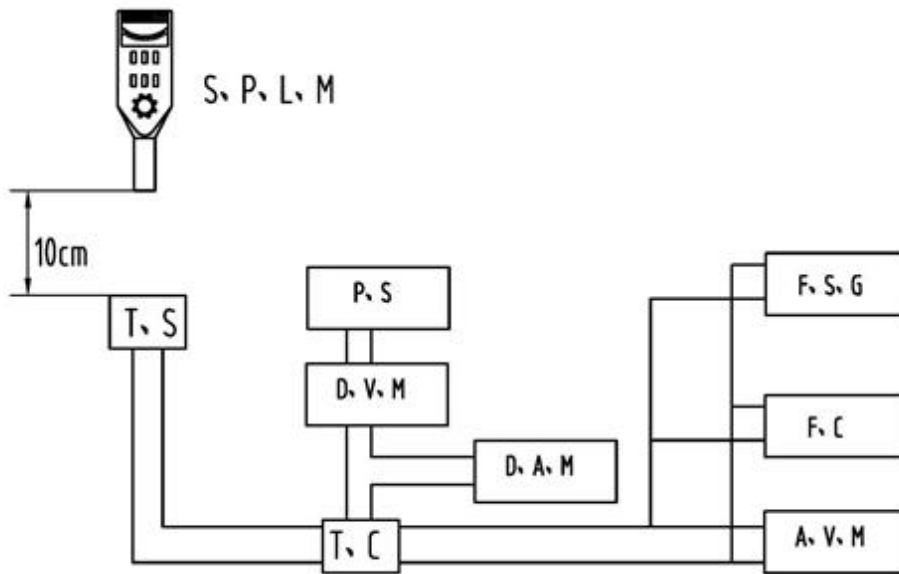


Figure 5-9

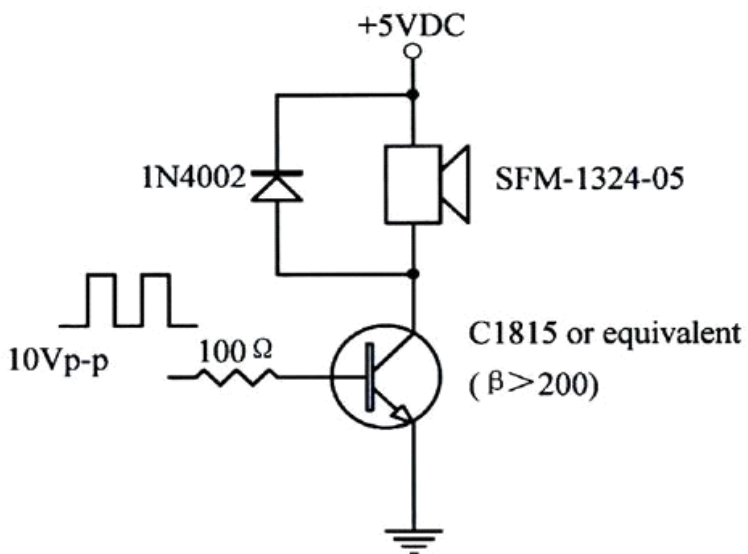


## 6. Electrical Testing Method



|         |                            |
|---------|----------------------------|
| 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           | <p>a) The design for such tape packing was executed under standard IEC - 286-3</p> <p>b) The material of the tape is polystyrene in black color. Detailed dimensions are as below: (See Figure7-1)</p>  |
| 7-2 | Dimensions of the rolling plate | <p>a) The material of the rolling plate is paper.</p> <p>b) The dimensions of the rolling plate are as below(See Figure7-2)</p>   |
| 7-3 | Packing dimensions and quantity | <p>a) The rolling plate is put into a 340X335X35mm inner packing box and is packed with 350pcs of transducer per plate.</p> <p>b) The dimension of the outer carton is 400X 350X 350mm containing 10 inner boxes with a total quantity of 3500 pcs of transducer.</p> <p>c) The total gross weight per carton is 18Kgs, while net weight is 8.8Kgs.</p> |

Figure 7-1(Unit:mm)

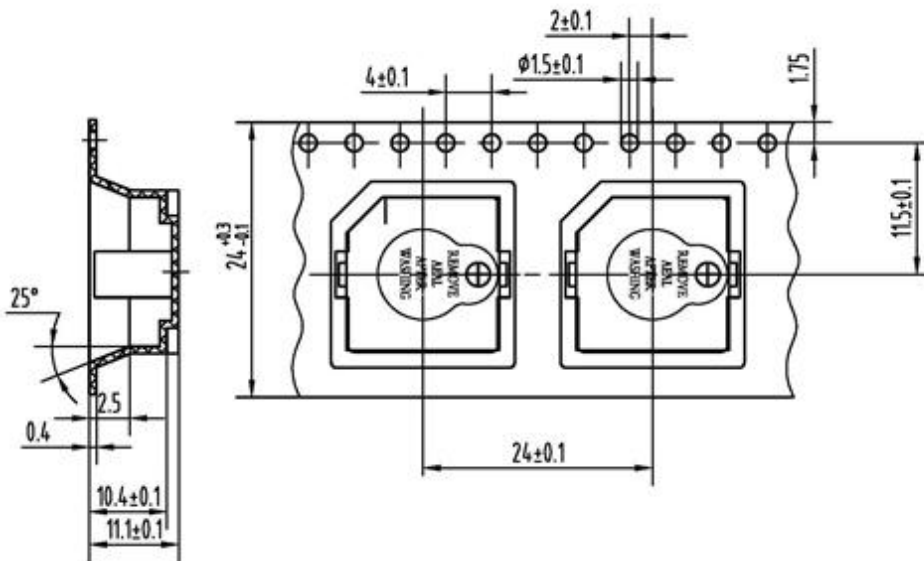


Figure 7-2(Unit:mm)

