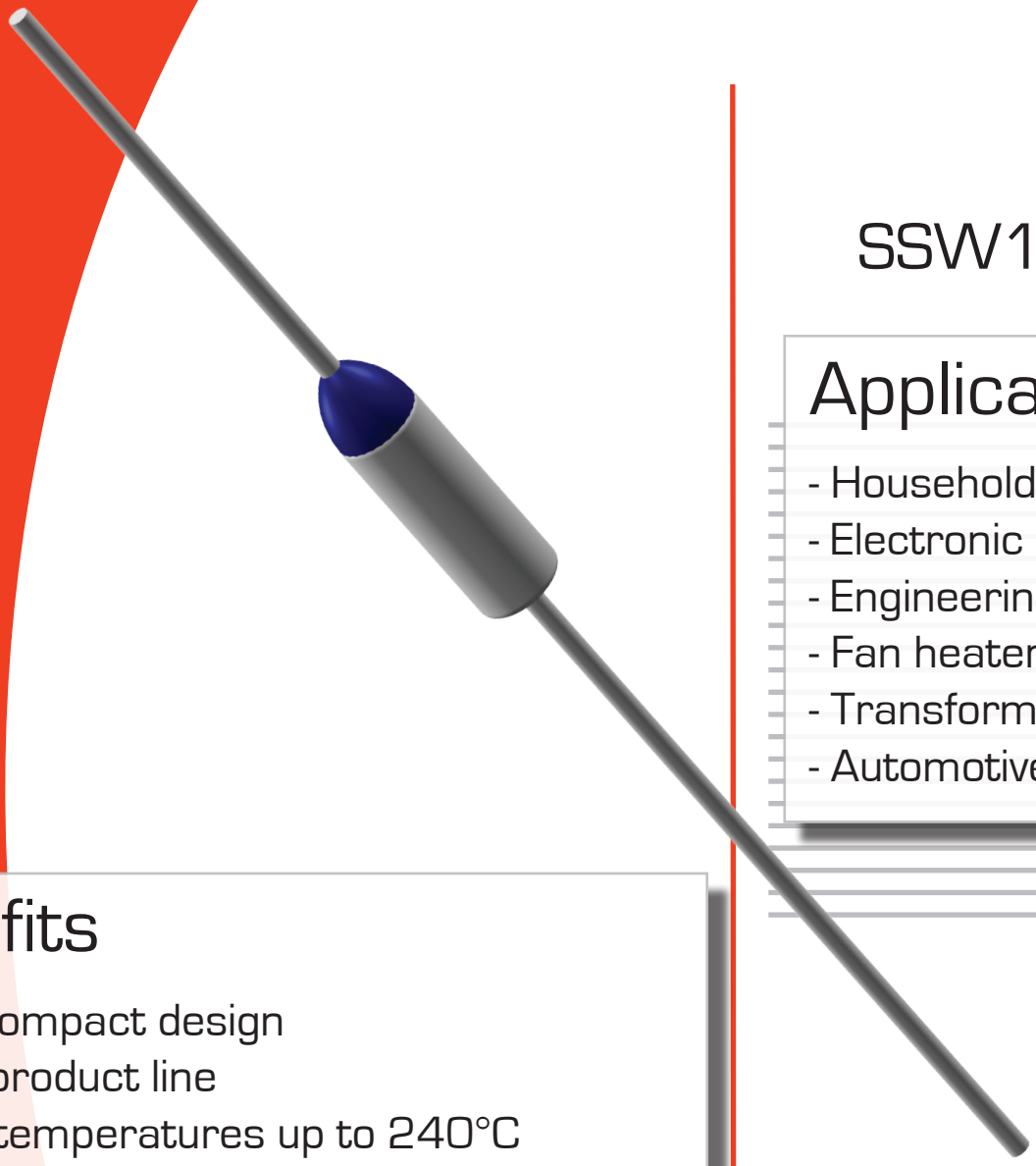
# Thermal cut-off S

## SSW1



## Applications

- Household appliances
- Electronic appliances
- Engineering
- Fan heaters
- Transformers
- Automotive industry

## Benefits

- Small compact design
- Broad product line
- Cut-off temperatures up to 240°C

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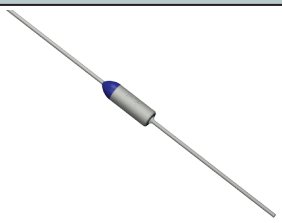
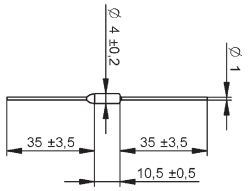
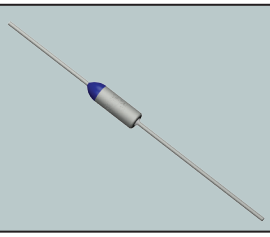
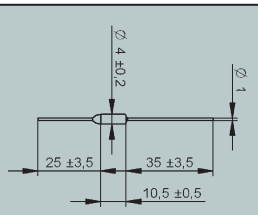
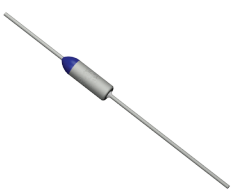
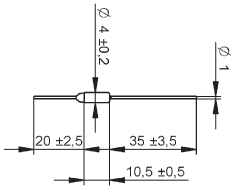
# technical data

| ratings \ cut-off type | | SSW1-series |
|---|---|---|
| **function** | non resetting, thermally sensitive, single pole, normally closed | |
| **rated voltage, rated current at 50 / 60 Hz** | UL, cUL, VDE, TUV, PSE, CCC, EK | 250V 10A |
| | VDE, EK | 250V 15A |
| | UL, cUL | 125V 15A*<br>for SW-109T,152T, 106T, 153T, 108T,110T, 111T, 114T, 139T, 128T only |
| **transient overload test current** | DC current pulses, in amplitude 150A and a duration of 3ms with 10s intervals, are applied for 100 successive cycles through the current path | |
| **guidelines and norms** | RoHS-conformity, REACH-conformity<br>production according to the European Directives 2011/65/EU | |
| **approvals** | VDE | No. 40026132 (Germany) |
| | TÜV | No. R 9937251 and R 9937533 (Germany) |
| | UL/cUL | No. E126429 (USA) |
| | CCC | No. 2003010205038994 (China) |
| | EK | No. HC05001-7053A (Korea) |
| | PSE | No. JD 60010713 and JD 60010743 (Japan) |

