

S505SC

5 x 20 mm Time-delay, axial lead ceramic tube fuses



Product description

- Time-delay, high breaking capacity
- Designed to IEC 60127-2
- Nickel-plated brass end cap construction
- 5 x 20mm physical size
- Halogen free, lead free, RoHS compliant

Applications

Primary circuit protection:

- Power supplies
- LED lighting
- LED/LCD televisions
- Appliances and white goods
- Printers

Agency information

- cURus Recognition file number: E19180, Guide JDYX2/JDYX8
- SEMKO: File 1219335, 1310139
- VDE: File 40024252, 40037710 (1-8A)
- BSI: File KM55676
- IMQ: File CA03.00529
- PSE/JET: JET1641-31003-1010, JET1641-31003-2002, JET7042-31003-2001
- CQC: 12012079823, 13012103317
- KC-Mark: File SU05011-12003, SU05011-12004, SU05011-12005A; SU05030-13003A, SU05030-13004, SU05030-13005
- TUV: J50233218

Ordering

- Specify packaging prefix and part number as shown

| Packaging prefix | Part number |
|------------------|-------------|
| BK/ | S505SC-1-R |

Packaging prefixes

- BK/ 20 parts in a carrier, 5 carriers in a box
- TR2/1500 parts per reel, tape width 52mm
- TR3/1500 parts per reel, tape width 54mm

Electrical characteristics

| I_n | $1.5I_n$ min minute | $2.1I_n$ max minute | $2.75I_n$ min ms | max s | $4I_n$ min ms | max s | $10I_n$ min ms | max ms |
|----------|---------------------------|---------------------------|------------------------|----------|---------------------|----------|----------------------|-----------|
| 1A-3.15A | 60 | 30 | 750 | 80 | 95 | 5 | 10 | 150 |
| 4A-6.3A | 60 | 30 | 750 | 80 | 150 | 5 | 10 | 150 |
| 8A-10A | 30 | 30 | 750 | 80 | 150 | 5 | 10 | 150 |

Product specifications

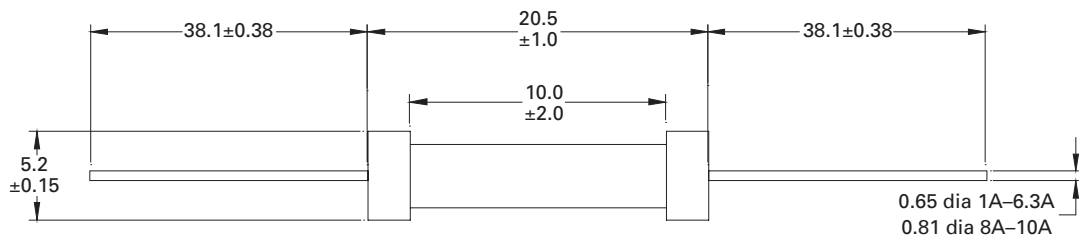
| Part number ⁵ | Voltage rating AC | Interrupting rating at rated voltage (50 Hz) AC ¹ (amps) | Typical DC cold resistance (Ω) ² | Typical pre-arcing I^2t (A^2s) ³ | Typical voltage drop (mV) ⁴ | IMQ | VDE | SEMKO | cURus | PSE/JET | KC | BSI | TUV |
|--------------------------|-------------------|---|--|---|--|-----|-----|-------|-------|---------|----|-----|-----|
| S505SC-1-R | 250 | 1500 | 0.169 | 1.38 | 180 | x | x | x | x | x | x | x | x |
| S505SC-1.25-R | 250 | 1500 | 0.108 | 2.14 | 151 | x | x | x | x | x | x | x | x |
| S505SC-1.6-R | 250 | 1500 | 0.070 | 7.35 | 130 | x | x | x | x | x | x | x | x |
| S505SC-2-R | 250 | 1500 | 0.055 | 9.83 | 123.5 | x | x | x | x | x | x | x | x |
| S505SC-2.5-R | 250 | 1500 | 0.040 | 19.9 | 119 | x | x | x | x | x | x | x | x |
| S505SC-3.15-R | 250 | 1500 | 0.031 | 40.4 | 110 | x | x | x | x | x | x | x | x |
| S505SC-4-R | 250 | 1500 | 0.018 | 41.0 | 89.8 | x | x | x | x | x | x | x | x |
| S505SC-5-R | 250 | 1500 | 0.013 | 71.2 | 88 | x | x | x | x | x | x | x | x |
| S505SC-6.3-R | 250 | 1500 | 0.010 | 152 | 72.5 | x | x | x | x | x | x | x | x |
| S505SC-8-R | 250 | 1500 | 0.007 | 237 | 82.5 | x | x | x | x | x | x | x | x |
| S505SC-10-R | 250 | 1500 | 0.005 | 353 | 70 | x | | x | x | x | x | x | x |

1 Interrupting ratings 1A to 10A were measured at 70% to 80% PF on AC.
2 Typical DC cold resistance measured at <10% of rated current .
3. Typical I^2t value is measured at 10 times the rated current under DC.

