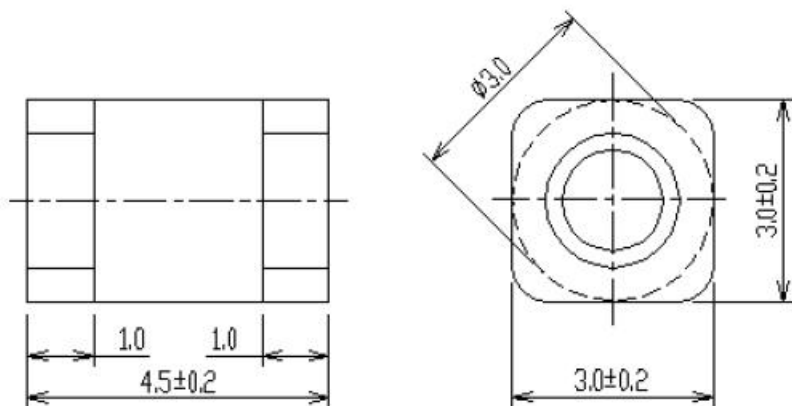


## 2-Electrode Gas Discharge Tubes

## 1: Dimension(mm)

1KA  
Surface Mount

## 2:Main Applications

- Transient Voltage Surge Suppression(TVSS)
- Cable Telephone Product
- Modems/Cable Modems
- Broadband/CATV/Coaxial Protectors
- Communication Lines

## 3:Features

- 100% Lead-Free(RoHs Compliant )
- Non-Radioactive
- Low capacitance:  $\leq 0.5\text{pF}$
- Small size :4.5\*3.0\*3.0mm
- Safety certification: File number: E505240

## 4 Electrical Characteristics

|             | DC<br>Spark-over<br>Voltage | Impulse<br>Spark-over<br>Voltage | Insulat<br>ion<br>Resist<br>ance | Impulse<br>dischar<br>ge<br>current | Impulse<br>Discharge<br>Current<br>300hits | Impulse Wit<br>Hstanding<br>Voltage<br>10hits | AC<br>discharg<br>e current<br>50Hz,1s | UL<br>Certificate | Deliver<br>y Time |
|-------------|-----------------------------|----------------------------------|----------------------------------|-------------------------------------|--------------------------------------------|-----------------------------------------------|----------------------------------------|-------------------|-------------------|
| Part Number | @100V/S                     | @1KV/ $\mu\text{s}$              | G $\Omega$                       | 8/20 $\mu\text{s}$                  | 8/20 $\mu\text{s}$                         | 10/700 $\mu\text{s}$                          | 10times                                | UL497B            | Days              |
| HA2R3-75E   | 75V $\pm 25\%$              | <600V                            | >1G $\Omega$                     | 1KA                                 | 100A                                       | 4000V                                         | 1A                                     | E505240           | 9days             |
| HA2R3-90E   | 90V $\pm 20\%$              | <600V                            | >1G $\Omega$                     | 1KA                                 | 100A                                       | 4000V                                         | 1A                                     | E505240           | 9days             |
| HA2R3-140E  | 140V $\pm 20\%$             | <600V                            | >1G $\Omega$                     | 1KA                                 | 100A                                       | 4000V                                         | 1A                                     | E505240           | 9days             |
| HA2R3-150E  | 150V $\pm 20\%$             | <600V                            | >1G $\Omega$                     | 1KA                                 | 100A                                       | 4000V                                         | 1A                                     | E505240           | 9days             |
| HA2R3-200E  | 200V $\pm 20\%$             | <700V                            | >1G $\Omega$                     | 1KA                                 | 100A                                       | 4000V                                         | 1A                                     | E505240           | 9days             |
| HA2R3-230E  | 230V $\pm 20\%$             | <700V                            | >1G $\Omega$                     | 1KA                                 | 100A                                       | 4000V                                         | 1A                                     | E505240           | 9days             |
| HA2R3-250E  | 250V $\pm 20\%$             | <800V                            | >1G $\Omega$                     | 1KA                                 | 100A                                       | 4000V                                         | 1A                                     | E505240           | 9days             |
| HA2R3-300E  | 300V $\pm 20\%$             | <900V                            | >1G $\Omega$                     | 1KA                                 | 100A                                       | 4000V                                         | 1A                                     | E505240           | 9days             |
| HA2R3-350E  | 350V $\pm 20\%$             | $\leq 1000\text{V}$              | >1G $\Omega$                     | 1KA                                 | 100A                                       | 4000V                                         | 1A                                     | E505240           | 9days             |
| HA2R3-400E  | 400V $\pm 20\%$             | $\leq 1000\text{V}$              | >1G $\Omega$                     | 1KA                                 | 100A                                       | 4000V                                         | 1A                                     | E505240           | 9days             |

2-Electrode Surface Mount Gas Discharge Tubes

1KA

- 1:At delivery AQL 0.65 leave II Military Standard 105 E

2:In ionized mode

3:Test according to ITU-T Rec.k.12
- According to the demand of customer, can do all kinds of voltage

