BUSSMANN SERIES

SR-5

Subminiature time-delay fuses



Photo is representative

Product features

- · Radial leaded time-delay thru-hole fuse
- Designed to IEC 60127-3, sheet 4
- Internationally accepted for primary and secondary overcurrent protection
- Place directly onto PCB or plug into <u>BK-PCS</u> holder
- · High inrush withstand capability
- Compatible with leaded and lead-free reflow and wave solder

Agency information

- VDE: File: HA122052 (100 mA to 6.3 A)
- cURus: File E19180 Guide: JDYX8 JDYX2 (100 mA to 6.3 A)
- CCC: File: 2020970207000251 (100 mA to 6.3 A)
- PSE: JET1641-31007-1015 (1 A to 5 A) JET1641-31007-1009 (6.3 A)
- SEMKO: File: 1412328 (100 mA to 6.3 A)
- KC: SU05011-9003B (100 mA) SU05011-9004B (125 mA to 800 mA) SU05011-9002B (1 A to 2.5 A) SU05011-9001B (3.15 A to 6.3 A)









Applications

Primary and secondary circuit protection:

- Servers
- · Appliances and white goods
- · LED/LCD televisions and displays
- Heating, ventilation, and air conditioning (HVAC)
- · Lighting ballasts
- LED lighting
- · Set top boxes
- Power supplies

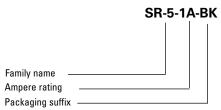
Environmental compliance







Ordering code



The ordering code is the part number replacing the "with a "-" plus adding the packaging suffix (example: SR-5-1.25A to SR-5-1-25A)

Packaging suffix

-BK

200 pieces in polybag

-AP

Ammo Pack, Pitch=12.7 mm



Electrical characteristics

| Rating | 1.5 ln | 2.1 In | 2.75 ln | | 4 In | | 10 In | |
|---------------|------------|-----------|---------|------------|---------|-----------|---------|---------|
| | minimum | maximum | minimum | maximum | minimum | maximum | minimum | maximum |
| 100 mA to 4 A | 60 minutes | 2 minutes | 400 ms | 10 seconds | 150 ms | 3 seconds | 20 ms | 150 ms |
| 5 A to 6.3 A | 60 minutes | 2 minutes | 400 ms | 10 seconds | 150 ms | 3 seconds | 20 ms | 150 ms |

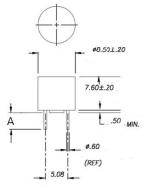
Product specifications

| | Current | Voltage | Interrupting rating @ rated voltage ¹ | Typical DC cold resistance | Typical voltage | Typical | Agenc | y informa | tion | | | |
|-------------|---------------|-----------------|--|----------------------------|-----------------|--|-------|-----------|------|-----|-------|----|
| Part number | rating (A) | rating (Vac) | (A) | resistance (Ω) | drop³ (mV) | pre-arcing ² l ² t (A ² sec) | VDE | cURus | ссс | PSE | SEMKO | кс |
| SR-5-100mA | 0.100 | 250 | 35 | 2.37 | 288.5 | 0.015155 | Х | Х | Х | | Х | Х |
| SR-5-125mA | 0.125 | 250 | 35 | 1.6 | 238 | 0.026783 | Х | Х | Х | | Х | Х |
| SR-5-160mA | 0.160 | 250 | 35 | 1.02 | 196.5 | 0.039097 | Х | Х | Х | | Х | Х |
| SR-5-200mA | 0.200 | 250 | 35 | 0.94 | 215.5 | 0.168832 | Х | Х | Х | | Х | Х |
| SR-5-250mA | 0.250 | 250 | 35 | 0.66 | 185 | 0.24778 | Х | Х | Х | | Х | Х |
| SR-5-315mA | 0.315 | 250 | 35 | 0.43 | 152 | 0.277201 | Х | Х | Х | | Х | Х |
| SR-5-400mA | 0.400 | 250 | 35 | 0.285 | 127 | 0.771618 | Х | Х | Х | | Х | Х |
| SR-5-500mA | 0.500 | 250 | 35 | 0.242 | 143.5 | 2 | Х | Х | Х | | Х | Х |
| SR-5-630mA | 0.630 | 250 | 35 | 0.154 | 113 | 3.5 | Х | Х | Х | | Х | Х |
| SR-5-800mA | 0.800 | 250 | 35 | 0.112 | 104.5 | 6.5 | Х | Х | Х | | Х | Х |
| SR-5-1A | 1.0 | 250 | 35 | 0.085 | 100 | 7.5 | Х | Х | Х | Х | Х | Х |
| SR-5-1.25A | 1.25 | 250 | 35 | 0.061 | 91 | 13 | Х | Х | Х | Х | Х | Х |
| SR-5-1.6A | 1.6 | 250 | 35 | 0.043 | 102 | 24 | Х | Х | Х | Х | Х | Х |
| SR-5-2A | 2.0 | 250 | 35 | 0.031 | 74.5 | 30 | Х | Х | Х | Х | Х | Х |
| SR-5-2.5A | 2.5 | 250 | 35 | 0.024 | 72.5 | 45 | Х | Х | Х | Х | Х | Х |
| SR-5-3.15A | 3.15 | 250 | 35 | 0.018 | 70.25 | 57 | Х | х | Х | Х | Х | Х |
| SR-5-4A | 4.0 | 250 | 40 | 0.012 | 62 | 80 | Х | х | Х | Х | Х | Х |
| SR-5-5A | 5.0 | 250 | 50 | 0.010 | 57.5 | 95.4 | Х | Х | Х | Х | Х | Х |
| SR-5-6.3A | 6.3 | 250 | 63 | 0.008 | 60.85 | 200 | Х | Х | Х | Х | Х | Х |

