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

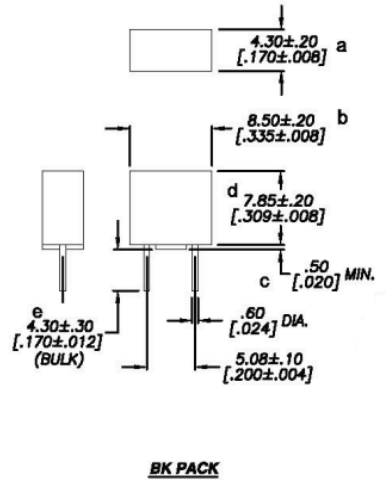
I_n	$1.5I_n$ minimum minute	$2.1I_n$ maximum minute	$2.75I_n$ minimum ms	$2.75I_n$ maximum s	$4I_n$ minimum ms	$4I_n$ maximum s	$10I_n$ minimum ms	$10I_n$ maximum ms
200 mA – 6.3 A	60	2	400	10	150	3	20	150

Product specifications

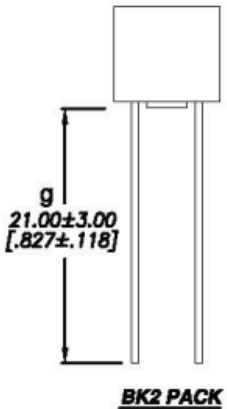
Part number	Current rating (A)	Voltage rating (V_{AC})	Interrupting rating at rated voltage[1] (50 Hz) (A_{AC})	Typical DC cold resistance[2] (mΩ)	Typical melting[3] I^2t (A^2s)	Typical voltage drop[4] (mV)	cURus	KC	VDE	CQC	SEMKO	PSE+ JET[1]
SS-5-200mA	0.2	250	35	960	0.35	212	X		X	X		
SS-5-400mA	0.4	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

1. 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.
2. Typical cold resistance measured at < 10% of rated current
3. I^2t value is measured at $10I_n$ DC
4. Typical voltage drop measured at 20 °C ambient temperature and rated current

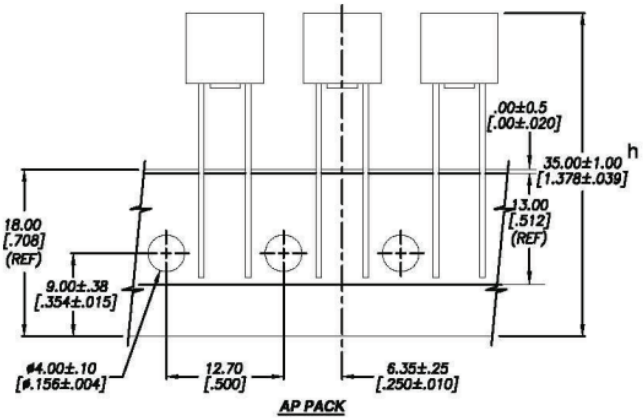
Dimensions and packaging – mm [in]



