

**MESSRS.****SPECIFICATION FOR APPROVAL****承 認 书**

|                   |                      |
|-------------------|----------------------|
| Product           | MAGNETIC BUZZER(SMD) |
| Part No.          | HD-854019 (RoHS)     |
| Customer Approval |                      |

|                    |                    |                     |
|--------------------|--------------------|---------------------|
| Approved By        | Checked By         | Made By             |
| 王台平<br>NOV-11-2023 | 曹丽萍<br>NOV-11-2023 | LILY<br>NOV-11-2023 |

**常 州 华 龙 电 子 有 限 公 司****DRAGONSTATE ELECTRONIC CORPORATION**

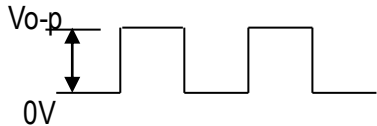
中国江苏省常州市新区电子园新四路 36 号

Tel: +86-519-85110078. 86-519-85106698, Fax: +86-519-85101081

EDITION:1.1

## Specifications

**HD-854019 (RoHS)**

| Items |                     | Units              | Specifications       | Conditions                                                                                                                       |
|-------|---------------------|--------------------|----------------------|----------------------------------------------------------------------------------------------------------------------------------|
| 01    | Rated Voltage       | Vo-p               | 5.0                  |                                               |
| 02    | Operating Voltage   | Vo-p               | 4.5~6.5              |                                                                                                                                  |
| 03    | Consumption Current | mA<br>(max)        | 80                   | Standard State, Standard Drive Circuit.<br>Rated Voltage, Rated Frequency, Distance<br>at 10 cm free air, Square Wave 1 / 2 Duty |
| 04    | Sound Output        | dB<br>(min)        | 85                   |                                                                                                                                  |
| 05    | Rated Frequency     | Hz                 | 2700                 |                                                                                                                                  |
| 06    | Coil Resistance     | $\Omega$           | $32 \pm 3$           | At Basic State                                                                                                                   |
| 07    | Operating Temp.     | $^{\circ}\text{C}$ | $-30 \sim +70$       |                                                                                                                                  |
| 08    | Storage Temp.       | $^{\circ}\text{C}$ | $-40 \sim +85$       |                                                                                                                                  |
| 09    | Dimension           | mm                 | 8.5 x 8.5 x H4.0     | See appearance drawing                                                                                                           |
| 10    | Weight              | Gram               | 0.8                  |                                                                                                                                  |
| 11    | Housing Material    |                    | LCP( Black )         |                                                                                                                                  |
| 12    | Leading Pin         |                    | Tin Plated Brass(Sn) | See appearance drawing                                                                                                           |

### Test Condition

#### STANDARD

 Temperature :  $15 \sim 35^{\circ}\text{C}$ 

Relative humidity : 25% ~ 85%,

Atmospheric pressure : 860mbar to 1060mbar.

