

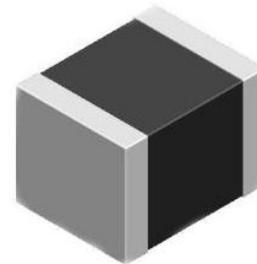
Socay High Surge Micro Varistor

SV0604H271G0A

Features

- ◆ RoHS Compliant.
- ◆ Meet IEC 61000-4-5 standard.
- ◆ SMD type zinc oxide based ceramic chip.
- ◆ Insulator overcoat keeps excellent low and stable leakage current.
- ◆ Quick response time (<0.5ns).
- ◆ High transient current capability.
- ◆ High reliability.
- ◆ Compact size for EIA 0604.

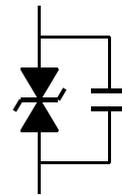
Top View (0604)



Applications

- ◆ Protection against high working voltage applications
Related transient over voltage.

Equivalent Circuits



Electrical Characteristics (25±5°C)

| Symbol | Minimum | Typical | Maximum | Units |
|-----------|---------|---------|---------|---------|
| V_{RMS} | — | — | 175 | V |
| V_{DC} | — | — | 225 | V |
| V_V | 243 | — | 297 | V |
| I_L | -- | -- | 30 | μA |
| V_C | — | — | 450 | V |
| I_{max} | — | — | 30 | A |

Notes:

V_{RMS} - Maximum AC operating voltage the varistor can maintain .

V_{DC} - Maximum DC operating voltage the varistor can maintain .

I_L - Leakage current at $V_V \times 80\%$

C_p - Device capacitance measured with zero volt bias 1Vrms.

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

Equivalent to V_B "breakdown voltage".

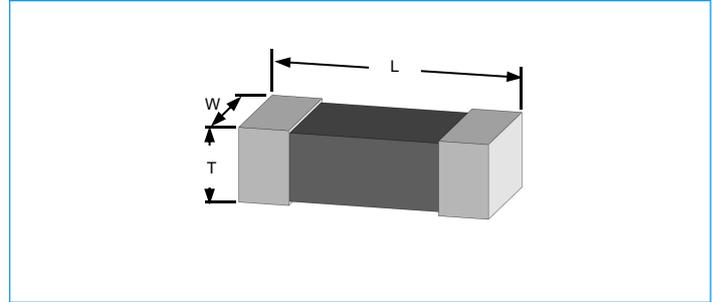
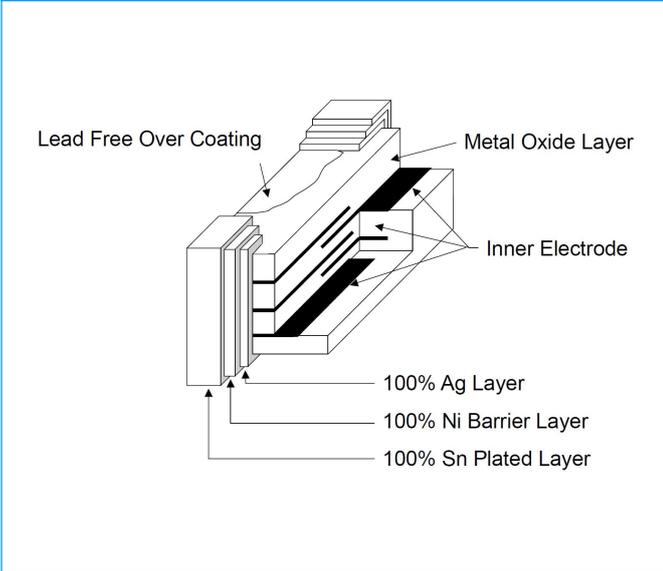
V_C - Maximum peak current across the varistor with 8/20 μs waveform and 1A pulse current.

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

Socay High Surge Micro Varistor

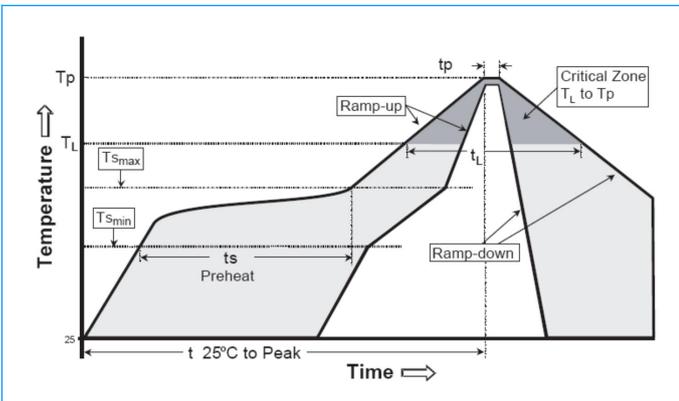
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Construction & Dimensions



| | |
|-----------------|-------------|
| Size EIA (EIAJ) | 0604 |
| Symbol | Millimeters |
| L | 1.60±0.20 |
| W | 1.10±0.20 |
| T | 1.30 Max |

Soldering Parameters



| | | |
|--|------------------------------------|------------------|
| Reflow Condition | | Pb-Free assembly |
| Pre Heat | -Temperature Min ($T_{s(min)}$) | +150°C |
| | -Temperature Max ($T_{s(max)}$) | +200°C |
| | -Time (min to max) (t_s) | 60 -180 Seconds |
| $T_{s(max)}$ to T_P - Ramp-up Rate | | 3°C/Second Max |
| Reflow | - Temperature (T_L) (Liquidus) | +217°C |
| | - Time (min to max) (t_L) | 60 -150 Seconds |
| Peak Temperature (T_P) | | 260 °C |
| Time within 5°C of actual peak Temperature (t_p) | | 20-40 Seconds |
| Ramp-down Rate | | 6°C/Second Max |
| Time 25°C to peak Temperature (T_P) | | 8 minutes Max |

Precaution for Soldering

Note that this product will be easily damaged by rapid heating, rapid cooling or local heating.

Do not give heat shock over 100°C in the process of soldering. We recommend to take preheating and gradual cooling

Soldering gun procedure

Note the follows, in case of using solder gun for replacement.

- 1) The tip temperature must be less than 350°C for the period within 3 seconds by using soldering gun under 30W
- 2) The soldering gun tip shall not touch this product directly.

Soldering volume

Note that excess of soldering volume will easily get crack the body of this product.

Socay High Surge Micro Varistor**SV0604H271G0A****General Technical Data**

| | | |
|---|----------------------------|-----------------------|
| Operating Temperature | | -40 ~ +125°C |
| Storage Temperature | | -40 ~ +125°C |
| Response Time | | <1 ns |
| Solderability | | 245±5°C, 5 +0/-0.5sec |
| Solder leach resistance | | 260±5°C, 10±1sec |
| Taping Package Storage Condition | Storage Temperature | 5 ~ 40°C |
| | Relative Humidity | To 65% |
| | Storage Time | 12 Months max |

Packaging

| Part Number | Quantity |
|--------------------|-----------------|
| SV0604H271G0A | 3000Pcs |