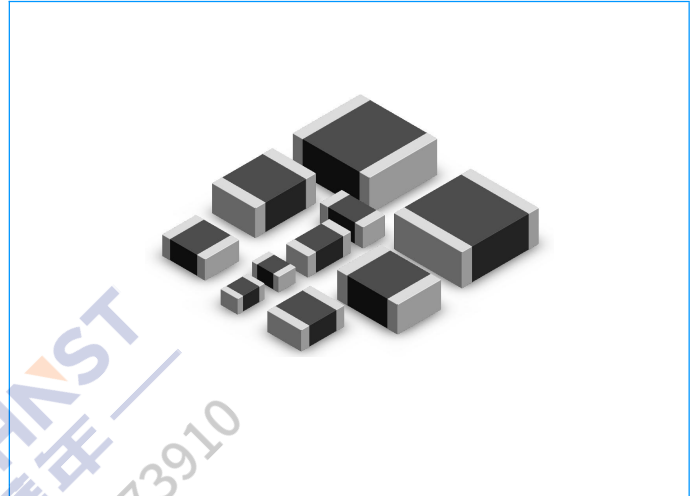


## Socay High Surge Micro Varistor

### SV1206H271G0A

#### Description

The SV1206H271G0A is based on Multilayer fabrication technology. These components are designed to suppress a variety of transient events, including those specified in IEC 61000-4-2 or other standards used for Electromagnetic Compliance (EMC). The SV1206H271G0A is typically applied to protect integrated circuits and other components at the circuit board level. It can operate over a wider temperature range than zener diodes.



#### Features

- ◆ Rectangle, sizes serialization for hybrid integrated circuit or printed circuit surface mount components
- ◆ There are many side electrode lead-out material, particularly suitable for surface mount technology for solderability and resistance to soldering heat of the stringent requirements
- ◆ Fast response (<1ns)
- ◆ Low leakage current, low clamping voltage
- ◆ Suitable for reflow, wave soldering and hot air hand soldering

## Socay High Surge Micro Varistor

### SV1206H271G0A

#### Electrical Characteristics (25±5°C)

Symbol	Minimum	Typical	Maximum	Unit
$V_{RMS}$	--	--	175	V
$V_{DC}$	--	--	225	V
$V_V$	243	--	297	V
$V_C$	--	--	475	V
$I_{max}$	--	--	150	A
$W_{max}$	--	--	0.5	J

$V_{RMS}$  - Maximum AC operating voltage the varistor can maintain and not exceed 10μA leakage current.

$V_{DC}$  - Maximum DC operating voltage the varistor can maintain and not exceed 10μA leakage current.

$V_V$  - Voltage across the device measure at 1mA DC current.

Equivalent to  $V_B$  "breakdown voltage".

$V_C$  - Maximum peak current across the varistor with 8/20μs waveform and 5A pulse current.

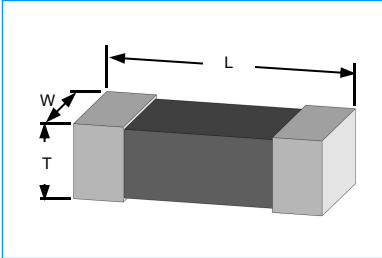
$I_{max}$  - Maximum peak current which may be applied with 8/20μs waveform without device failure.

$W_{max}$  - Maximum energy which may be dissipated with the 10/1000μs waveform without device failure.

# Socay High Surge Micro Varistor

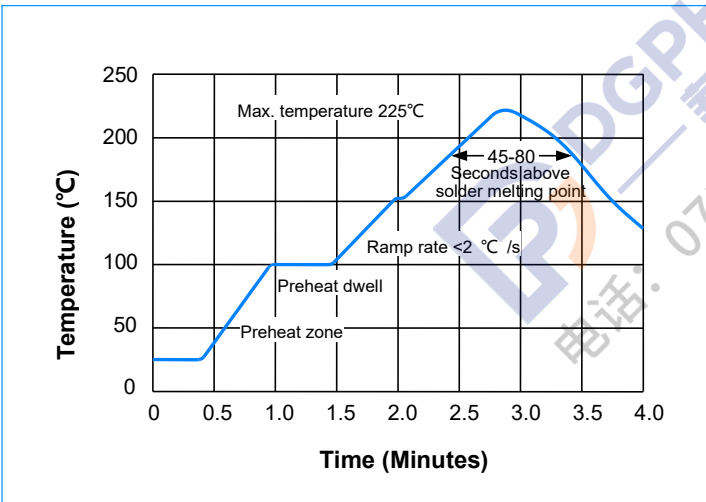
## SV1206H271G0A

### Dimensions



Size EIA (EIAJ)	Length (L)		Width (W)		Thickness (T)	
	Inches	Millimeters	Inches	Millimeters	Inches	Millimeters
1206 (3216)	0.126±0.012	3.20±0.30	0.063±0.012	1.60±0.30	0.071 Max	1.80 Max