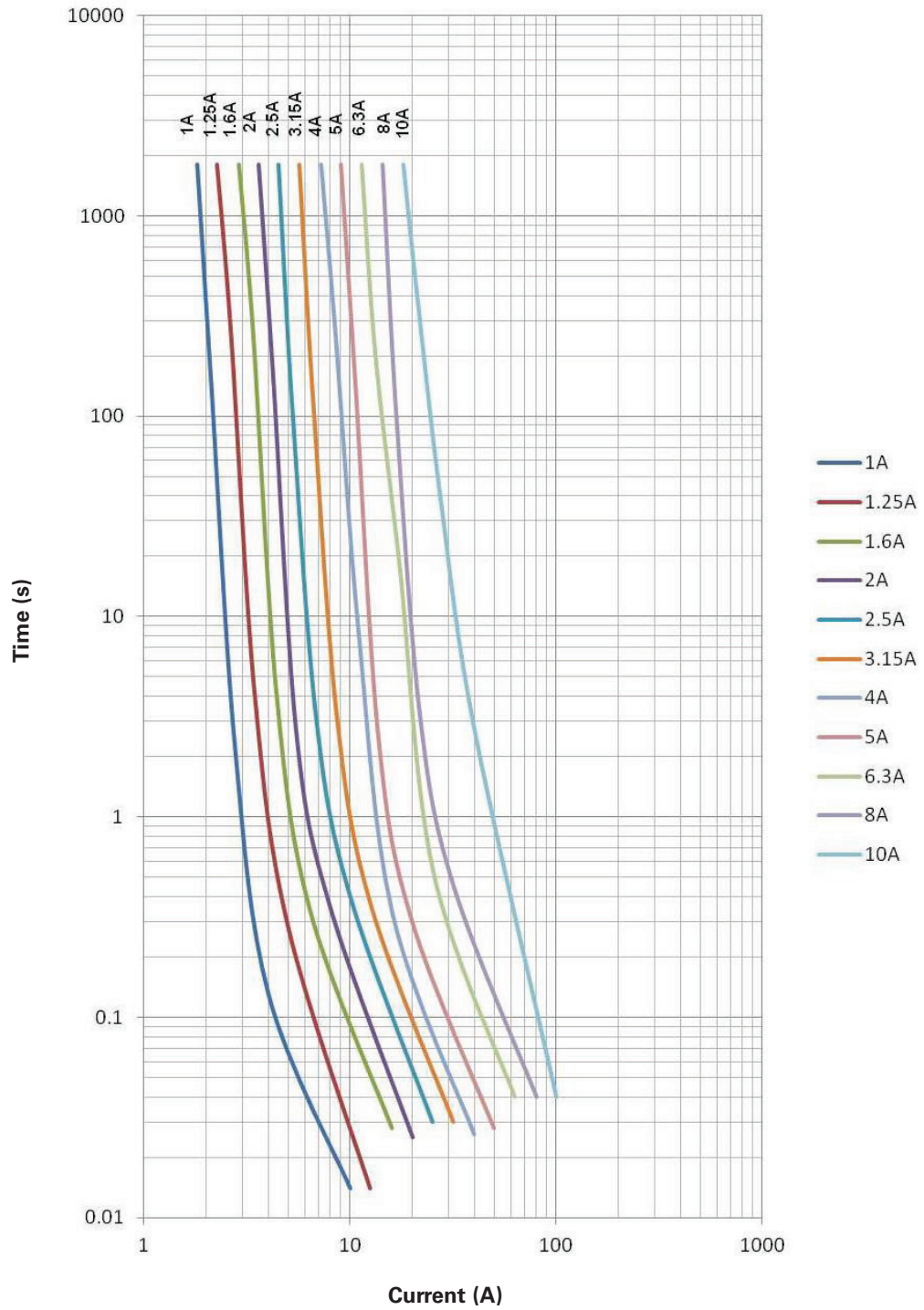
4. Typical voltage drop is measured at 20°C ambient temperature at rated current .
5. Part number definition: S505SC-xxx-R
S505 = Product code
SC = Single cap
xxx = Ampere rating
-R = RoHS compliant

