

# SS-5

## 250 V Subminiature, radial leaded, time-delay fuses



### Product description

- Radial leaded, time delay with low breaking capacity
- Designed to IEC60127-3 Sheet 4
- Plastic cap and base, flammability UL 94V0
- Protects against harmful overcurrents in primary and secondary applications
- Small rectangular-leaded design utilizes less board space
- High frequency vibration: MIL-STD-202F, Method 201A
- Halogen free, lead free, RoHS compliant

### Applications

Primary and secondary circuit protection:

- Power supplies
- Notebooks and laptops
- Appliances and white goods
- Lighting ballasts
- Power adapters
- Set top boxes
- LED/LCD televisions and displays
- Air conditioners
- Battery chargers

### Agency information

- UL Recognition: File E19180, Guide JDYX2/JDYX8
- VDE: 40015513
- CQC: 08012025533
- PSE:  
JET 1641-31007-1008 (1 A – 5 A)  
JET 1641-31007-1009 (6.3 A)
- KC:  
SU05011-8001 (400 mA – 800 mA)  
SU05011-8002 (1 A – 2.5 A)  
SU05011-8003 (3.15 A – 6.3 A)
- Semko:  
1516697 (630 mA, 1 A – 4 A)  
1124941 (500 mA, 800 mA, 5 A, 6.3 A)

### Ordering

- Use ordering number (see page 6 for details)

### Packaging suffixes

- -AP (1 000 parts Ammo pack, Pitch = 12.7)
- -BK (200 parts in a polybag, Lead L = 4.3 ± 0.3)
- -BK2 (200 parts in a polybag, Lead L = 21 ± 3.0)

Electrical characteristics

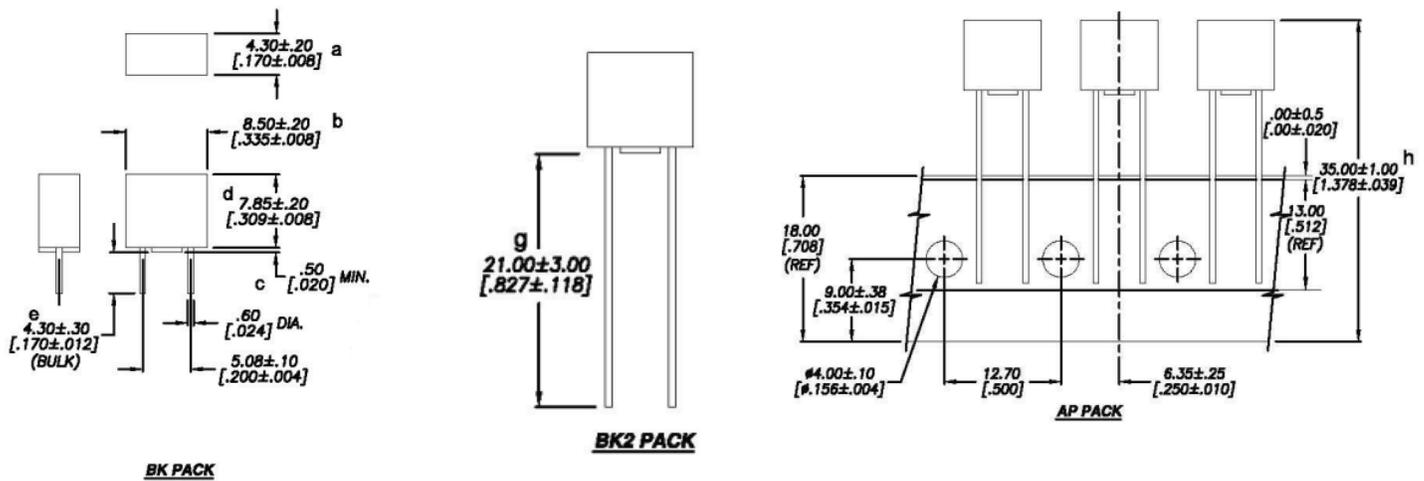
$I_n$	1.5I <sub>n</sub> minimum minute	2.1I <sub>n</sub> maximum minute	2.75I <sub>n</sub> minimum ms	2.75I <sub>n</sub> maximum s	4I <sub>n</sub> minimum ms	4I <sub>n</sub> maximum s	10I <sub>n</sub> minimum ms	10I <sub>n</sub> maximum ms
200 mA – 6.3 A	60	2	400	10	150	3	20	150