BK PACK

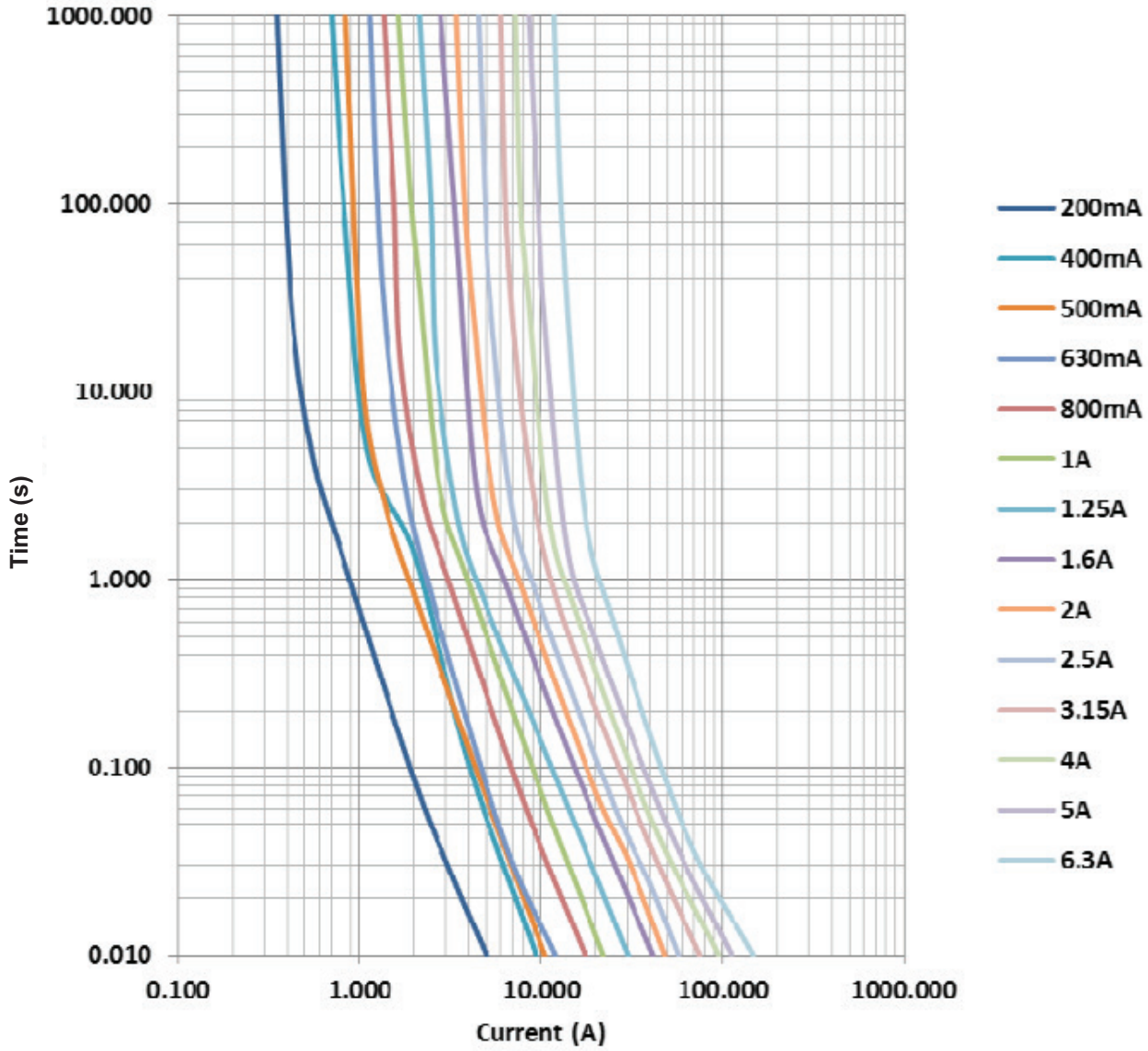


BK2 PACK

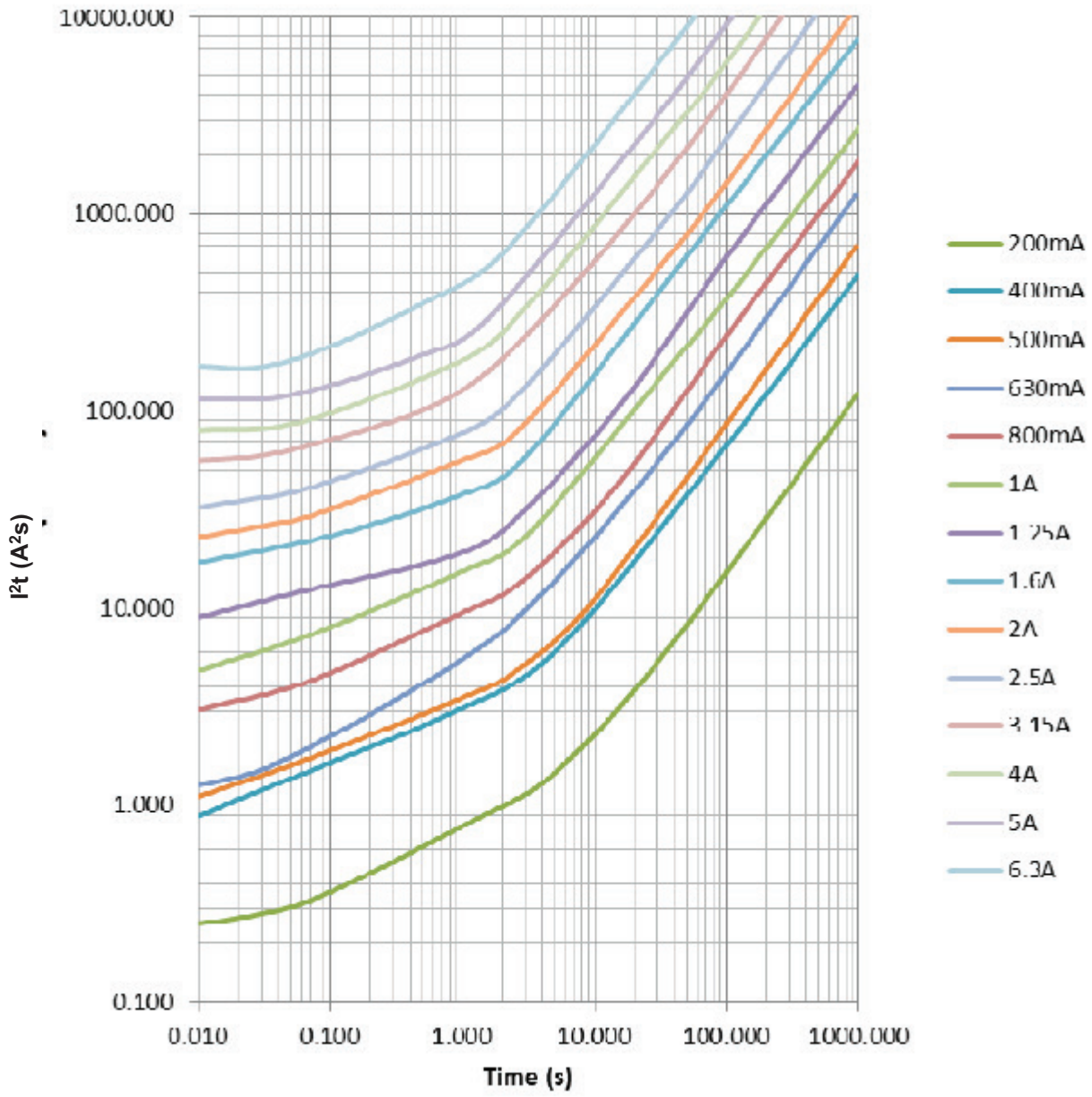


AP PACK

Time vs. current curve

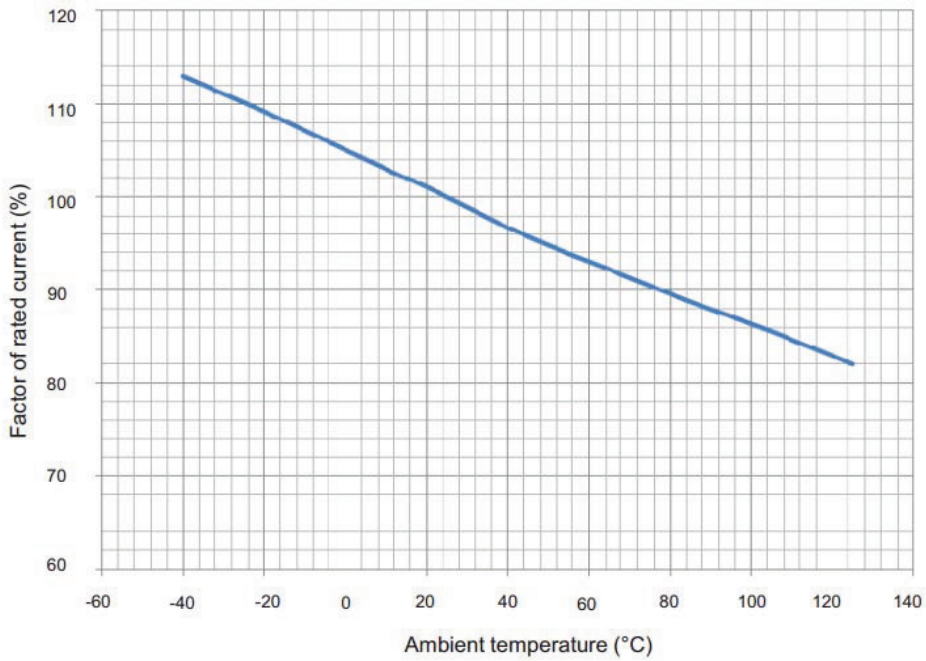


I²t vs. time curve



Temperature derating curve

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



Environmental data

Operating temperature: -40 °C to +125 °C with proper correction factor applied
Storage temperature: -10 °C to 40 °C
Solderability: EIA-186-9E Method 9
High frequency vibration test: Withstands 10-55 Hz per MIL-STD-202F, Method 201A
