S500

5 mm x 20 mm Fast-acting glass tube fuses

Photo is representative

Applications

- Power supplies
- LED and general Lighting
- LED/LCD televisions
- Appliances and white goods
- Desktops
- Test equipment
- Set top boxes
- Battery chargers
- Printers and peripherals

Product features

- Fast-acting, low breaking capacity
- Optional axial lead option available
- 5 mm x 20 mm physical size
- Glass tube with silver-plated (32 mA - 125 mA) and nickel plated (160 mA - 10 A) brass endcaps
- Designed to IEC 60127-2/2 (160 mA - 10 A)

Environmental compliance

RoHS · Pb · HALOGEN HF FREE

Agency information

- cURus recognized: File E19180, Guide JDYX2, JDYX8
- VDE Approval: File 40014109
- BSI Approval: File KM55676
- IMQ Approval: File CA03.00097
- CCC Approval: File 2005010207155694
- KC approval: File SU05011-5001B; SU05011-5002B; SU05011-5003B

Note: Philippines manufactured parts have cURus approvals only

Ordering part number

BK-S500-V-1-R

- Packaging code
- Family name
- Option code
- Ampere rating
- RoHS compliant

The ordering code is the part number replacing the "." with a "-"

Packaging prefix

- **BLANK:** 5 pieces in tin case (Cartridge only)
- **BK-:** 100 pieces in carton.
- **BK1-:** 1,000 pieces in polybag.
- **TR2-:** 1,500 pieces on reel (Axial lead only)

Option code

- **-V:** Axial leads

Powering Business Worldwide

Electrical characteristics

Amp rating	1.5 In min	2.1 In max	2.75 In min	max	4.0 In min	max	10 In max
32 mA - 100 mA	60 min.	30 min.	10 ms	500 ms	3 ms	100 ms	20 ms
125 mA - 6.3 A	60 min.	30 min.	50 ms	2 s	10 ms	300 ms	20 ms
8 A - 10 A	30 min.	30 min.	50 ms	2 s	10 ms	400 ms	40 ms

Product specifications

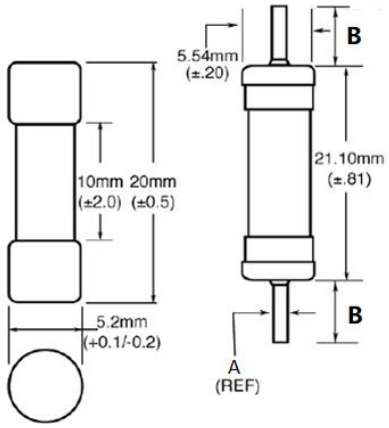
Part number	Current rating (A)	Voltage rating (Vac)	Interrupting rating (A) at rated voltage (50 Hz) Vac	Typical DC cold resistance[1] (Ohms)	Typical melting[2] I^2t (A^2sec)	Maximum voltage drop[3] (mV)	Agency approval cURus	VDE	BSI	IMQ	CCC	KC
S500-32-R	0.032	250	35	290	0.00002	13000						
S500-40-R	0.04	250	35	210	0.00006	11500						
S500-50-R	0.05	250	35	150	0.00010	10500						
S500-63-R	0.063	250	35	113	0.00020	9800						
S500-80-R	0.08	250	35	22	0.0008	3000						
S500-100-R	0.10	250	35	18	0.0013	2800						
S500-125-R	0.125	250	35	11	0.0034	2200						
S500-160-R	0.16	250	35	8.5	0.008	2000	X	X	X	X	X	X
S500-200-R	0.20	250	35	6.6	0.016	1700	X	X	X	X	X	X
S500-250-R	0.25	250	35	4.32	0.28	1400	X	X	X	X	X	X
S500-315-R	0.315	250	35	3.0	0.58	1300	X	X	X	X	X	X
S500-400-R	0.40	250	35	1.95	0.18	1100	X	X	X	X	X	X
S500-500-R	0.50	250	35	0.26	0.18	220	X	X	X	X	X	X
S500-630-R	0.63	250	35	0.20	0.35	220	X	X	X	X	X	X
S500-800-R	0.80	250	35	0.14	0.67	190	X	X	X	X	X	X
S500-1-R	1.0	250	35	0.118	0.8	200	X	X	X	X	X	X
S500-1.25-R	1.25	250	35	0.083	1.1	200	X	X	X	X	X	X
S500-1.6-R	1.6	250	35	0.058	2.1	190	X	X	X	X	X	X
S500-2-R	2.0	250	35	0.043	5.5	150	X	X	X	X	X	X
S500-2.5-R	2.5	250	35	0.032	7.9	150	X	X	X	X	X	X
S500-3.15-R	3.15	250	35	0.023	16.9	130	X	X	X	X	X	X
S500-4-R	4.0	250	40	0.021	22	130	X	X	X	X	X	X
S500-5-R	5.0	250	50	0.014	42	120	X	X	X	X	X	X
S500-6.3-R	6.3	250	63	0.01	69	120	X	X	X	X	X	X
S500-8-R	8.0	250	80	0.01	102	120	X	X	X	X		
S500-10-R	10	250	100	0.008	111	120	X*	X**	X	X		