^{1.} Interrupting ratings: 100 mA to 3.15 A were measured at 35 A, 95%-100% of PF on AC, 4 A, 5 A were measured at 10 times of rated current, 95%-100% of PF on AC.

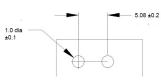
Dimensions- mm

Drawing not to scale



| Length |
|-------------|
| 4.3 ±0.3 mm |
| 9.15 ±2 mm |
| |
| |

Land pattern



^{2.} Typical pre-arcing: SR-5-100mA to SR-5-400mA measured @ 100 In, SR-5-500mA to SR-5-6.3A measured @10 In

^{3.} Typical voltage drop was measured at +20 °C ambient temperature at rated currentt

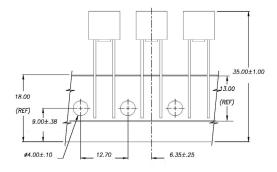
General specifications

| Operating temperature: -40 °C to +125 °C with proper derating factor applied. |
|---|
| Solderability: EIA-186-9E, method 9 |
| High frequency vibration: MIL-STD-202F, method 201A |

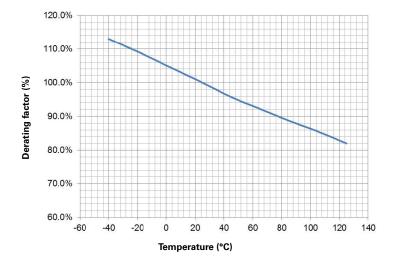
Packaging information

| Packaging suffix | | Description | | | | |
|------------------|-----|-----------------------------|--|--|--|--|
| | -BK | Bulk, 200 pieces in polybag | | | | |
| | -AP | Ammo Pack, Pitch=12.7 mm | | | | |

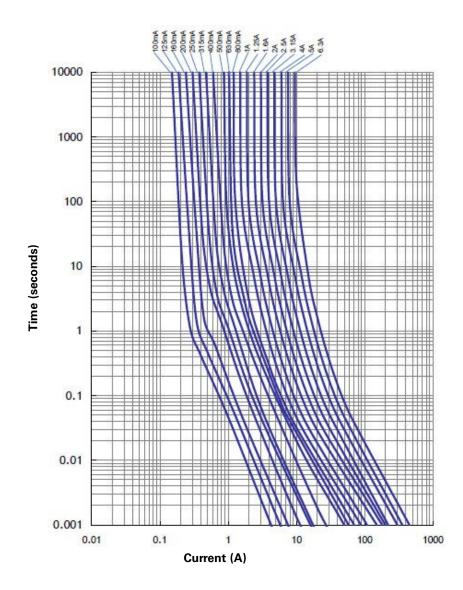
-AP (Ammo pack) (mm)



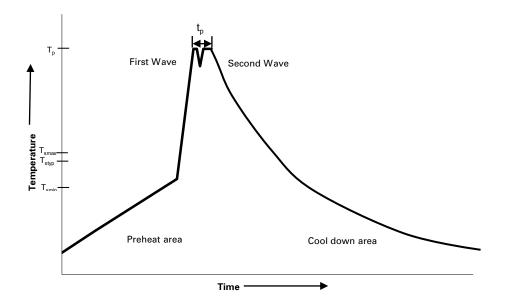
Temperature derating curve



Current vs time curve



Wave solder profile



Reference EN 61760-1:2006

| Profile feature | | Standard SnPb solder | Lead (Pb) free solder | | |
|--|--|---|---|--|--|
| Preheat | • Temperature min. (T _{smin}) | 100 °C | 100 °C | | |
| | • Temperature typ. (T _{styp}) | 120 °C | 120 °C | | |
| | • Temperature max. (T _{smax}) | 130 °C | 130 °C | | |
| | • Time (T _{smin} to T _{smax}) (t _s) | 70 seconds | 70 seconds | | |
| Δ preheat to max Temperature | | 150 °C max. | 150 °C max. | | |
| Peak temperature (Tp)* | | 235 °C − 260 °C | 250 °C – 260 °C | | |
| Time at peak temperature (t _p) | | 10 seconds max 5 seconds max each wave | 10 seconds max 5 seconds max each wave | | |
| Ramp-down rate | | ~ 2 K/s min ~3.5 K/s typ ~5 K/s max | ~ 2 K/s min ~3.5 K/s typ ~5 K/s max | | |
| Time 25 °C to 25 °C | | 4 minutes | 4 minutes | | |
| | | | | | |

Manual solder

+350 °C (4-5 seconds by soldering iron), generally manual/hand soldering is not recommended.

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