Dimensions—mm

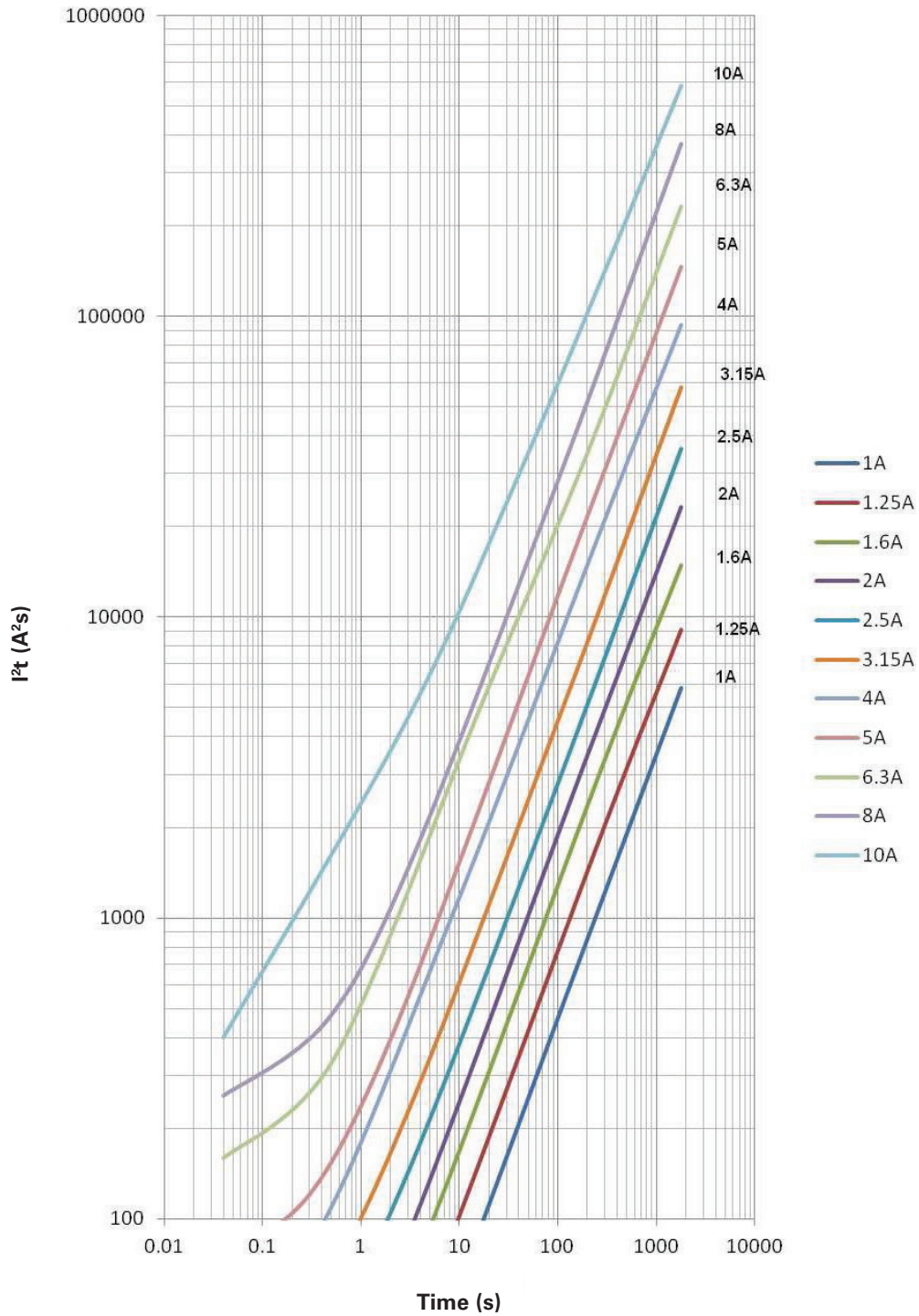
| |
|---------------|
| A |
| BK: 38.1±0.38 |
| TR2: 15.0 typ |
| TR3: 16.0 typ |