1. DC cold resistance measured at <10% of rated current
2. Typical melting I^2t was measured at listed interrupting rating and rated voltage
3. Maximum voltage drop was measured at +20 °C ambient temperature at rated current

* Axilal lead version only

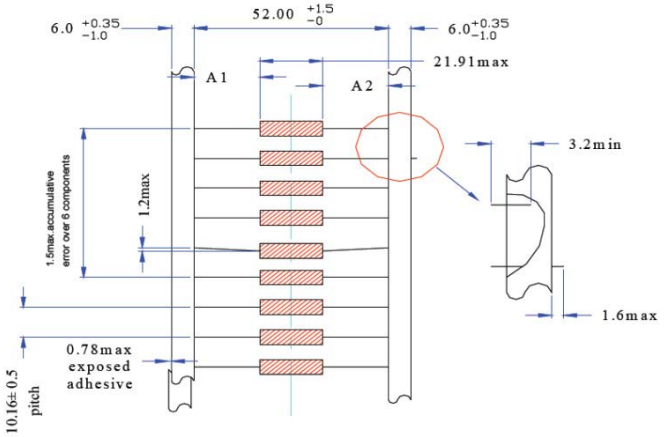
** Cartridge version only

Dimensions- mm
Drawing not to scale



- Dimension A (ref): 0.65 mm (0.5 A - 6.3 A), 0.80 mm (8 A - 10 A)
- Dimension B: For BK- packaging code, 38.1 mm ±0.38 mm
  For TR2- packaging code 15.8 mm ±2.0 mm

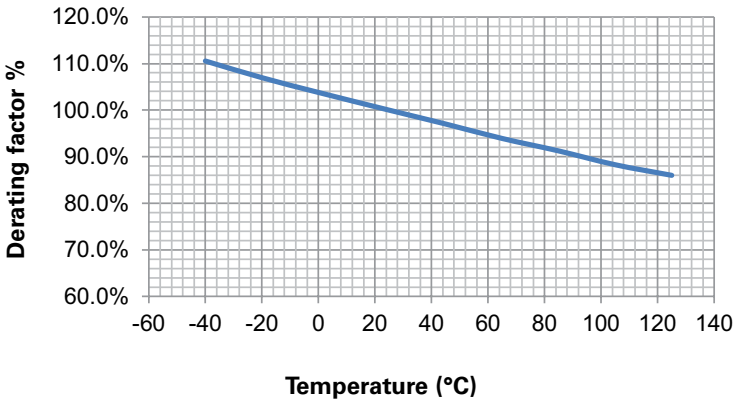
TR2-packaging option- mm
Drawing not to scale