Endurance test: IEC60127-3/4

Ordering codes

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

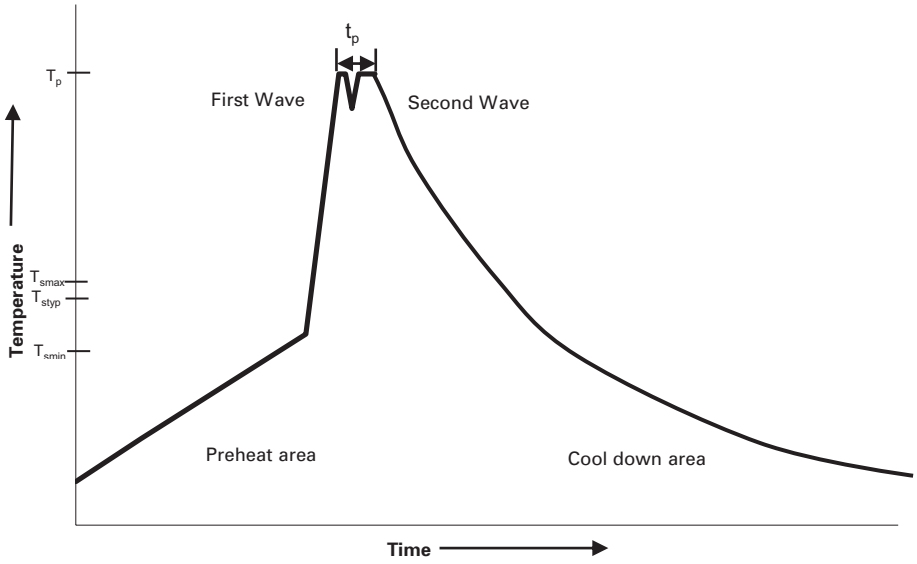
Packaging suffixes

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

	Ordering codes		
Part number	**-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	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 (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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