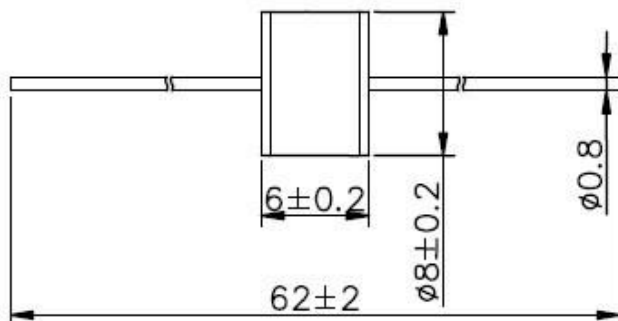


## 2-Electrode Gas Discharge Tubes

10KA

1: Dimension(mm)

Axial Lead Wire



## 2:Main Applications

- PCI Cards protection
- Telephone/Fax/Modem protection
- single line protection
- ADSL/XDSL Splitter,Power Supply
- Surge Protection Device/Surge Protector

## 3:Features

- 100% Lead-Free(RoHS Compliant )
- Non-Radioactive
- Low capacitance: ≤1pF
- Small size :Φ8x6(mm)
- Safety certification: File number: E505240

## 4 Electrical Characteristics

|             | DC Spark-over<br>Voltage | Impulse<br>Spark-over<br>Voltage | Impulse<br>Spark-over<br>Voltage | Insulation<br>Resistanc<br>e | Impulse disch<br>arge current<br>8/20μs | Impulse<br>Life<br>300 hits | AC dischar<br>ge current<br>50Hz,1s | Deliver<br>y time | UL<br>Certificat<br>e |
|-------------|--------------------------|----------------------------------|----------------------------------|------------------------------|-----------------------------------------|-----------------------------|-------------------------------------|-------------------|-----------------------|
| Part Number | @100V/S                  | @100V/μs                         | @1KV/μs                          | GΩ                           | 10 Times                                | 10x1000μs                   | 10times                             | days              | UL497B                |
| HA2R8-75ML  | 75V ±20%                 | ≤500V                            | ≤ 600V                           | >1GΩ                         | 10KA                                    | 100A                        | 10A                                 | 12days            | E505240               |
| HA2R8-90ML  | 90V ±20%                 | ≤500V                            | ≤ 600V                           | >1GΩ                         | 10KA                                    | 100A                        | 10A                                 | 12days            | E505240               |
| HA2R8-140ML | 140V±20%                 | ≤500V                            | ≤ 600V                           | >1GΩ                         | 10KA                                    | 100A                        | 10A                                 | 12days            | E505240               |
| HA2R8-150ML | 150V±20%                 | ≤500V                            | ≤ 600V                           | >1GΩ                         | 10KA                                    | 100A                        | 10A                                 | 12days            | E505240               |
| HA2R8-200ML | 200V±20%                 | ≤600V                            | ≤ 700V                           | >1GΩ                         | 10KA                                    | 100A                        | 10A                                 | 12days            | E505240               |
| HA2R8-230ML | 230V±20%                 | ≤600V                            | ≤ 700V                           | >1GΩ                         | 10KA                                    | 100A                        | 10A                                 | 12days            | E505240               |
| HA2R8-250ML | 250V±20%                 | ≤600V                            | ≤ 700V                           | >1GΩ                         | 10KA                                    | 100A                        | 10A                                 | 12days            | E505240               |
| HA2R8-260ML | 260V±20%                 | ≤700V                            | ≤ 800V                           | >1GΩ                         | 10KA                                    | 100A                        | 10A                                 | 12days            | E505240               |
| HA2R8-300ML | 300V±20%                 | ≤800V                            | ≤ 900V                           | >1GΩ                         | 10KA                                    | 100A                        | 10A                                 | 12days            | E505240               |
| HA2R8-350ML | 350V±20%                 | ≤900V                            | ≤ 1000V                          | >1GΩ                         | 10KA                                    | 100A                        | 10A                                 | 12days            | E505240               |
| HA2R8-400ML | 400V±20%                 | ≤900V                            | ≤ 1000V                          | >1GΩ                         | 10KA                                    | 100A                        | 10A                                 | 12days            | E505240               |
| HA2R8-420ML | 420V±20%                 | ≤900V                            | ≤ 1000V                          | >1GΩ                         | 10KA                                    | 100A                        | 10A                                 | 12days            | E505240               |
| HA2R8-470ML | 470V±20%                 | ≤1100V                           | ≤ 1200V                          | >1GΩ                         | 10KA                                    | 100A                        | 10A                                 | 12days            | E505240               |
| HA2R8-500ML | 500V±20%                 | ≤1100V                           | ≤ 1200V                          | >1GΩ                         | 10KA                                    | 100A                        | 10A                                 | 12days            | E505240               |
| HA2R8-550ML | 550V±20%                 | ≤1300V                           | ≤ 1400V                          | >1GΩ                         | 10KA                                    | 100A                        | 10A                                 | 12days            | E505240               |
| HA2R8-600ML | 600V±20%                 | ≤1300V                           | ≤1400V                           | >1GΩ                         | 10KA                                    | 100A                        | 10A                                 | 12days            | E505240               |