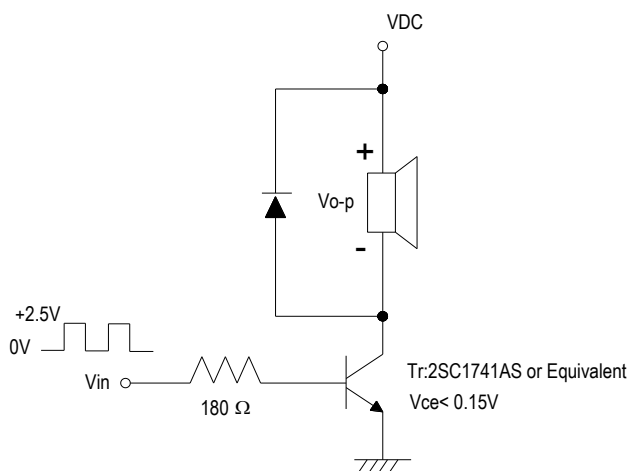
#### JUDGEMENT

 Temperature :  $20 \pm 3^{\circ}\text{C}$ 

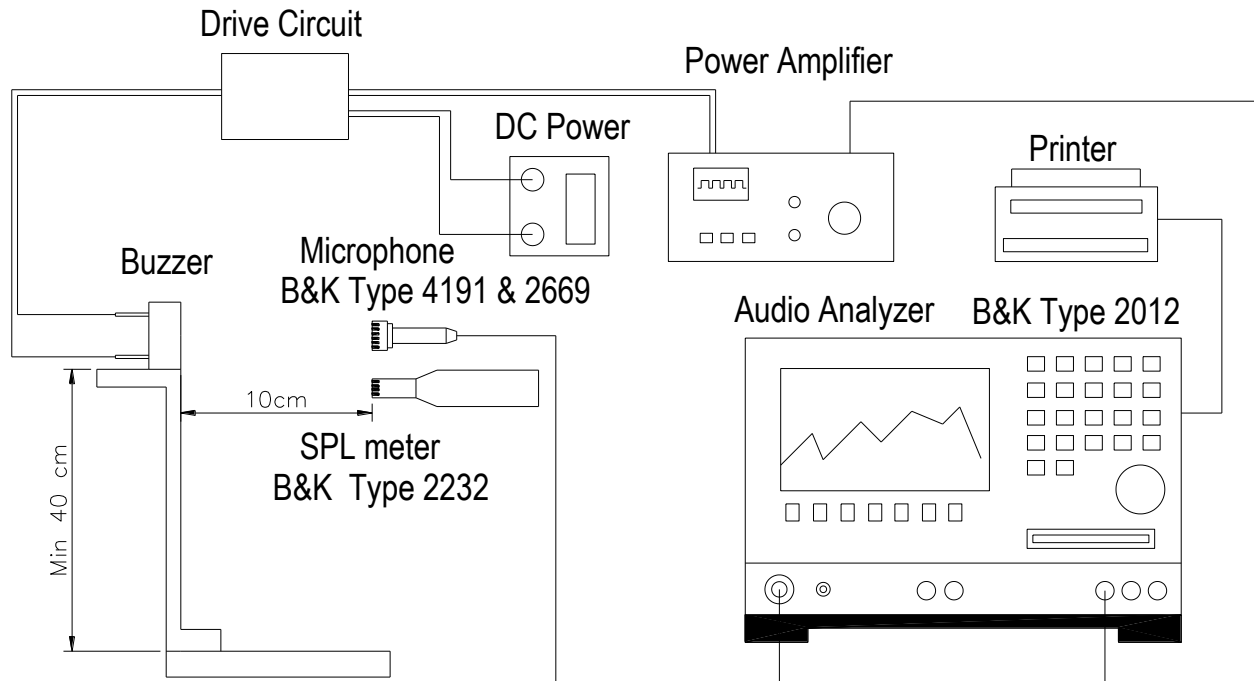
Relative humidity : 60% ~ 70%,

Atmospheric pressure : 860mbar to 1060mbar

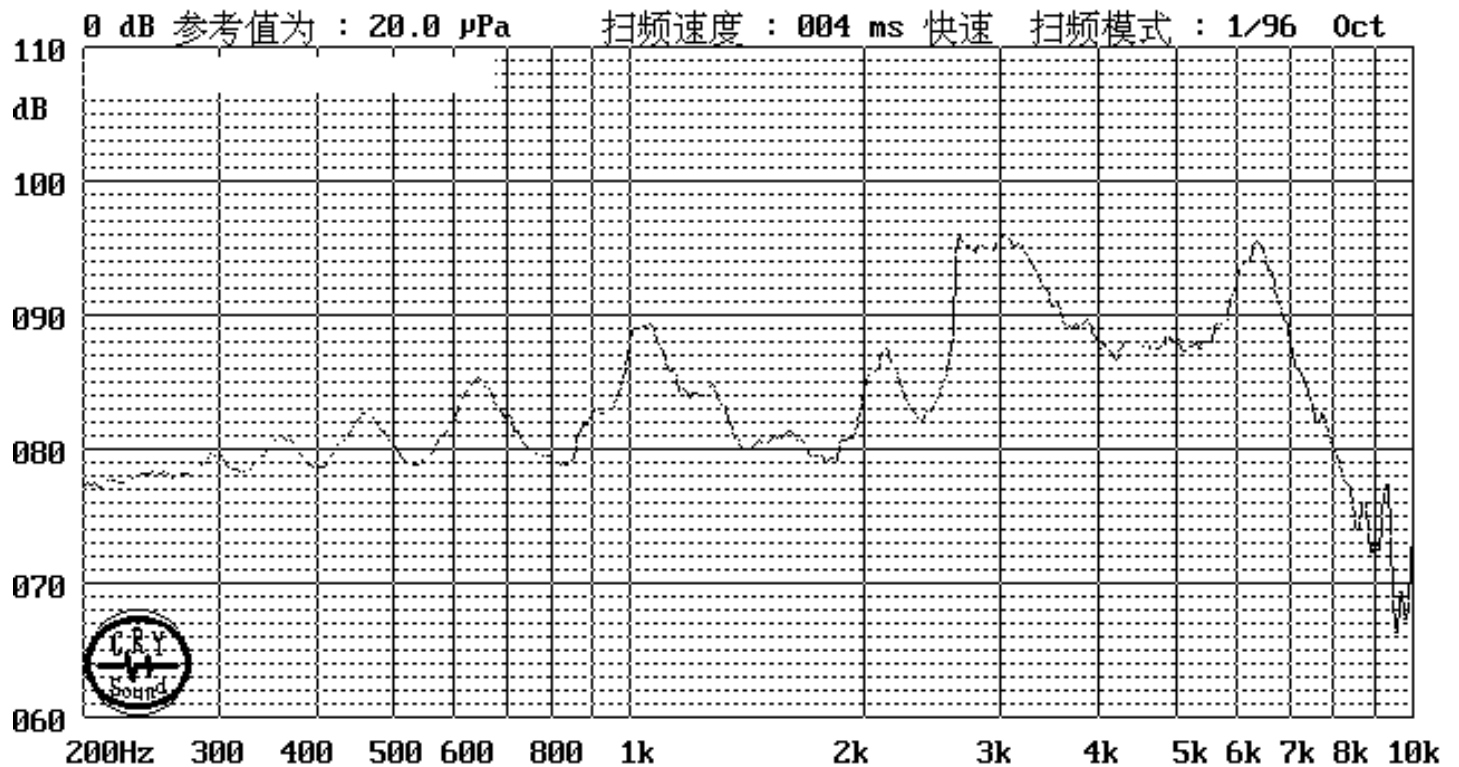
### Standard Drive Circuit

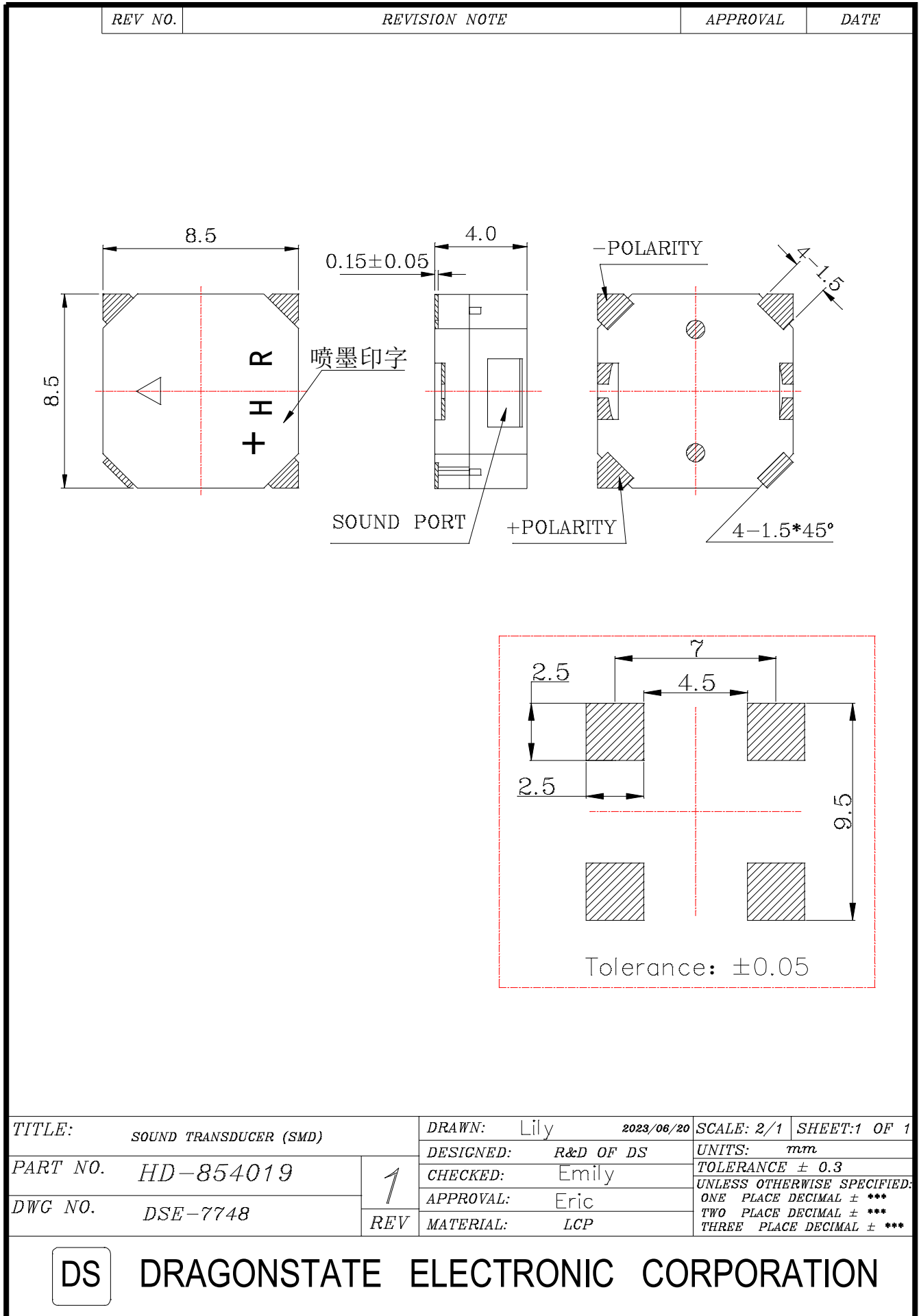


## Standard Test Fixture

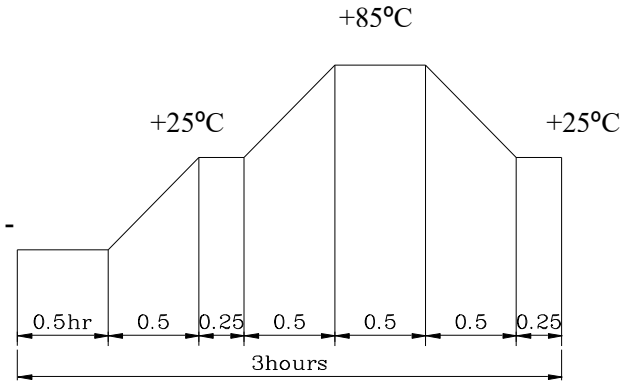


## 3.Frequency Response Curve





## Reliability test

| NO. | ITEM                            | TEST CONDITION AND REQUIREMENT                                                                                                                                                                                                                  |
|-----|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1   | High Temperature Test (Storage) | After being placed in a chamber with $85\pm 2^{\circ}\text{C}$ for 96 hours and then being placed in normal condition for 2 hours.<br>Allowable variation of SPL after test: $\pm 10\text{dB}$ .                                                |
