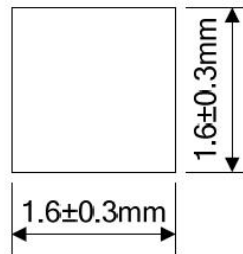
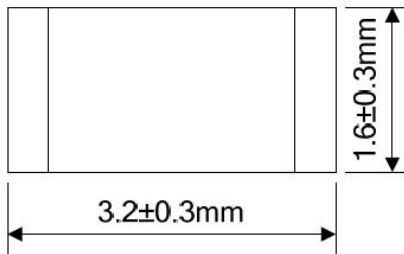


## 2-Electrode Gas Discharge Tubes

1: Dimension(mm)

0.5KA  
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:  $\leq 0.4\text{pF}$
- Small size :4.5\*3.0\*3.0mm
- Safety certification: File number: E505240

## 4 Electrical Characteristics

Part Number	DC Spark-over Voltage@	Impulse Spark-over Voltage	Insulation Resistance	Impulse discharge current	Impulse Withstanding Voltage 10hits	AC discharge current 50Hz, 1s,	Certificate
	100V/S	@1KV/ $\mu\text{s}$	G $\Omega$	8/20 $\mu\text{s}$	10/700 $\mu\text{s}$	10times	UL497B
HA2R3-90L	90V $\pm 30\%$	<900V	>1G $\Omega$	0.5KA	4000V	1A	E505240
HA2R3-150L	150V $\pm 30\%$	<1100V	>1G $\Omega$	0.5KA	4000V	1A	E505240
HA2R3-200L	200V $\pm 30\%$	<1100V	>1G $\Omega$	0.5KA	4000V	1A	E505240
HA2R3-300L	300V $\pm 30\%$	$\leq 1200\text{V}$	>1G $\Omega$	0.5KA	4000V	1A	E505240
HA2R3-400L	400V $\pm 30\%$	$\leq 1300\text{V}$	>1G $\Omega$	0.5KA	4000V	1A	E505240
HA2R3-500L	500V $\pm 30\%$	$\leq 1300\text{V}$	>1G $\Omega$	0.5KA	4000V	1A	E505240
Part Number	Impulse Spark-over Voltage @100V/ $\mu\text{s}$	Arc voltage at 1 A	Glow to arc transition current	Glow voltage	Weight	Capacitance at 1 MHz	Delivery Time
HA2R3-90L	<700V	$\sim 10\text{V}$	< 0.1A	$\sim 65\text{V}$	0.05g	$\leq 0.4\text{pF}$	9days
HA2R3-150L	<800V	$\sim 10\text{V}$	< 0.1A	$\sim 65\text{V}$	0.05g	$\leq 0.4\text{pF}$	9days
HA2R3-200L	<850V	$\sim 10\text{V}$	< 0.1A	$\sim 65\text{V}$	0.05g	$\leq 0.4\text{pF}$	9days
HA2R3-300L	<900V	$\sim 10\text{V}$	< 0.1A	$\sim 65\text{V}$	0.05g	$\leq 0.4\text{pF}$	9days
HA2R3-400L	<1000V	$\sim 10\text{V}$	< 0.1A	$\sim 65\text{V}$	0.05g	$\leq 0.4\text{pF}$	9days
HA2R3-500L	<1050V	$\sim 10\text{V}$	< 0.1A	$\sim 65\text{V}$	0.05g	$\leq 0.4\text{pF}$	9days

**2-Electrode Surface Mount Gas Discharge Tubes**

0.5KA



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

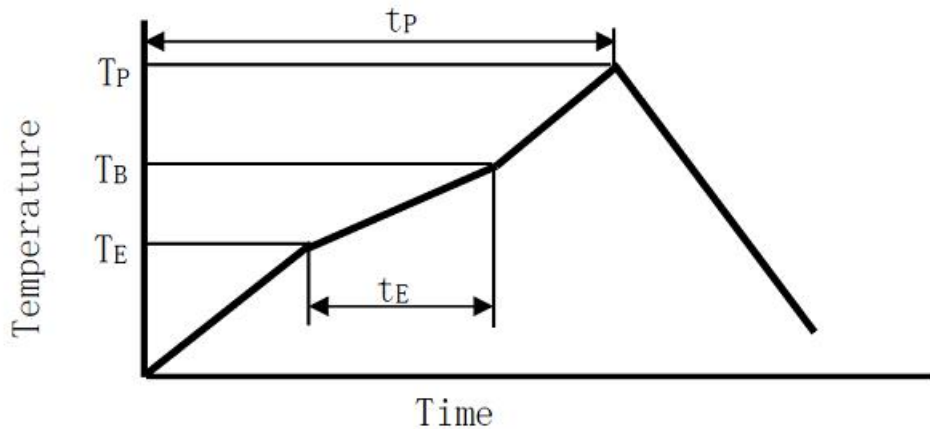
**Environmental resistance**

Storage temperature:	-40°C---+85°C
Operating temperature:	-40°C---+85°C
Electrode:	Tin Plated

**Example Part Number: HA2R3-90E**

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

**Reflow Soldering Curve**

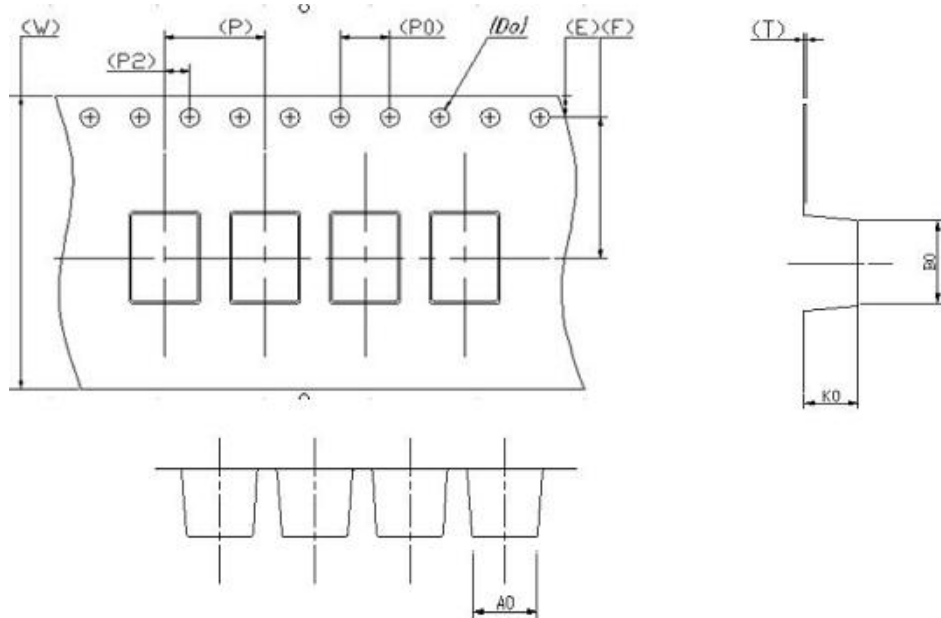


$T_E \text{ max}=180^\circ\text{C}$      $t_E \text{ max}=60\text{s (at } T_E \text{ max)}$   
 $T_B \text{ max}=220^\circ\text{C}$

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-xxxL Series	2500PCS	7500PCS