

# S505H

## 5 mm x 20 mm 400 Vdc/500-600 Vac time-delay fuses



### Applications

- Power supplies - adapters
- Desktops/notebooks
- TVs / Displays
- Set top boxes
- Lighting ballasts
- Battery chargers
- Printers
- Game systems
- Air conditioners

### Product features

- 400 Vdc/500-600 Vac rating
- Time-delay, high breaking capacity
- 5 mm x 20 mm physical size
- Ceramic tube with plated end cap construction
- Designed to IEC 60127-2, Standard, Sheet 5
- RoHS Compliant, lead free and halogen free
- Optional axial leads available

| Electrical Characteristics |                   |                   |                    |       |                 |       |                  |        |
|----------------------------|-------------------|-------------------|--------------------|-------|-----------------|-------|------------------|--------|
| Amps                       | 1.5I <sub>n</sub> | 2.1I <sub>n</sub> | 2.75I <sub>n</sub> |       | 4I <sub>n</sub> |       | 10I <sub>n</sub> |        |
|                            | Min min.          | Max min.          | Min ms             | Max s | Min ms          | Max s | Min ms           | Max ms |
| <1A                        | >60               | <30               | >250               | <80   | >50             | <5    | >5               | <150   |
| 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   |

### Agency information

#### S505H-XXX-R (Ferrule)

- cURus approval: Guide JFHR2, File E56412 and Guide JFHR8, File E56412 (500 mA - 10 A)
- CCC Approval: 500 mA - 10 A, Cert. No.: 2010010207395946
- TUV Approval: 2 A - 10 A, Cert. No.: R50297821
- PSE Approval: 1 A - 5 A, Cert. No.: JET1641-31003-1017  
6.3 A - 10 A, Cert. No.: JET1641-31003-2001

#### S505H-V-XXX-R (Axial Leads)

- PSE Approval: 1 A - 5 A, Cert. No.: JET1641-31003-1018;  
6.3 A - 10 A, Cert. No.: JET1641-31003-2002
- cURus approval: Guide JFHR2, File E56412 and Guide JFHR8, File E56412 (500 mA - 10 A)
- CCC Approval: 500 mA - 10 A, Cert. No.: 2010010207395946

### Specifications

| Catalog number | Voltage rating Vac | Max. voltage rating |                  | Interrupting rating (A) under max voltage |           |         | Typical DC cold resistance Ω <sup>3</sup> | Typical voltage drop (mV) <sup>4</sup> | Typical value I <sup>2</sup> t (A <sup>2</sup> s) <sup>5</sup> | Agency approvals |                    |   |   |
|----------------|--------------------|---------------------|------------------|---|-----------|---------|---|--|--|------------------|--------------------|---|---|
|                |                    |                     |                  | 250 Vac                                   | Max Volts | 400 Vdc |   |  |  | 250 Vac          |                    |   |   |
|                |                    | TUV                 | CCC <sup>6</sup> |   |           |         |   |  |  | PSE/JET          | cURus <sup>7</sup> |   |   |
| S505H-500-R    | 250                | 600                 | 400              | 1500                                      | 100       | 1500    | 0.507                                     | 295                                    | 0.188  |                  |                    |   | x |
| S505H-800-R    | 250                | 600                 | 400              | 1500                                      | 100       | 1500    | 0.237                                     | 189                                    | 0.632  |                  |                    |   | x |
| S505H-1-R      | 250                | 600                 | 400              | 1500                                      | 100       | 1500    | 0.14                                      | 153                                    | 1.28   |                  |                    | X | x |
| S505H-1.25-R   | 250                | 600                 | 400              | 1500                                      | 100       | 1500    | 0.108                                     | 150                                    | 2.22   |                  |                    | X | x |
| S505H-1.6-R    | 250                | 600                 | 400              | 1500                                      | 100       | 1500    | 0.07                                      | 125                                    | 6.78   |                  |                    | X | x |
| S505H-2-R      | 250                | 600                 | 400              | 1500                                      | 100       | 1500    | 0.055                                     | 128                                    | 11.44  | X                | X                  | X | x |
| S505H-2.5-R    | 250                | 600                 | 400              | 1500                                      | 100       | 1500    | 0.04                                      | 126                                    | 24.23  | X                | X                  | X | x |
| S505H-3.15-R   | 250                | 600                 | 400              | 1500                                      | 100       | 1500    | 0.031                                     | 121                                    | 43.55  | X                | X                  | X | x |
| S505H-4-R      | 250                | 600                 | 400              | 1500                                      | 100       | 1500    | 0.019                                     | 90                                     | 38.45  | X                | X                  | X | x |
| S505H-5-R      | 250                | 600                 | 400              | 1500                                      | 100       | 1500    | 0.015                                     | 89                                     | 71.3   | X                | X                  | X | x |
| S505H-6.3-R    | 250                | 500                 | 400              | 1500                                      | 100       | 1500    | 0.011                                     | 80                                     | 111.4  | X                | X                  | X | x |
| S505H-8-R      | 250                | 500                 | 400              | 1500                                      | 100       | 1500    | 0.007                                     | 76                                     | 228.2  | X                |                    | X | x |
| S505H-10-R     | 250                | 500                 | 400              | 1500                                      | 100       | 1500    | 0.006                                     | 72                                     | 349.5  | X                |                    | X | x |