Product specifications

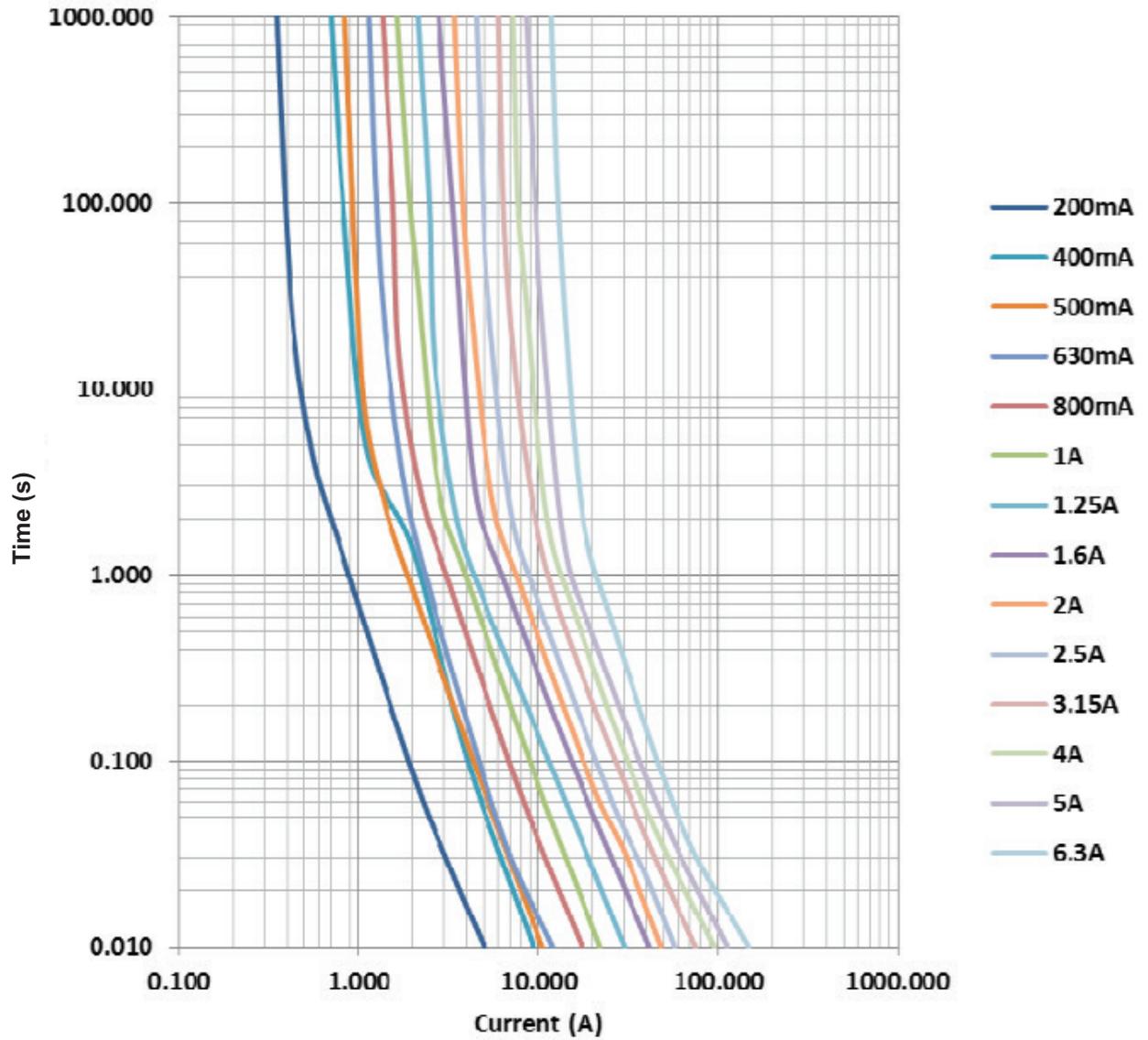
Part number	Current rating (A)	Voltage rating (V <sub>AC</sub> )	Interrupting rating at rated voltage <sup>1</sup> (50 Hz) (A <sub>AC</sub> )	Typical DC cold resistance <sup>2</sup> (mΩ)	Typical melting <sup>3</sup> I <sup>2</sup> t (A <sup>2</sup> s)	Typical voltage drop <sup>4</sup> (mV)	cURus	KC	VDE	CQC	SEMKO	PSE+ JET <sup>1</sup>
SS-5-200mA	0.2	250	35	960	0.35	212	X		X	X		
SS-5-400mA	0.4	250	35	330	1.67	147	X	X	X	X		
SS-5-500mA	0.5	250	35	258	1.79	152	X	X	X	X	X	
SS-5-630mA	0.63	250	35	140	1.51	101	X	X	X	X	X	
SS-5-800mA	0.8	250	35	118	4.21	111	X	X	X	X	X	
SS-5-1A	1.0	250	35	80.8	7.40	94.5	X	X	X	X	X	X
SS-5-1.25A	1.25	250	35	62.4	12.8	93.5	X	X	X	X	X	X
SS-5-1.6A	1.6	250	35	41	23	71.5	X	X	X	X	X	X
SS-5-2A	2.0	250	35	31.2	29.8	75	X	X	X	X	X	X
SS-5-2.5A	2.5	250	35	24.3	40.3	74.5	X	X	X	X	X	X
SS-5-3.15A	3.15	250	35	16.8	67	62.5	X	X	X	X	X	X
SS-5-4A	4.0	250	40	12.8	87	65.4	X	X	X	X	X	X
SS-5-5A	5.0	250	50	7.35	120	43	X	X	X	X	X	X
SS-5-6.3A	6.3	250	63	7.4	176	59	X	X	X	X	X	X

