

UHS Fuse 50 - 100A, 32/50 VDC, 8.4 x 9.4 mm



## Quick-Acting F

See below:

[Approvals and Compliances](#)

### Description

- This fuse was specially developed for SELV applications with high rated currents for highest breaking capacity demands. Thanks to its design, the fuses tripping time minimizes excessive temperature dissipation at 2x rated current.

### Unique Selling Proposition

- High breaking capacity up to 2000A
- Safe tripping in 10s at twice the rated current
- High range of operating temperature
- Small component height of 4.7 mm

### Applications

- Automotive
- Telecom equipment
- Datacenter appliances
- Power tools

### Weblinks

[pdf data sheet](#), [html datasheet](#), [General Product Information](#), [Distributor-Stock-Check](#), [Detailed request for product](#)

### Technical Data

|                          |                                                                                                             |
|--------------------------|-------------------------------------------------------------------------------------------------------------|
| Rated current            | 50-100 A                                                                                                    |
| Breaking Capacity        | 2000 A                                                                                                      |
| Characteristic           | Quick-Acting F                                                                                              |
| Mounting                 | PCB,SMT                                                                                                     |
| Admissible Ambient Temp. | -55 °C to 125 °C                                                                                            |
| Material: Housing        | Polyphthalamid                                                                                              |
| Material: Terminals      | Ni/Sn-Plated Copper Alloy                                                                                   |
| Unit Weight              | 0.53 g                                                                                                      |
| Storage Conditions       | 0 °C to 40 °C, max. 70% r.h.                                                                                |
| Product Marking          |  , Marking, gR, Lot Code |

|                              |                                                      |
|------------------------------|------------------------------------------------------|
| Soldering Methods            | Reflow<br><a href="#">Soldering Profile</a>          |
| Solderability                | J-STD-002, Method B1 & Method D                      |
| Resistance to Soldering Heat | MIL-STD-202 Method 210, Condition K                  |
| Resistance to Soldering Heat | 260 °C / 30sec acc. to IPC/JEDEC J-STD-020D, Level 1 |
| Flammability                 | UL 94V-0                                             |
| Operational Time             | MIL-STD-202, Method 108                              |
| Load Humidity Test           | MIL-STD-202, Method 103                              |
| Vibration, High Frequency    | MIL-STD-202, Method 204                              |
| Mechanical Shock             | MIL-STD-202, Method 213 Condition C                  |
| Resistance to Solvents       | MIL-STD-202, Method 215                              |
| Temperature Cycling          | JESD22-A104                                          |
| Board Flex                   | AEC-Q200-005                                         |
| Terminal Strength            | AEC-Q200-006                                         |

## Approvals and Compliances

Detailed information on product approvals, code requirements, usage instructions and detailed test conditions can be looked up in [Details about Approvals](#)

SCHURTER products are designed for use in industrial environments. They have approvals from independent testing bodies according to national and international standards. Products with specific characteristics and requirements such as required in the automotive sector according to IATF 16949, medical technology according to ISO 13485 or in the aerospace industry can be offered exclusively with customer-specific, individual agreements by SCHURTER.

### Approvals

The approval mark is used by the testing authorities to certify compliance with the safety requirements placed on electronic products.

Approval Reference Type: UHS

| Approval Logo                                                                       | Certificates                 | Certification Body | Description             |
|-------------------------------------------------------------------------------------|------------------------------|--------------------|-------------------------|
|  | <a href="#">UL Approvals</a> | UL                 | UR File Number: E531402 |

Product standards

Product standards that are referenced

| Organization                                                                     | Design                | Standard                | Description                                      |
|----------------------------------------------------------------------------------|-----------------------|-------------------------|--------------------------------------------------|
|  | Designed according to | UL 248-13               | Low voltage fuses - Part 13: Semiconductor fuses |
|  | Designed according to | CSA C22.2 No. 248.13:22 | Low voltage fuses - Part 13: Semiconductor fuses |

