

# S505

## 5 mm x 20 mm, Ferrule time-delay, ceramic tube fuses



### Product features

- Time-delay high breaking capacity
- Designed to IEC 60127-2
- 0.5 A to 12 A current ratings
- Ceramic tube, nickel plated brass end cap construction
- Halogen free, RoHS compliant, lead free
- Reference [S505SC data sheet \(10132\)](#) for available axial lead options

### Applications

Primary circuit protection:

- LED and general lighting
- LED/LCD televisions
- Appliances and white goods
- Printers and peripherals
- Test equipment
- Power supplies

### Agency information

- cURus Recognition file number: E19180, Guide JDYX2/JDYX8
- CSA file: 53787
- SEMKO file: 816547, 1119019
- VDE file: 40014091, 40024352, 40023140
- BSI file: KM55676
- IMQ file: CA03 00100, CA03 00529
- PSE: JET 1641-31003-1009, 1641-31003-1010, 1641-31003-1011, 1641-31003-1012, 1641-31003-2001, 1641-31003-2002
- CCC file: 2002010207011295
- KC-Mark file: SU5011-4012A, SU5011-5004A

### Ordering

- Use ordering code (see page 4 for details)

### Packaging prefixes

- BK- (100 parts in a cardboard carton)
- BK1- (1,000 parts in a bag)

**Electrical characteristics**

| $I_n$        | 1.5I <sub>n</sub><br>min<br>minute | 2.1I <sub>n</sub><br>max<br>minute | 2.75I <sub>n</sub><br>min<br>ms | max<br>s | 4I <sub>n</sub><br>min<br>ms | max<br>s | 10I <sub>n</sub><br>min<br>ms | max<br>ms |
|--------------|------------------------------------|------------------------------------|---------------------------------|----------|------------------------------|----------|-------------------------------|-----------|
| < 1 A        | 60                                 | 30                                 | 250                             | 80       | 50                           | 5        | 5                             | 150       |
| 1 A - 3.15 A | 60                                 | 30                                 | 750                             | 80       | 95                           | 5        | 10                            | 150       |
| 4 A - 6.3 A  | 60                                 | 30                                 | 750                             | 80       | 150                          | 5        | 10                            | 150       |
| 8 A - 12 A   | 30                                 | 30                                 | 750                             | 80       | 150                          | 5        | 10                            | 150       |