# standard types

| type | illustration | drawing dimensions ( mm ) | technical specification |
|---|---|---|---|
| **35-35 long** |  |  | 80.5 ±7.5 x Ø 4.0 ±0.2 mm<br>Leads Ø 1.0 mm, AWG 18 |
| **25-35 medium** |  |  | 70.5 ±7.5 x Ø 4.0 ±0.2 mm<br>Leads Ø 1.0 mm, AWG 18 |
| **20-35 short** |  |  | 65.5 ±6.5 x Ø 4.0 ±0.2 mm<br>Leads Ø 1.0 mm, AWG 18 |

| SSW1-series | $T_f$ | tolerance | $T_h$ | $T_m$ | EK | UL | cUL | VDE | TÜV | CCC | PSE |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **SW-102T** | 72°C | - 4 K | 47°C | 200°C | • | • | • | • | • | • | • |
| **SW-105T** | 77°C | - 4 K | 52°C | 200°C | • | • | • | • | • | • | • |
| **SW-109T*** | 84°C | - 5 K | 57°C | 180°C | • | • | • | • | • | • | • |
| **SW-152T*** | 90°C | - 4 K | 65°C | 180°C | • | • | • | • | applied | • | • |
| **SW-106T*** | 91°C | - 4 K | 66°C | 180°C | • | • | • | • | applied | • | • |
| **SW-153T*** | 93°C | - 5 K | 68°C | 180°C | • | • | • | • | applied | • | • |
| **SW-104T** | 98°C | - 4 K | 73°C | 190°C | • | • | • | • | • | • | • |
| **SW-108T*** | 100°C | - 5 K | 75°C | 190°C | • | • | • | • | • | • | • |
| **SW-110T*** | 109°C | - 5 K | 84°C | 190°C | • | • | • | • | • | • | • |
| **SW-111T*** | 121°C | - 4 K | 94°C | 200°C | • | • | • | • | • | • | • |
| **SW-115T** | 126°C | - 4 K | 100°C | 200°C | • | • | • | • | | • | • |
| **SW-129T** | 128°C | - 5 K | 103°C | 200°C | • | • | • | • | • | • | • |
| **SW-114T*** | 139°C | - 4 K | 114°C | 200°C | • | • | • | • | • | • | • |
| **SW-138T** | 144°C | - 5 K | 119°C | 260°C | • | • | • | • | • | • | • |
| **SW-116T** | 152°C | - 4 K | 127°C | 270°C | • | • | • | • | • | • | • |
| **SW-120T** | 167°C | - 4 K | 144°C | 280°C | • | • | • | • | • | • | • |
| **SW-118T** | 169°C | - 4 K | 144°C | 280°C | • | | | | | | • |
| **SW-127T** | 184°C | - 6 K | 159°C | 220°C | • | • | • | • | • | • | • |
| **SW-122T** | 192°C | - 7 K | 162°C | 300°C | • | | | | | | • |
| **SW-125T** | 195°C | - 6 K | 165°C | 300°C | • | • | • | • | • | • | • |
| **SW-139T*** | 216°C | - 6 K | 178°C | 370°C** | • | • | • | • | • | • | • |
| **SW-124T** | 228°C | - 6 K | 187°C | 370°C | • | • | • | • | • | • | • |
| **SW-128T*** | 240°C | - 6 K | 193°C | 370°C** | • | • | • | • | • | • | • |

*125V 15A (UL, C-UL) for SW-109T,152T, 106T, 153T, 108T,110T, 111T, 114T, 139T, 128T only
** Tm of SW-128T & 139T, approved by UL, 370°C

• = approved

**Rated functioning temperature ($T_f$)**
The temperature at which a thermal cut off (TCO) changes its state of conductivity to open circuit with detection current as the only load. The tolerance according to UL 1020 is +0 / -10°C

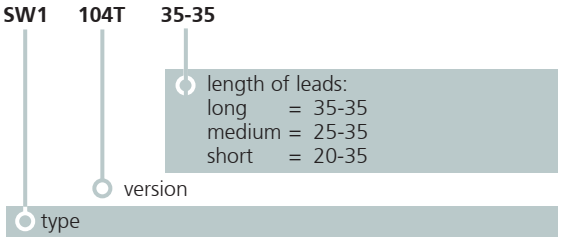
**Holding temperature ($T_h$)**
The maximum temperature at which a thermal cut off can be maintained while conducting rated current for 168 hours which will not cause a change in state of conductivity to open circuit.

**Max. overshoot temperature ($T_m$)**
Above this temperature the thermal cut off might conduct again

**Rated current**
The maximum current which the thermal cut off is able to carry for a specified time at $T_c$ without alteration of its functioning temperature

# ordering and marking examples

## Ordering example




## Marking example

| | |
|---|---|
| **SW -** | type |
| **104T** | version |
| **250V,10A** | rated voltage (V), rated current (A) |
| **98°C** | rated functioning temperature (°C) |
| **XXX** | lot code |

RoHS compliant product

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Deviations from standard controls on request