Compliances

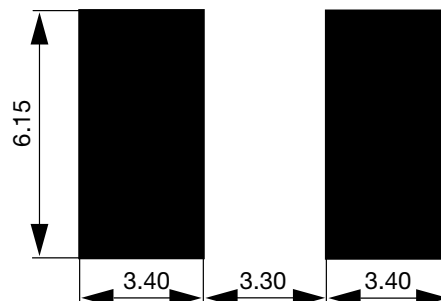
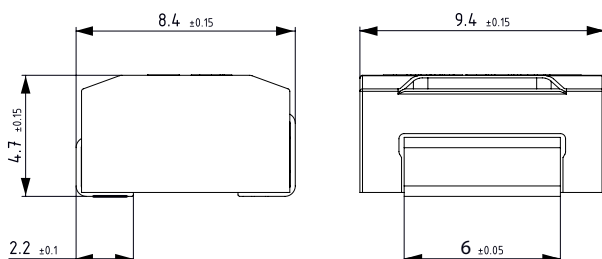
The product complies with following Guide Lines

| Identification                                                                   | Details                                        | Initiator   | Description                                                                                                                                                                                           |
|----------------------------------------------------------------------------------|------------------------------------------------|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <a href="#">CE declaration of conformity</a>   | SCHURTER AG | The CE marking declares that the product complies with the applicable requirements laid down in the harmonisation of Community legislation on its affixing in accordance with EU Regulation 765/2008. |
|  | <a href="#">UKCA declaration of conformity</a> | SCHURTER AG | The UKCA marking declares that the product complies with the applicable requirements laid down in the British Amendment of Regulation (EC) 765/2008.                                                  |
|  | RoHS                                           | SCHURTER AG | Directive RoHS 2011/65/EU, Amendment (EU) 2015/863                                                                                                                                                    |
|  | China RoHS                                     | SCHURTER AG | The law SJ / T 11363-2006 (China RoHS) has been in force since 1 March 2007. It is similar to the EU directive RoHS.                                                                                  |
|  | Halogen Free                                   | SCHURTER AG | SCHURTER strives to offer our customers halogen free products.                                                                                                                                        |
|  | REACH                                          | SCHURTER AG | On 1 June 2007, Regulation (EC) No 1907/2006 on the Registration, Evaluation, Authorization and Restriction of Chemicals 1 (abbreviated as "REACH") entered into force.                               |
|  | Automotive                                     | SCHURTER AG | AEC-Q200 is a test standard for passive components used in automotive applications. SCHURTER tests components according to the customer's agreement and is certified according to IATF 16949.         |

Dimension [mm]