## 4 Electrical Characteristics

Continue



| Part Number  | DC Spark-over Voltage | Impulse Spark-over Voltage | Insulation Resistance | Impulse discharge current 8/20μs | Capacitance 1MHz | AC discharge current 50Hz, 1s | Delivery time | UL Certificate |
|--------------|-----------------------|----------------------------|-----------------------|----------------------------------|------------------|-------------------------------|---------------|----------------|
|              | @100V/S               | @1KV/μs                    | GΩ                    | 10 Times                         | pF               | 10times                       | days          | UL1449         |
| HA2R8-800ML  | 800V ±20%             | ≤1400V                     | >1GΩ                  | 10KA                             | ≤1pF             | 10A                           | 12days        | ---            |
| HA2R8-1000ML | 1000V±20%             | ≤ 1700V                    | >1GΩ                  | 10KA                             | ≤1pF             | 10A                           | 12days        | ---            |

## 4 Electrical Characteristics

Continue

| Part Number  | DC Holdover Voltage   | On-State Voltage | Impulse discharge current 8/20μs | Peak Current @10/350μs | Weight |
|--------------|-----------------------|------------------|----------------------------------|------------------------|--------|
|              | Per ITU K.12 (<150ms) | Nominal @ 1A     | 1time                            | 1time                  | g      |
| HA2R8-75ML   | <52V                  | 20V              | 12KA                             | 2.5KA                  | ~1.5g  |
| HA2R8-90ML   | <52V                  | 20V              | 12KA                             | 2.5KA                  | ~1.5g  |
| HA2R8-140ML  | <80V                  | 20V              | 12KA                             | 2.5KA                  | ~1.5g  |
| HA2R8-150ML  | <80V                  | 20V              | 12KA                             | 2.5KA                  | ~1.5g  |
| HA2R8-200ML  | <135V                 | 20V              | 12KA                             | 2.5KA                  | ~1.5g  |
| HA2R8-230ML  | <135V                 | 20V              | 12KA                             | 2.5KA                  | ~1.5g  |
| HA2R8-250ML  | <135V                 | 20V              | 12KA                             | 2.5KA                  | ~1.5g  |
| HA2R8-260ML  | <135V                 | 20V              | 12KA                             | 2.5KA                  | ~1.5g  |
| HA2R8-300ML  | <150V                 | 20V              | 12KA                             | 2.5KA                  | ~1.5g  |
| HA2R8-350ML  | <150V                 | 20V              | 12KA                             | 2.5KA                  | ~1.5g  |
| HA2R8-400ML  | <150V                 | 20V              | 12KA                             | 2.5KA                  | ~1.5g  |
| HA2R8-420ML  | <150V                 | 20V              | 12KA                             | 2.5KA                  | ~1.5g  |
| HA2R8-470ML  | <150V                 | 20V              | 12KA                             | 2.5KA                  | ~1.5g  |
| HA2R8-500ML  | <150V                 | 20V              | 12KA                             | 2.5KA                  | ~1.5g  |
| HA2R8-550ML  | <150V                 | 20V              | 12KA                             | 2.5KA                  | ~1.5g  |
| HA2R8-600ML  | <150V                 | 20V              | 12KA                             | 2.5KA                  | ~1.5g  |
| HA2R8-800ML  | <150V                 | 20V              | 12KA                             | 2.5KA                  | ~1.5g  |
| HA2R8-1000ML | <150V                 | 20V              | 12KA                             | 2.5KA                  | ~1.5g  |

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

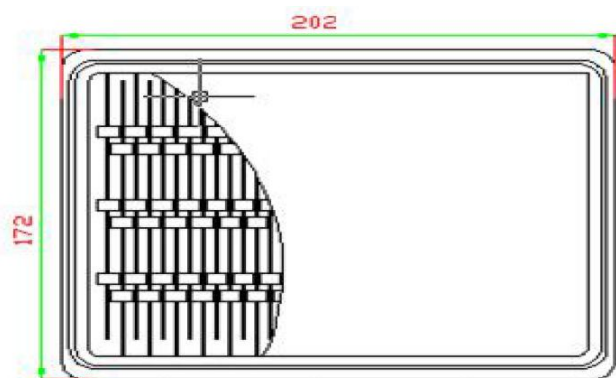
## Environmental resistance

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

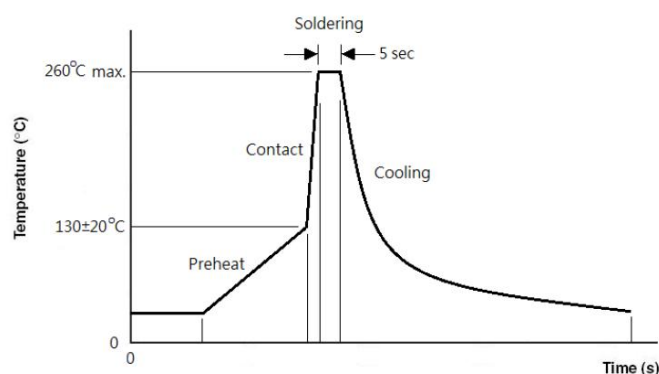
## Example Part Number: HA2R8-90ML

|    |   |                    |
|----|---|--------------------|
| HA | = | HUAAN              |
| 2  | = | 2 Electrode device |
| R  | = | Gas Discharge Tube |
| 8  | = | 8mm Diameter       |
| 90 | = | 90V                |
| M  | = | Medium Surge 10KA  |
| L  | = | Axial Lead Wire    |

## Packaging Information



## Reflow Soldering Curve



## Packaging Quantity

| Part Number        | Quantity |            |
|--------------------|----------|------------|
|                    | Per Tray | Per Carton |
| HA2R8-xxxML Series | 100PCS   | 5000PCS    |