**Product specifications**

| Part number <sup>5</sup> | Current rating (A) | Voltage rating AC | Interrupting rating at rated AC voltage <sup>1</sup> (50 Hz) (A <sub>AC</sub> ) | Typical DC cold resistance <sup>2</sup> (Ω) | Typical pre-arcing <sup>3</sup> I <sup>2</sup> t (A <sup>2</sup> s) | Typical voltage drop <sup>4</sup> (mV) | IMQ | VDE | SEMKO | cURus | CCC | PSE-JET | CSA | KC | BSI |
|--------------------------|--------------------|-------------------|---|---|---|--|-----|-----|-------|-------|-----|---------|-----|----|-----|
| S505-500-R               | 0.5                | 250               | 1500  | 0.5070                                      | 0.188*  | 295                                    | X   | X   | X     | X     | X   |         | X   |    | X   |
| S505-800-R               | 0.8                | 250               | 1500  | 0.2370                                      | 0.632*  | 189                                    | X   | X   | X     | X     | X   |         | X   |    | X   |
| S505-1-R                 | 1.0                | 250               | 1500  | 0.1570                                      | 1.28  | 176                                    | X   | X   | X     | X     | X   | X       | X   | X  | X   |
| S505-1.25-R              | 1.25               | 250               | 1500  | 0.1075                                      | 2.22  | 150                                    | X   | X   | X     | X     | X   | X       | X   | X  | X   |
| S505-1.6-R               | 1.6                | 250               | 1500  | 0.0700                                      | 6.78  | 125                                    | X   | X   | X     | X     | X   | X       | X   | X  | X   |
| S505-2-R                 | 2.0                | 250               | 1500  | 0.0545                                      | 9.6   | 118.5                                  | X   | X   | X     | X     | X   | X       | X   | X  | X   |
| S505-2.5-R               | 2.5                | 250               | 1500  | 0.0395                                      | 16.6  | 115                                    | X   | X   | X     | X     | X   | X       | X   | X  | X   |
| S505-3.15-R              | 3.15               | 250               | 1500  | 0.0305                                      | 36.6  | 102.5                                  | X   | X   | X     | X     | X   | X       | X   | X  | X   |
| S505-4-R                 | 4.0                | 250               | 1500  | 0.0185                                      | 38.45*  | 86.5                                   | X   | X   | X     | X     | X   | X       | X   | X  | X   |
| S505-5-R                 | 5.0                | 250               | 1500  | 0.0131                                      | 71.30*  | 77.5                                   | X   | X   | X     | X     | X   | X       | X   | X  | X   |
| S505-6.3-R               | 6.3                | 250               | 1500  | 0.0102                                      | 111*  | 75                                     | X   | X   | X     | X     | X   | X       | X   | X  | X   |
| S505-8-R                 | 8.0                | 250               | 1500  | 0.0077                                      | 228*  | 73                                     | X   | X   | X     | X     | X   | X       | X   | X  | X   |
| S505-10-R                | 10                 | 250               | 1500  | 0.0061                                      | 397   | 72                                     | X   | X   | X     | X     | X   | X       | X   | X  | X   |
| S505-12-R                | 12                 | 250               | 1000  | 0.0053                                      | 713.7*  | 77                                     |     | X   |       | X     |     |         |     |    |     |

- 1 Interrupting ratings 500 mA to 10 A measured at 70% to 80% PF on AC. 12 A measured at 100% PF on AC.
- 2 Typical DC cold resistance measured at <10% of rated current at an ambient temperature of +20 ° C (reference only)
- 3 Typical pre-arcing (I<sup>2</sup>t) measured at listed interrupting rating and voltage.  
\* = measured at 10 times rated current under DC.

- 4 Typical voltage drop measured at +20 ° C at rated current.
- 5 Part number definition: S505-xxx-R  
S505= Product code and size  
xxx= Ampere rating  
-R= Rohs compliant

**Dimensions (mm)**



Temperature derating curve



Time vs. current curve



## Environmental data

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

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## Ordering codes

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

## Packaging prefixes

- BK- (100 parts in a cardboard carton)
- BK1- (1,000 parts in a bag)

| Part number | Ordering codes |                 |
|-------------|----------------|-----------------|
|             | -BK option     | -BK1 option     |
| S505-500-R  | BK-S505-500-R  | BK1-S505-500-R  |
| S505-800-R  | BK-S505-800-R  | BK1-S505-800-R  |
| S505-1-R    | BK-S505-1-R    | BK1-S505-1-R    |
| S505-1.25-R | BK-S505-1-25-R | BK1-S505-1-25-R |
| S505-1.6-R  | BK-S505-1-6-R  | BK1-S505-1-6-R  |
| S505-2-R    | BK-S505-2-R    | BK1-S505-2-R    |
| S505-2.5-R  | BK-S505-2-5-R  | BK1-S505-2-5-R  |
| S505-3.15-R | BK-S505-3-15-R | BK1-S505-3-15-R |
| S505-4-R    | BK-S505-4-R    | BK1-S505-4-R    |
| S505-5-R    | BK-S505-5-R    | BK1-S505-5-R    |
| S505-6.3-R  | BK-S505-6-3-R  | BK1-S505-6-3-R  |
| S505-8-R    | BK-S505-8-R    | BK1-S505-8-R    |
| S505-10-R   | BK-S505-10-R   | BK1-S505-10-R   |
| S505-12-R   | BK-S505-12-R   | BK1-S505-12-R   |

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