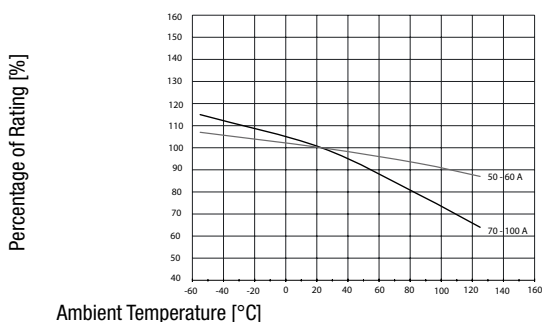
8.4 mm

Reflow soldering pads



Derating Curves

Temperature Derating

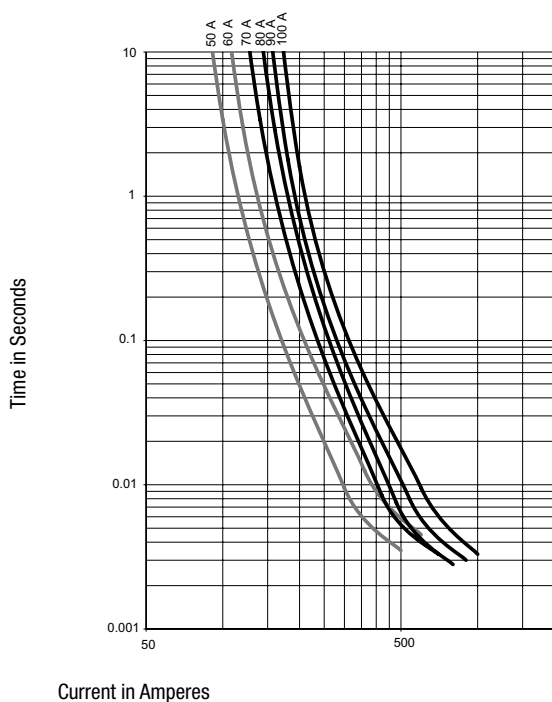


## Pre-Arcing Time

Rated Current  $I_n$     1.0 x  $I_n$  min.    2.0 x  $I_n$  max.    10.0 x  $I_n$  min.    10.0 x  $I_n$  max.

|              |     |      |      |       |
|--------------|-----|------|------|-------|
| 50 A - 100 A | 4 h | 10 s | 1 ms | 10 ms |
|--------------|-----|------|------|-------|

## Time-Current-Curves



## Variants

| Rated Current [A] | Rated Voltage [VDC] | Marking  | Breaking Capacity | Voltage Drop 1.0 $I_n$ typ. [mV] | Cold Resistance typ. [mΩ] | Melting $I^2t$ 10.0 $I_n$ typ. [A²s] | Packaging unit | Order Number |
|-------------------|---------------------|----------|-------------------|----------------------------------|---------------------------|--------------------------------------|----------------|--------------|
| 50                | 32                  | UHS 50A  | 1)                | 110                              | 1.82                      | 800                                  | 100            | 3-140-167    |
| 50                | 32                  | UHS 50A  | 1)                | 110                              | 1.82                      | 800                                  | 1000           | 3-140-168    |
| 60                | 32                  | UHS 60A  | 1)                | 115                              | 1.5                       | 1400                                 | 100            | 3-140-169    |
| 60                | 32                  | UHS 60A  | 1)                | 115                              | 1.5                       | 1400                                 | 1000           | 3-140-170    |
| 70                | 50                  | UHS 70A  | 2)                | 90                               | 1.03                      | 1500                                 | 100            | 3-140-171    |
| 70                | 50                  | UHS 70A  | 2)                | 90                               | 1.03                      | 1500                                 | 1000           | 3-140-172    |
| 80                | 50                  | UHS 80A  | 2)                | 95                               | 0.88                      | 1700                                 | 100            | 3-140-173    |
| 80                | 50                  | UHS 80A  | 2)                | 95                               | 0.88                      | 1700                                 | 1000           | 3-140-174    |
| 90                | 50                  | UHS 90A  | 2)                | 105                              | 0.77                      | 2300                                 | 100            | 3-140-175    |
| 90                | 50                  | UHS 90A  | 2)                | 105                              | 0.77                      | 2300                                 | 1000           | 3-140-176    |
| 100               | 50                  | UHS 100A | 2)                | 110                              | 0.71                      | 3200                                 | 100            | 3-140-177    |
| 100               | 50                  | UHS 100A | 2)                | 110                              | 0.71                      | 3200                                 | 1000           | 3-140-178    |

Availability for all products can be searched real-time: <https://www.schurter.com/en/info-center/support-tools/stock-check-distributors>

Breaking Capacity:

1) 1000 A @ 32 VDC, 1300 A @ 24 VDC, 1500 A @ 16 VDC

2) 600 A @ 50 VDC, 1000 A @ 32 VDC, 1300 A @ 24 VDC, 2000 A @ 16 VDC

All measurements are carried out on a test board according to IEC 60127, track width 22 mm, Cu layer 210 µm.

## Packaging Unit

acc. IEC 60286-3 Type 2a

1000 pcs. in tape [W: 24mm and P1: 12mm] on reel [A: 33cm]

100 pcs. in tape [W: 24mm and P1: 12mm] in ESD plastic bag