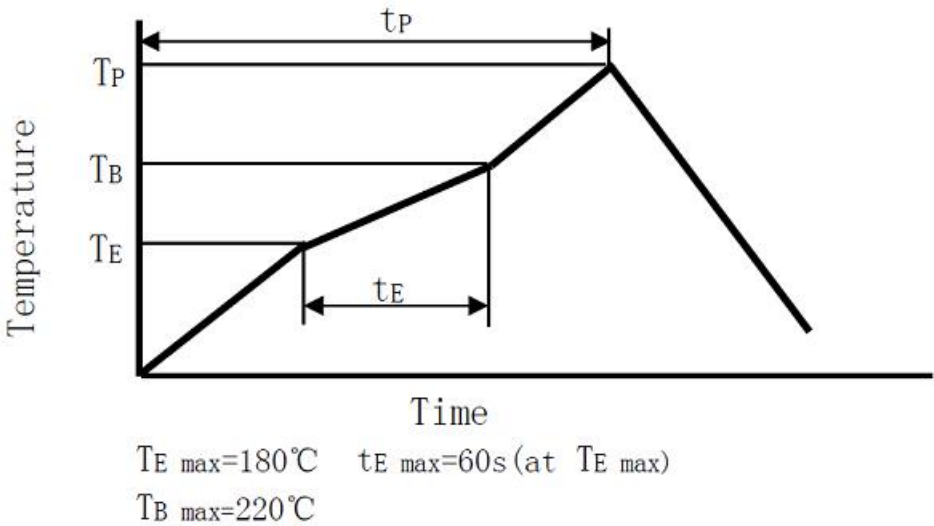
Environmental resistance

|                        |             |
|------------------------|-------------|
| Storage temperature:   | -40℃---+90℃ |
| Operating temperature: | -40℃---+90℃ |
| Electrode:             | Tin Plated  |

Example Part Number: HA2R3-90E

|    |   |                                           |
|----|---|-------------------------------------------|
| HA | = | HUAAN                                     |
| 2  | = | 2 Electrode device                        |
| R  | = | Gas Discharge Tube                        |
| 3  | = | 3mm Diameter                              |
| 90 | = | 90V                                       |
| E  | = | Surface Mounted Device Gas Discharge Tube |

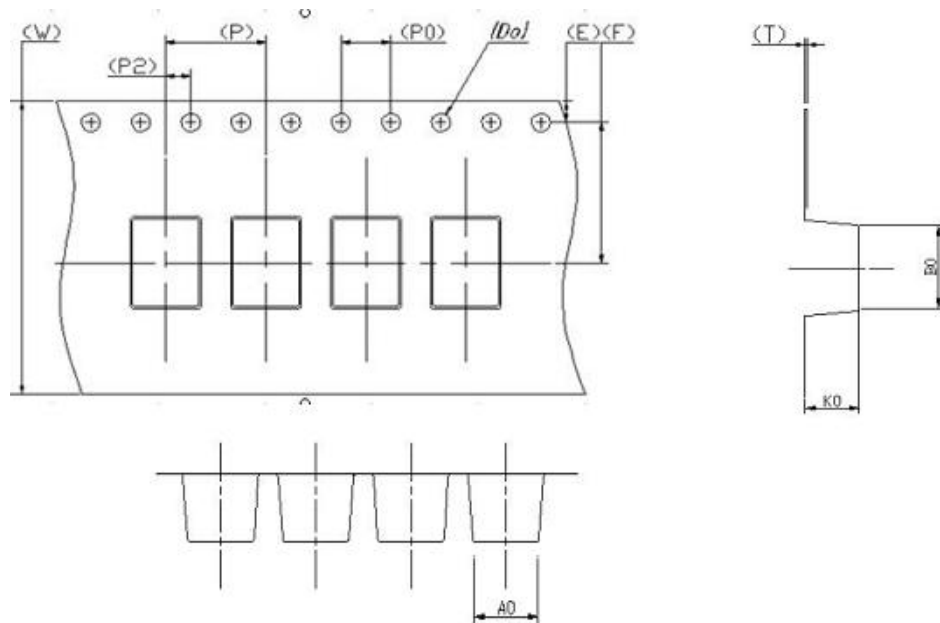
Reflow Soldering Curve



## 2-Electrode Surface Mount Gas Discharge Tubes Tape Specification and Reel Dimensions

1KA

### Tape



| Symbol | Dimensions(mm) |
|--------|----------------|
| W      | 16.0mm ±0.3    |
| E      | 1.75mm ±0.1    |
| F      | 7.5mm ±0.1     |
| T      | 0.35mm ±0.05   |
| P      | 8.0mm ±0.1     |
| P0     | 4.0mm ±0.1     |
| P2     | 2.0mm ±0.1     |
| D0     | 1.5mm ±0.1     |
| A0     | 3.4mm ±0.1     |
| K0     | 3.0mm ±0.1     |
| B0     | 5.0mm ±0.1     |
|        |                |
|        |                |
|        |                |

### Packaging Quantity

| Part Number       | Quantity |            |
|-------------------|----------|------------|
|                   | Per Reel | Per Carton |
| HA2R3-xxxE Series | 2000PCS  | 16000PCS   |