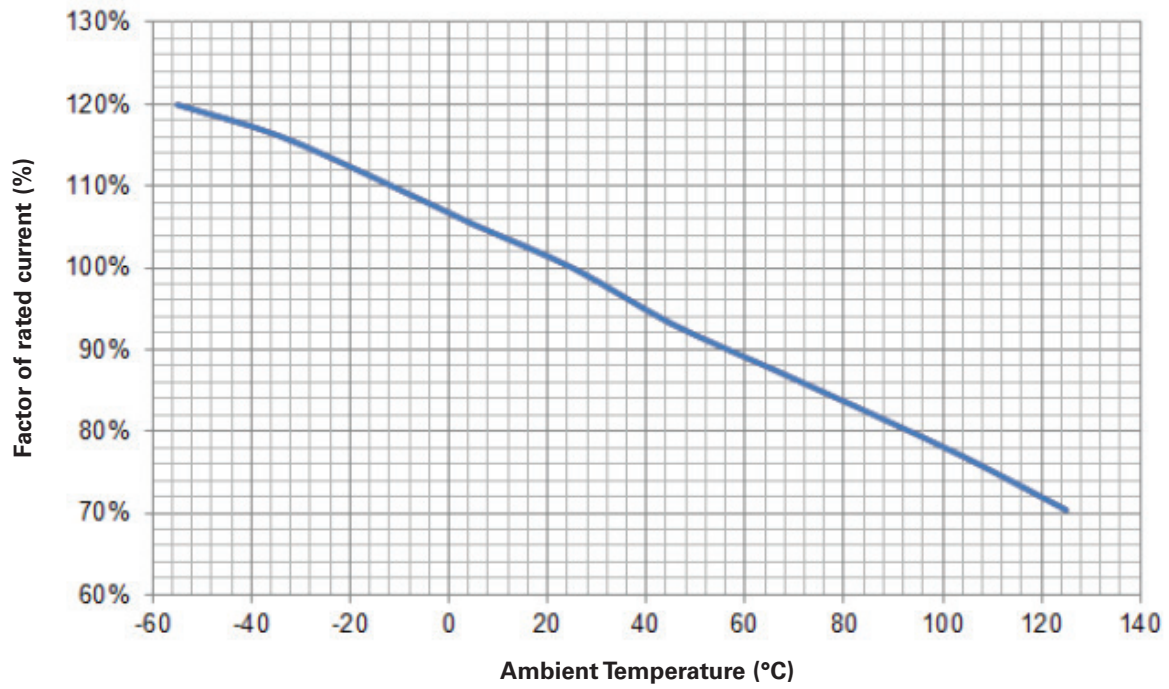
Time vs. current curve



I²t vs. time curve



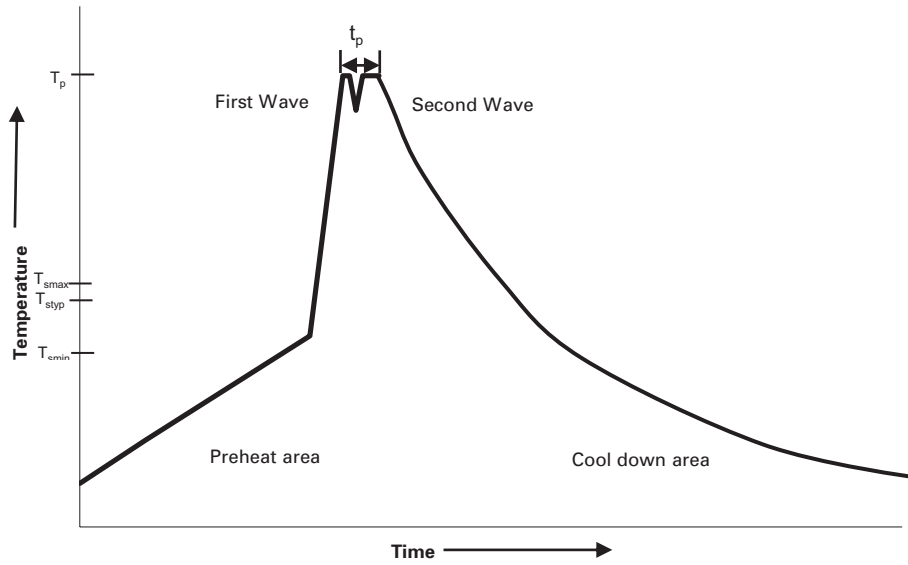
Temperature derating curve



Environmental data

Operating temperature: -55°C to 125°C (with derating)

Wave solder profile



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 |
| 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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