| 2   | Low Temperature Test (Storage)  | After being Placed in a chamber with $-40\pm 2^{\circ}\text{C}$ for 96 hours and then being placed in normal condition for 2 hours.<br>Allowable variation of SPL after test: $\pm 10\text{dB}$ .                                               |
| 3   | Humidity Test                   | After being Placed in a chamber with 90-95% R.H. at $40\pm 2^{\circ}\text{C}$ for 96 hours and then being placed in normal condition for 2 hours.<br>Allowable variation of SPL after test: $\pm 10\text{dB}$ .                                 |
| 4   | Temperature Cycle Test          | <p>The part shall be subjected to 5 cycles. One cycle shall be consist of :</p>  <p>Allowable variation of SPL after test: <math>\pm 10\text{dB}</math>.</p> |
| 5   | Drop Test                       | Drop on a hard wood board of 4cm thick, any directions ,6 times, at the height of 75cm .<br>Allowable variation of SPL after test: $\pm 10\text{dB}$ .                                                                                          |
| 6   | Vibration Test                  | After being applied vibration of amplitude of 1.5mm with 10 to 55 Hz band of vibration frequency to each of 3 perpendicular directions for 2 hours .<br>Allowable variation of SPL after test: $\pm 10\text{dB}$ .                              |
| 7   | Solderability Test              | Lead terminals are immersed in rosin for 5 seconds and then immersed in solder bath of $+300\pm 5^{\circ}\text{C}$ for $3\pm 1$ seconds .<br>90% min. lead terminals shall be wet with solder (Except the edge of terminals).                   |
| 8   | Terminal Strength Pulling Test  | The force of 9.8N(1.0kg) is applied to each terminal in axial direction for 10 seconds.<br>No visible damage and cutting off.                                                                                                                   |