1. Max. voltage rating: Base on the breaking capacity test according to UL.  
 2. - Breaking capacity of 250 VAC/1500 A is tested by all agency approvals, test condition is 250 Vac, PF: 0.7-0.8.  
 - Breaking capacity of Max. voltage is tested by UL, PF:1. (500 mA - 5 A @ 600Vac, 6.3 A - 10 A @ 500 Vac)  
 - Breaking capacity test of DC is tested by UL under Capacitor Bank 4800 mF (for 400 V, 1500 A), 2400 mF (for 400 V, 500 A).

3. Cold resistance: measure at <10% rated current.  
 4. Typical voltage drop: voltage drop is measured under ambient +20 °C with rated current  
 5. Typical pre-arc I<sup>2</sup>t: Measured at 10I<sub>n</sub> DC  
 6. Does not apply to axial leaded versions.  
 7. 600/500 Vac, 400 Vdc.



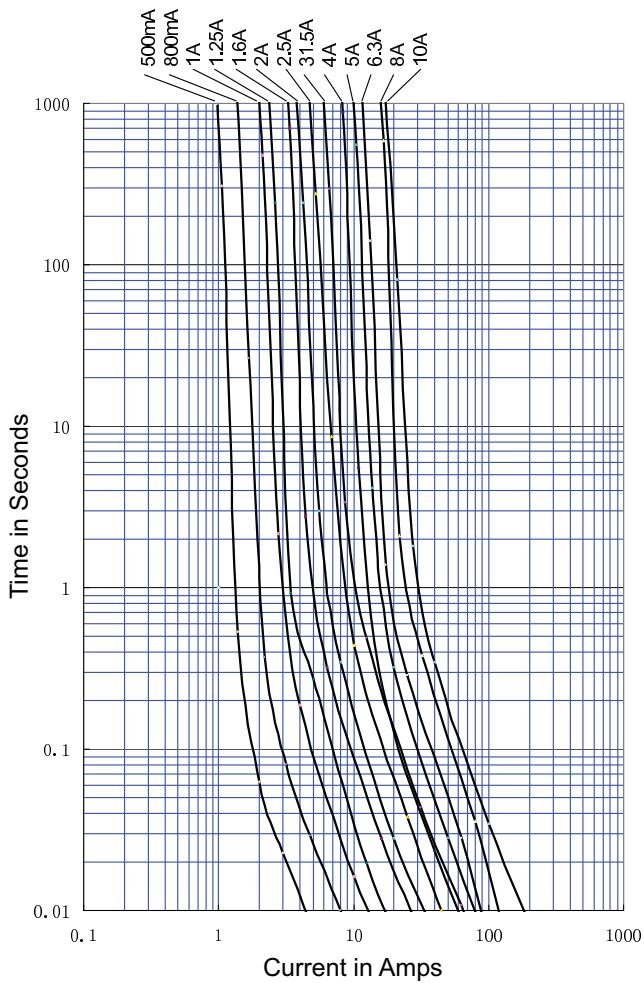
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**Dimensions - mm**



A (ref): 0.65 mm (0.5 A - 6.3 A), 0.80 mm (8 A-10 A)

**Time-Current Curves**



**Construction**



500-800mA



1-1.6 Amps



2 Amps & Above

1. Ceramic Tube
2. Wire Fuse Element
3. Plated Fuse Cap
4. Filler
5. Solder
6. Eyelet



**Axial Leaded Versions**

1. S505H-XXX-R
2. Axial Leaded Cap

**Wave Soldering Parameters (axial lead only)**

Note: These devices are NOT recommended for IR or convection reflow processes.



- Reservoir Temperature: +260°C ± 3°C
- Soldering Time: 10 seconds max.

**Recommended Hand Solder Parameters**

- Soldering Iron Tip Temperature: +350°C ± 5°C
- Heating Time: 5 seconds max.

**Operating Temperature Range**

- -55 °C to +125 °C (see temperature derating curve below for percentage of fuse rating per ambient temperature)

**Temperature Derating Curve**



| Packaging Code        |  |
|-----------------------|--|
| Packaging Code Prefix | Description  |
| BK-                   | 100 fuses packed into a cardboard carton with flaps folded         |
| BK1-                  | 1000 fuses packed into a poly bag                                  |
| TR2-                  | 1500 axial leaded fuses on tape and reel                           |
| Option Code           |  |
| Option Code           | Description  |
| -V                    | Axial leads – copper tinned wire with nickel plated brass end caps |
| -R                    | RoHS compliant version   |

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