- 200 mA to 3.15 A measured at 35 A, 95% - 100% of PF on AC. 4 A – 6.3 A measured at 10 times of rating current 95% - 100% of PF on AC.
- Typical cold resistance measured at < 10% of rated current
- I<sup>2</sup>t value is measured at 10I<sub>n</sub> DC
- Typical voltage drop measured at 20 °C ambient temperature and rated current

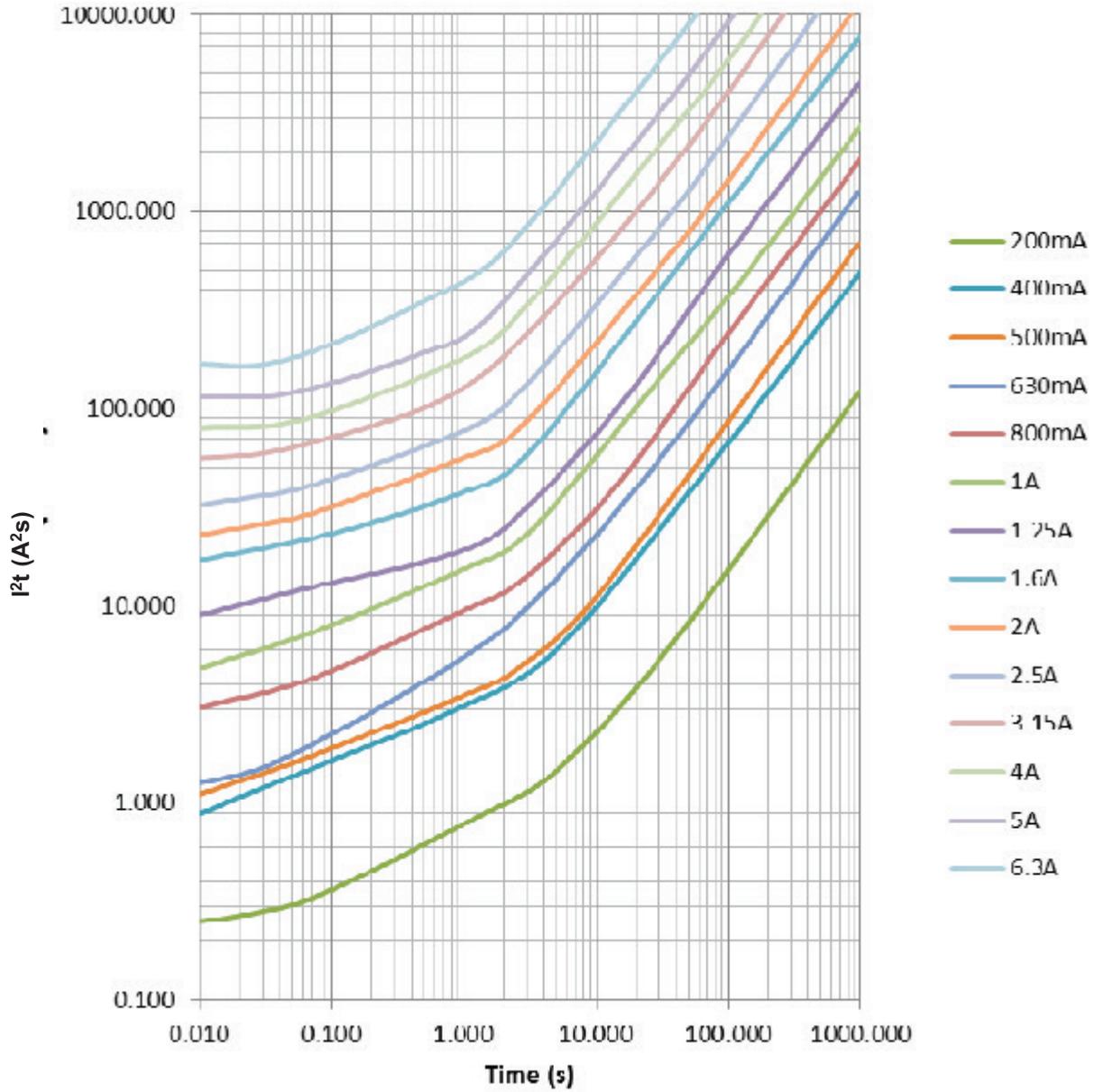
Dimensions and packaging – mm [in]



