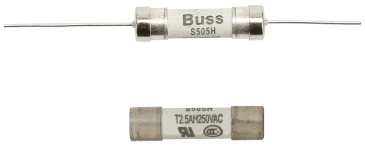
# S505H

## 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 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | $1.5I_n$ | $2.1I_n$ | $2.75I_n$ | | $4I_n$ | | $10I_n$ | |
| Amps | 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)

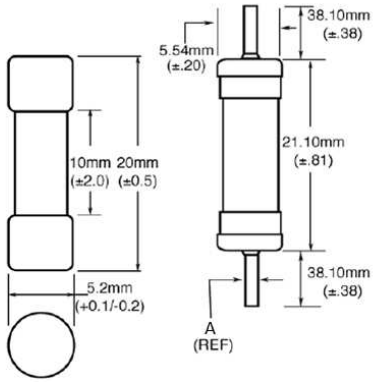
- PSE Approval: 1 A - 5 A, Cert. No.: JET1641-31003-1018; 6.3 A - 10 A, Cert. No: JET1641-31003-2002
- cURus approval: Guide JFHR2, File E56412 and Guide JFHR8, File E56412 (500 mA - 10 A)
- CCC Approval: 500 mA - 10 A, Cert. No.: 2010010207395946

### Specifications

| Catalog number | Voltage rating Vac | Max. voltage rating AC | Max. voltage rating DC | Interrupting rating (A) under max voltage 250 Vac | Interrupting rating (A) under max voltage Max Volts | Interrupting rating (A) under max voltage 400 Vdc | Typical DC cold resistance Ω[3] | Typical voltage drop (mV)[4] | Typical value $I^2t$ ($A^2s$)[5] | Agency approvals 250 Vac TUV[6] | | CCC[6] | PSE/JET | cURus[7] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 |

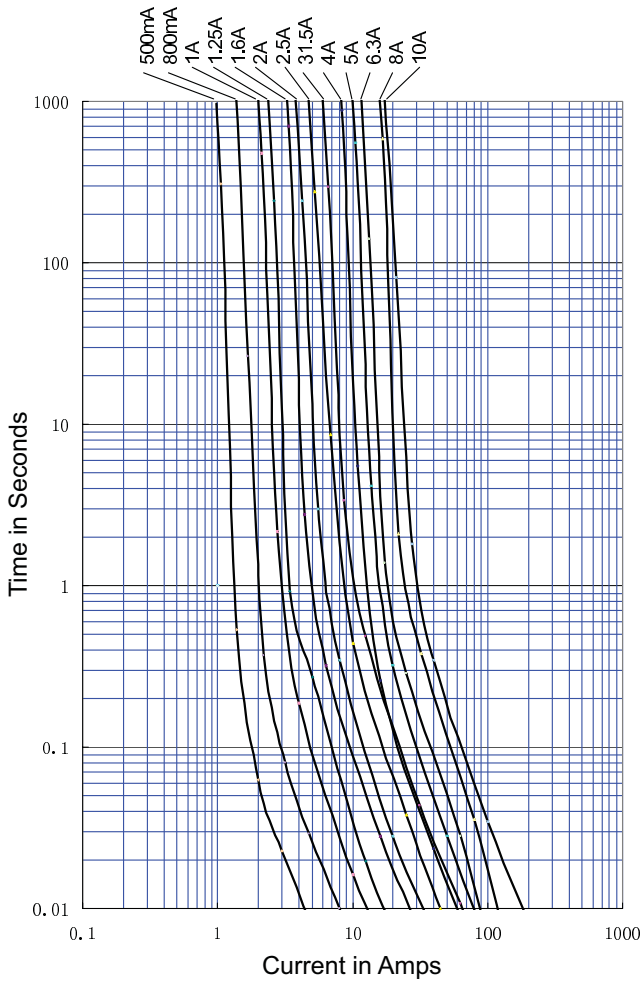
1. Max. voltage rating: Base on the breaking capacity test according to UL.
2. - Breaking capacity of 250 VAC/1500 A is tested by all agency approvals, test condition is 250 Vac, PF: 0.7-0.8.
   - Breaking capacity of Max. voltage is tested by UL, PF:1. (500 mA -5 A @ 600Vac, 6.3 A- 10 A @ 500 Vac)
   - 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 $I^2t$: Measured at 10In DC
6. Does not apply to axial leaded versions.
7. 600/500 Vac, 400 Vdc.

## Dimensions - mm

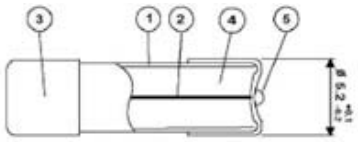



A (ref): 0.65 mm (0.5 A - 6.3 A), 0.80 mm (8 A-10 A)

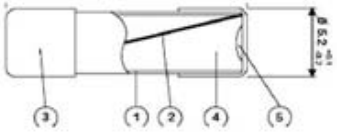
## Time-Current Curves



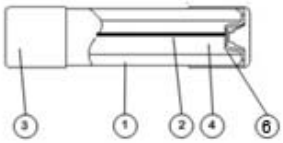

## Construction




500-800mA

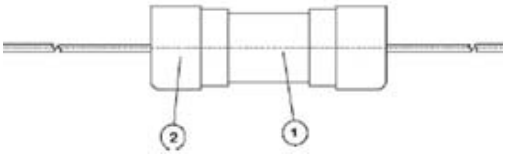



1-1.6 Amps




2 Amps & Above

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

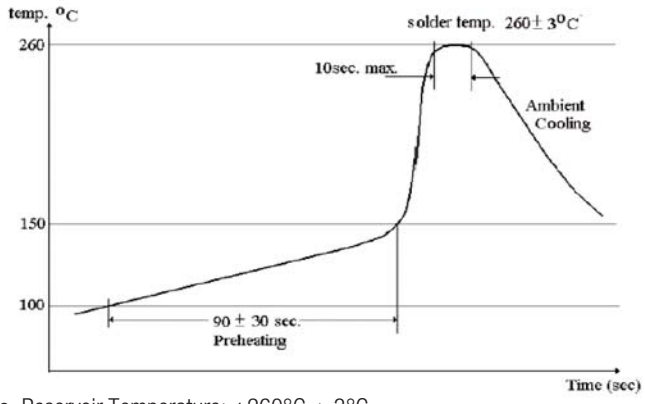



Axial Leaded Versions

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.

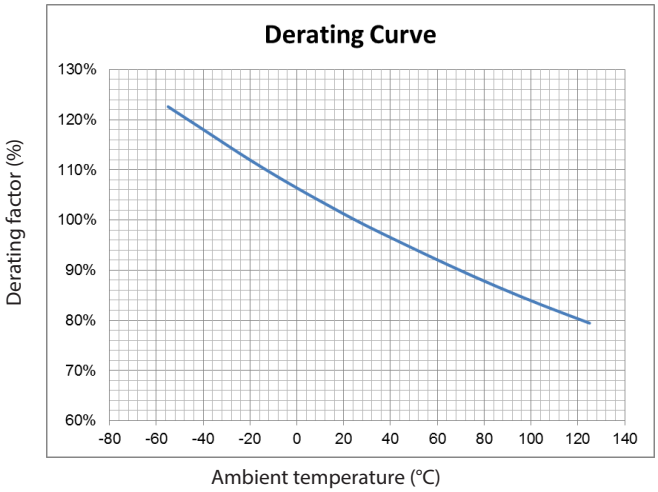
## Recommended Hand Solder Parameters

- 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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