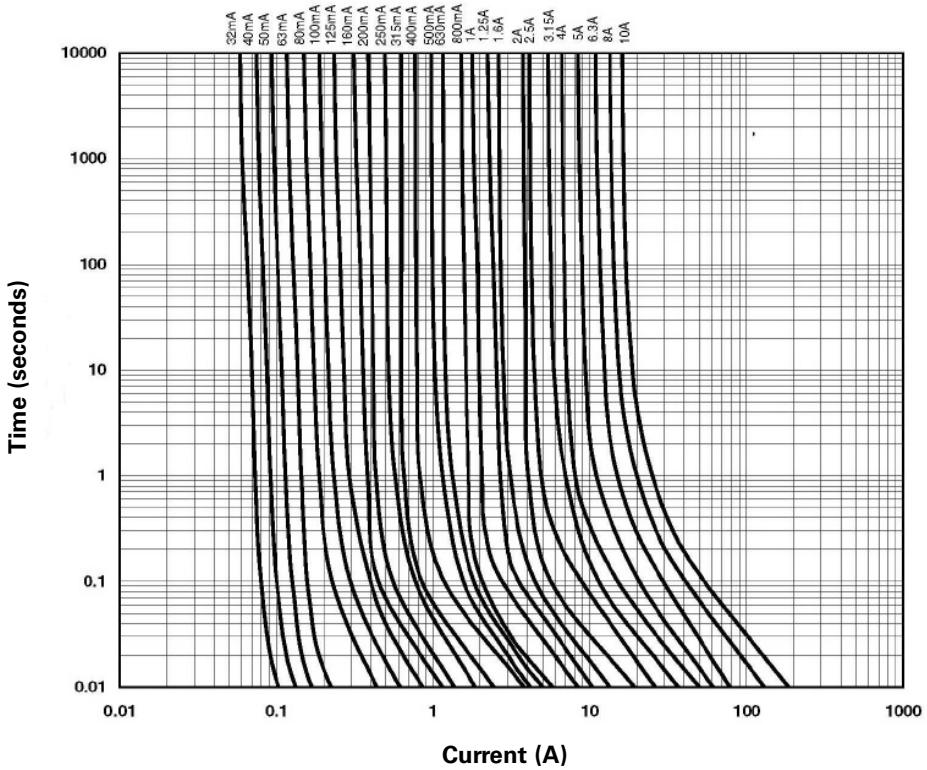
Dimension A1-A2 <1.0 mm

Temperature derating curve

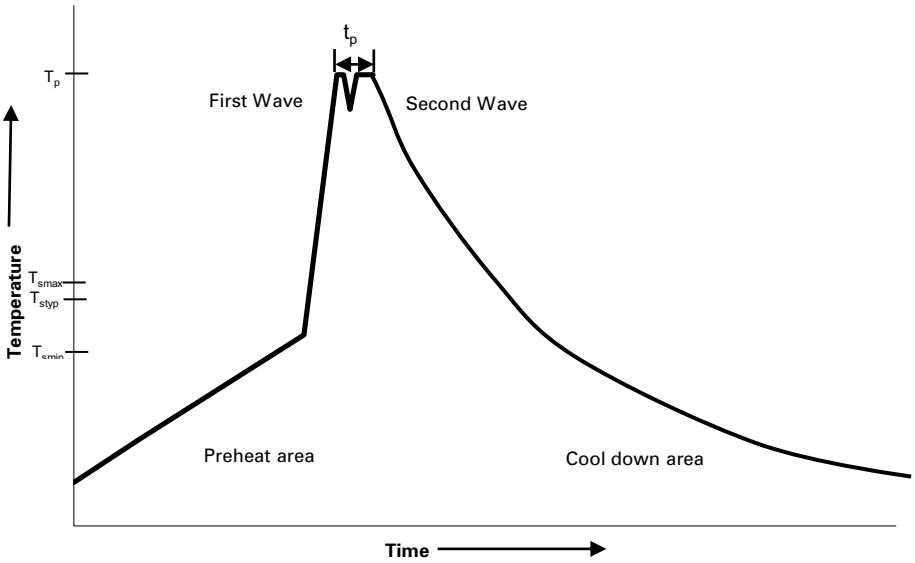
Operating temperature: -40 °C to +125 °C with proper correction factor applied



Time vs. current curve



Wave solder profile (Axial lead only)



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

Eaton
Electronics Division
1000 Eaton Boulevard
Cleveland, OH 44122
United States
Eaton.com/electronics

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