Time vs. current curve

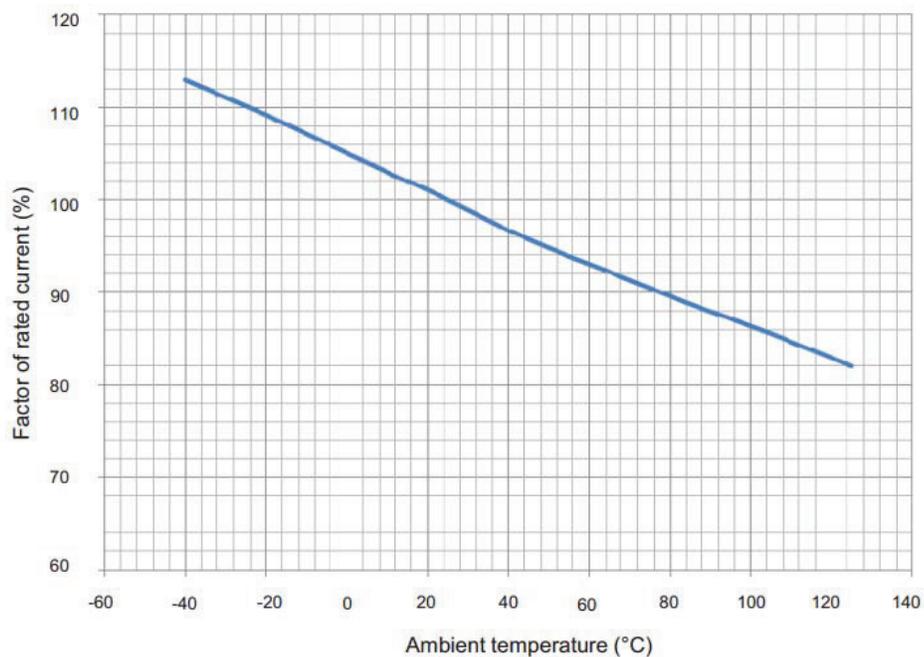


I<sup>2</sup>t vs. time curve



### Temperature derating curve

Normal Operating Temperature: +25 °C ±2 °C



### Environmental data

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Operating temperature: -40 °C to +125 °C with proper correction factor applied

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Storage temperature: -10 °C to 40 °C

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Solderability: EIA-186-9E Method 9

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High frequency vibration test: Withstands 10-55 Hz per MIL-STD-202F, Method 201A

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Endurance test: IEC60127-3/4

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### Ordering codes

The ordering code is the part number replacing the “.” with a “-” plus adding the packaging suffix.