### TEST CONDITION.

|                         |   |                                                |                      |                            |
|-------------------------|---|------------------------------------------------|----------------------|----------------------------|
| Standard Test Condition | : | a) Temperature : $+5 \sim +35^{\circ}\text{C}$ | b) Humidity : 45-85% | c) Pressure : 860-1060mbar |
| 一般测试条件                  | : | a) 温度 : $+5 \sim +35^{\circ}\text{C}$          | b) 湿度 : 45-85%       | c) 气压 : 860-1060mbar       |
| Judgment Test Condition | : | a) Temperature : $+25 \pm 2^{\circ}\text{C}$   | b) Humidity : 60-70% | c) Pressure : 860-1060mbar |
| 争议时测试条件                 | : | a) 温度 : $+25 \pm 2^{\circ}\text{C}$            | b) 湿度 : 60-70%       | c) 气压 : 860-1060mbar       |

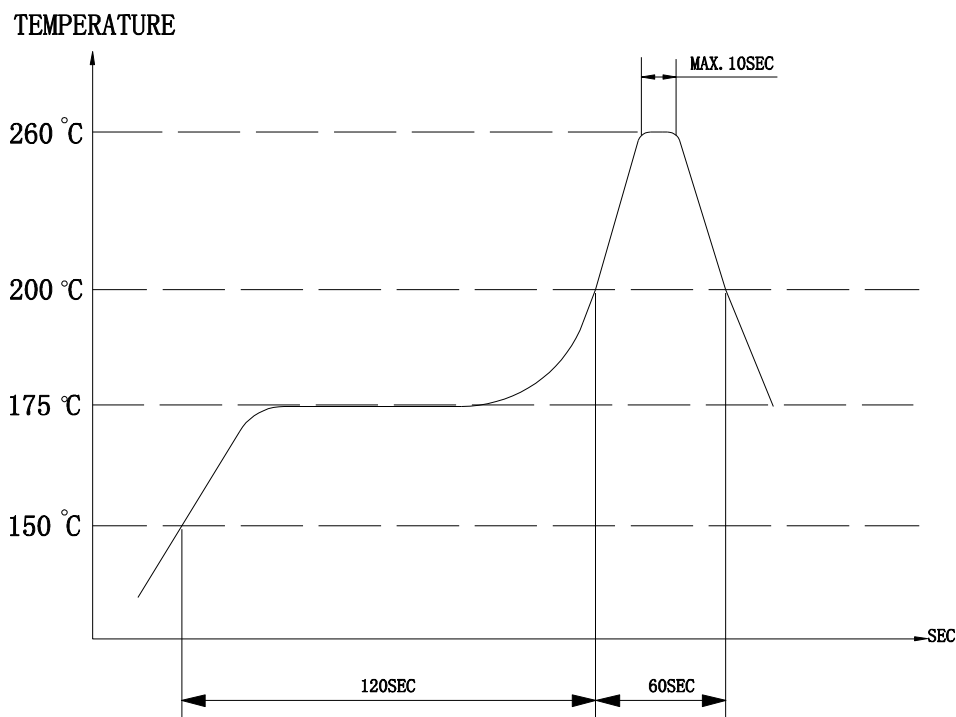
## SOLDER ABILITY

(1) Recommendable reflow soldering condition is as following

( Allowed reflow process twice)

Maximum allowed temperature for reflow process is 265 °C/10 sec.

Note: It is requested that reflow soldering should be executed after heat of product goes down to normal.