### Soldering Recommendations



#### (a) Preheat

1. The temperature rising speed is suggested to be 2~4 °C /s
2. Appropriate preheat time will be from 60 to 120 seconds.

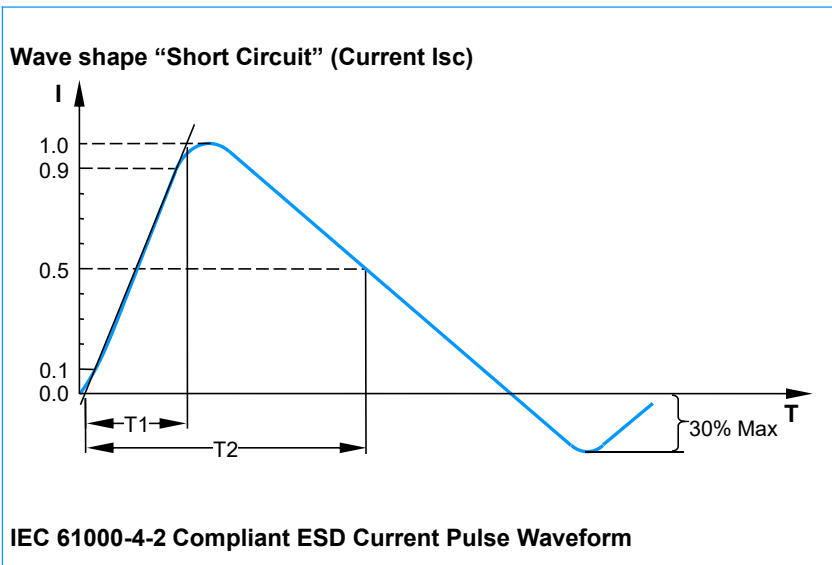
#### (b) Heating

1. Careful about sudden rise in temperature as it may worsen the solder ability.
2. Set the peak temperature in the range from 215 °C to 225 °C.

#### (c) Cooling

1. Careful about slow cooling as it may cause the position shift of component.

### Surge Waveform



#### IEC61000-4-5 Standards

SEVERITY LEVEL	T1	T2
1	8μs	20μs
2	10μs	1000μs

## Socay High Surge Micro Varistor

SV1206H271G0A

### Environmental & Reliability Testing

Characteristic	Test method and description			
<b>High Temperature Storage</b>	The specimen shall be subjected to $125\pm 2^{\circ}\text{C}$ for $1000\pm 2$ hours in a thermostatic bath without load and then stored at room temperature and humidity for 1 to 2 hours. The change of varistor voltage shall be within 10%.			
<b>Temperature Cycle</b>	The temperature cycle of specified temperature shall be repeated five times and then stored at room temperature and humidity for one two hours. The change of varistor voltage shall be within 10% and mechanical damage shall be examined.	Step	Temperture	Period
		1	$-40\pm 3^{\circ}\text{C}$	30min $\pm$ 3
		2	Room Temperature	1~2hours
		3	$125\pm 2^{\circ}\text{C}$	30min $\pm$ 3
		4	Room Temperature	1~2hours
<b>High Temperature Load</b>	After being continuously applied the maximum allowable voltage at $85^{\circ}\text{C}$ for 1000hours, the specimen shall be stored at room temperature and humidity for one or hours, the change of varistor voltage shall be within 10%.			
<b>Damp Heat Load/ Humidity Load</b>	The specimen should be subjected to $40^{\circ}\text{C}$ .90 to 95%RH environment, and the maximum allowable voltage applied for 1000 hours, then stored at room temperature and humidity for one or two hours. The change of varistor voltage shall be within 10%.			
<b>Low Temperature Storage</b>	The specimen should be subjected to $-40^{\circ}\text{C}$ , without load for 1000 hours and then stored at room temperature for one two hours. The change of varistor voltage shall be within 10%.			

### General Technical Data

<b>Operating Temperature</b>	$-55\sim +85^{\circ}\text{C}$
<b>Storage Temperature</b>	$-55\sim +150^{\circ}\text{C}$
<b>Response Time</b>	<1 ns
<b>Solderability</b>	$245\pm 5^{\circ}\text{C}$ , 3 $\pm$ 1sec
<b>Solder Leach Resistance</b>	$260\pm 5^{\circ}\text{C}$ , 10 $\pm$ 1sec

### Standard Packaging

Device	Quantity
SV1206H271G0A	2000pcs