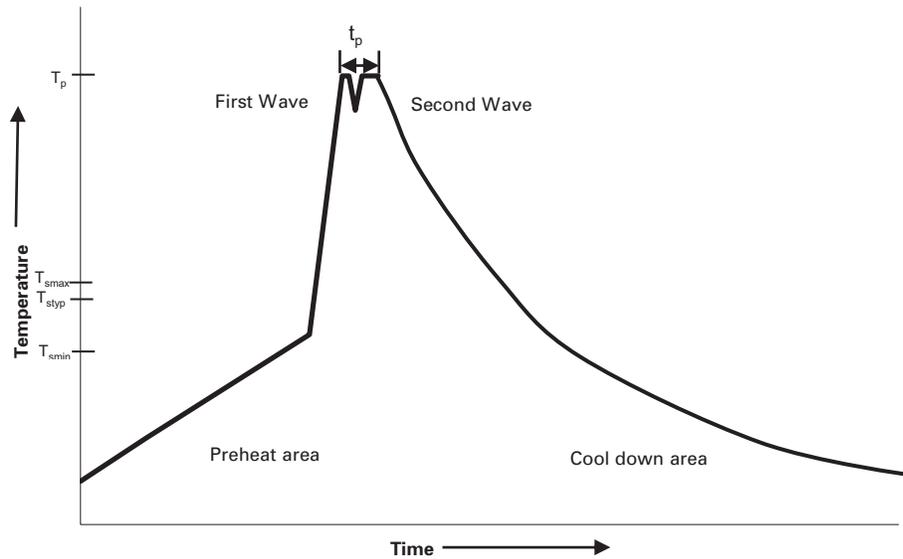
### Packaging suffixes

- -AP (1 000 parts Ammo pack, Pitch = 12.7)
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Part number	Ordering codes		
	-AP option	-BK option	-BK2 option
SS-5-200mA	SS-5-200mA-AP	SS-5-200mA-BK	SS-5-200mA-BK2
SS-5-400mA	SS-5-400mA-AP	SS-5-400mA-BK	SS-5-400mA-BK2
SS-5-500mA	SS-5-500mA-AP	SS-5-500mA-BK	SS-5-500mA-BK2
SS-5-630mA	SS-5-630mA-AP	SS-5-630mA-BK	SS-5-630mA-BK2
SS-5-800mA	SS-5-800mA-AP	SS-5-800mA-BK	SS-5-800mA-BK2
SS-5-1A	SS-5-1A-AP	SS-5-1A-BK	SS-5-1A-BK2
SS-5-1.25A	SS-5-1-25A-AP	SS-5-1-25A-BK	SS-5-1-25A-BK2
SS-5-1.6A	SS-5-1-6A-AP	SS-5-1-6A-BK	SS-5-1-6A-BK2
SS-5-2A	SS-5-2A-AP	SS-5-2A-BK	SS-5-2A-BK2
SS-5-2.5A	SS-5-2-5A-AP	SS-5-2-5A-BK	SS-5-2-5A-BK2
SS-5-3.15A	SS-5-3-15A-AP	SS-5-3-15A-BK	SS-5-3-15A-BK2
SS-5-4A	SS-5-4A-AP	SS-5-4A-BK	SS-5-4A-BK2
SS-5-5A	SS-5-5A-AP	SS-5-5A-BK	SS-5-5A-BK2
SS-5-6.3A	SS-5-6-3A-AP	SS-5-6-3A-BK	SS-5-6-3A-BK2

### Wave solder profile

Reflow soldering not recommended



### Reference EN 61760-1:2006

Profile Feature	Standard SnPb Solder	Lead (Pb) Free Solder
Preheat	• Temperature min. ( $T_{smin}$ )	100°C
	• Temperature typ. ( $T_{styp}$ )	120°C
	• Temperature max. ( $T_{smax}$ )	130°C
	• Time ( $T_{smin}$ to $T_{smax}$ ) ( $t_s$ )	70 seconds
$\Delta$ preheat to max Temperature	150°C max.	150°C max.
Peak temperature ( $T_p$ )*	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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