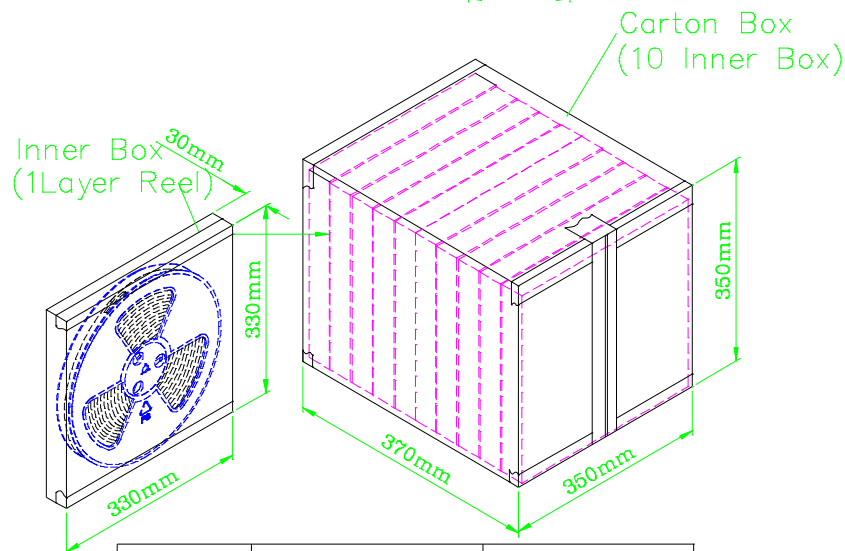
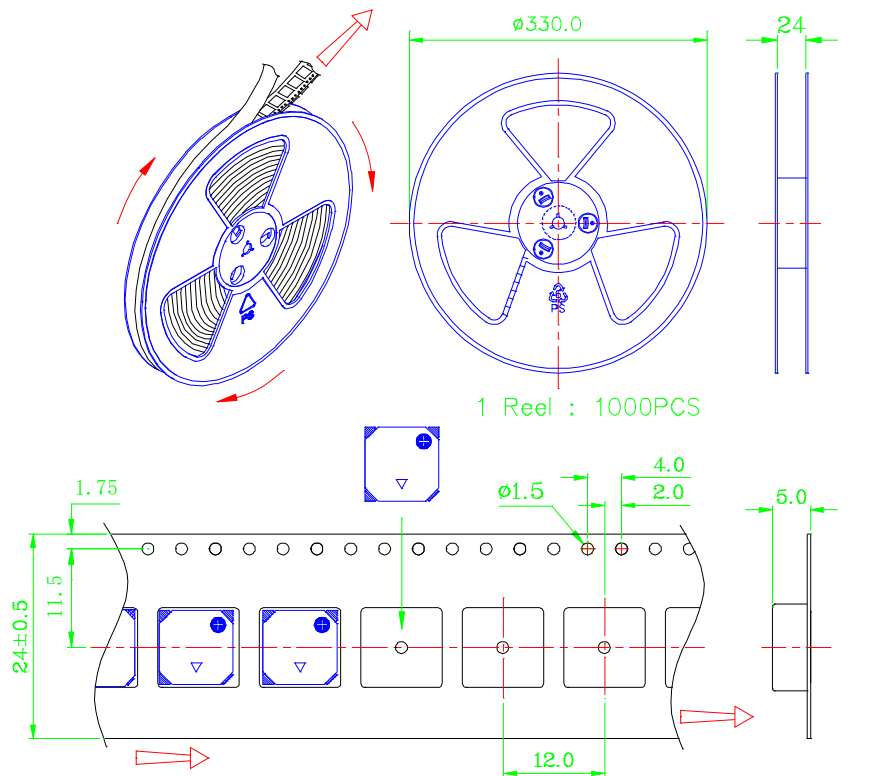
Heat resistant line

(Used when heat resistant reliability test is performed)

(2) Manual soldering

Manual soldering temperature 350 °C within 5 sec.

| REV NO. | REVISION NOTE | APPROVAL | DATE |
|---------|---------------|----------|------|
|---------|---------------|----------|------|



|            |                   |                      |
|------------|-------------------|----------------------|
| Inner Box  | 330mmx330mmx30mm  | 1000PCS=1000PCS      |
| Carton Box | 350mmx350mmx370mm | 10x1000PCS=10,000PCS |

|                          |     |                       |            |                             |               |
|--------------------------|-----|-----------------------|------------|-----------------------------|---------------|
| TITLE: PACKING FORMATION |     | DRAWN: Lily           | 2024/06/20 | SCALE: NONE                 | SHEET: 1 OF 1 |
| PART NO.                 | 1   | DESIGNED: R&D OF D.S. |            | UNITS: mm                   |               |
|                          |     | CHECKED: Emily        |            | TOLERANCE ± ***             |               |
| DWG NO.                  |     | APPROVAL: Eric        |            | UNLESS OTHERWISE SPECIFIED: |               |
|                          |     | MATERIAL: ***         |            | ONE PLACE DECIMAL ± ***     |               |
|                          | REV |                       |            | TWO PLACE DECIMAL ± ***     |               |
|                          |     |                       |            | THREE PLACE DECIMAL ± ***   |               |