

Surface Mount Fuse, 3.2 x 1.6 mm, Quick-Acting F, 32 VAC, 63 VDC



IEC 60127-4 · 32 VAC · 63 VDC · Quick-Acting F



#### Description

- IEC characteristic
- High melting I<sup>2</sup>t-values
- Impermeable to potting compound

#### Standards

- IEC 60127-4/2
- UL 248-14
- CSA C22.2 no. 248.14

#### Approvals

- VDE Certificate Number: 40017666
- UL File Number: E41599

#### Applications

- Secondary Protection DC and AC
- Circuits with inrush
- Industrial electronic

#### References

[Packaging Details](#)

#### Weblinks

[pdf-datasheet](#), [html-datasheet](#), [General Product Information](#), [Approvals](#), [CE declaration of conformity](#), [RoHS](#), [CHINA-RoHS](#), [REACH](#), [e-Shop](#), [SCHURTER-Stock-Check](#), [Distributor-Stock-Check](#), [Detailed request for product](#)

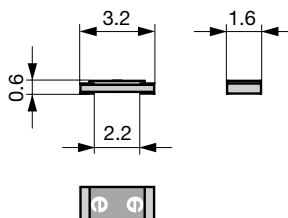
#### Technical Data

|                              |                               |
|------------------------------|-------------------------------|
| Rated Voltage                | 32 VAC, 63 VDC                |
| Rated current                | 0.5 - 6.3 A                   |
| Breaking Capacity            | 63 A                          |
| Characteristic               | Quick-Acting F                |
| Mounting                     | PCB,SMT                       |
| Admissible Ambient Air Temp. | -55 °C to 90 °C               |
| Climatic Category            | 55/090/21 acc. to IEC 60068-1 |
| Material: Housing            | Epoxyd Glass                  |
| Material: Terminals          | Copper, Ni/Au-plated          |
| Unit Weight                  | 0.006 g                       |
| Storage Conditions           | 0 °C to 60 °C, max. 70% r.h.  |
| Product Marking              | Letter (see variants)         |

|                              |                                                                  |
|------------------------------|------------------------------------------------------------------|
| Soldering Methods            | Reflow, Wave (0.5 A variant only)                                |
| Solderability                | 250 °C / 3 sec acc. to IEC 60068-2-58, Test Td                   |
| Resistance to Soldering Heat | 260 +0/-5 °C / 30 sec acc. to IPC/JEDEC J-STD-020D, Level 1      |
| Moisture Resistance Test     | MIL-STD-202, Method 106E (50 cycles in a temp./mister chamber)   |
| Terminal Strength            | MIL-STD-202, Method 211A (Deflection of board 1 mm for 1 minute) |
| Case Resistance              | acc. to EIA/IS-722, Test 4.7 >100 MΩ (between leads and body)    |
| Resistance to Solvents       | MIL-STD-202, Method 215A                                         |
| Flammability                 | UL 94V-1 (acc. to EIA/IS-722, Test 4.12)                         |

#### Dimension

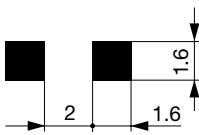
3.2 mm



Reflow soldering pads



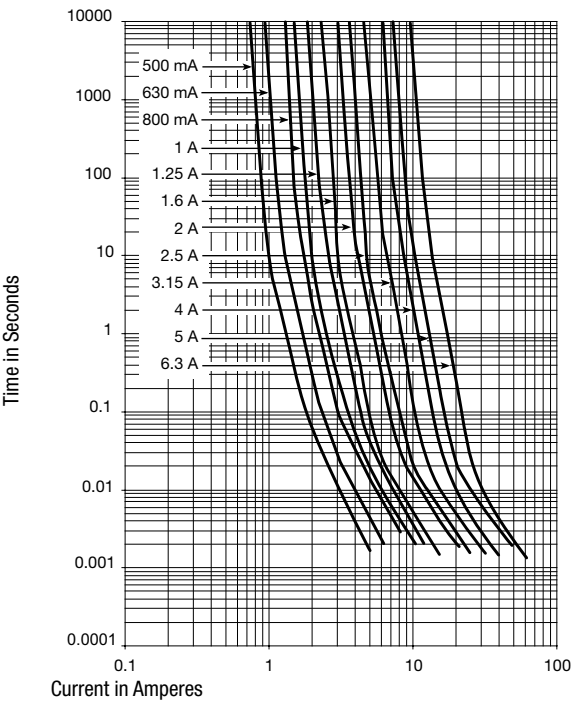
Wave soldering pads



Pre-Arcing Time

| Rated Current In | 1.25 x In min | 2.0 x In max | 10.0 x In min | 10.0 x In max |
|------------------|---------------|--------------|---------------|---------------|
| 0.5 A - 6.3 A    | 60 min        | 120 s        | 1 ms          | 10 ms         |

Time-Current-Curves



## All Variants

| Rated Cur-<br>rent [A] | Rated Vol-<br>tage [VAC] | Rated Vol-<br>tage [VDC] | Marking | Breaking<br>Capacity | Voltage Drop<br>1.0 In max.<br>[mV] | Voltage Drop<br>1.0 In typ.<br>[mV] | Cold Resi-<br>stance typ.<br>[mΩ] | Melting I <sup>2</sup> t<br>10.0 Intyp.<br>[A <sup>2</sup> s] |   | Order Number |
|------------------------|--------------------------|--------------------------|---------|----------------------|-------------------------------------|-------------------------------------|-----------------------------------|---------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| 0.5                    | 32                       | 63                       | e       | 1)                   | 600                                 | 201                                 | 330                               | 0.041                                                         | ● ●                                                                                                                                                                     | 3413.0213.xx |
| 0.63                   | 32                       | 63                       | f       | 1)                   | 500                                 | 170                                 | 230                               | 0.076                                                         | ● ●                                                                                                                                                                     | 3413.0214.xx |
| 0.8                    | 32                       | 63                       | g       | 1)                   | 400                                 | 110                                 | 116                               | 0.18                                                          | ● ●                                                                                                                                                                     | 3413.0215.xx |
| 1                      | 32                       | 63                       | h       | 1)                   | 300                                 | 108                                 | 94.2                              | 0.2                                                           | ● ●                                                                                                                                                                     | 3413.0216.xx |
| 1.25                   | 32                       | 63                       | i       | 1)                   | 300                                 | 96.3                                | 67                                | 0.31                                                          | ● ●                                                                                                                                                                     | 3413.0217.xx |
| 1.6                    | 32                       | 63                       | k       | 1)                   | 300                                 | 94.5                                | 50.5                              | 0.33                                                          | ● ●                                                                                                                                                                     | 3413.0218.xx |
| 2                      | 32                       | 63                       | m       | 1)                   | 300                                 | 80.2                                | 33.9                              | 0.79                                                          | ● ●                                                                                                                                                                     | 3413.0219.xx |
| 2.5                    | 32                       | 63                       | n       | 1)                   | 300                                 | 78.8                                | 25.3                              | 0.94                                                          | ● ●                                                                                                                                                                     | 3413.0220.xx |
| 3.15                   | 32                       | 63                       | p       | 1)                   | 300                                 | 65.5                                | 17.2                              | 1.44                                                          | ● ●                                                                                                                                                                     | 3413.0221.xx |
| 4                      | 32                       | 63                       | r       | 1)                   | 300                                 | 62.8                                | 12.5                              | 2.74                                                          | ● ●                                                                                                                                                                     | 3413.0222.xx |
| 5                      | 32                       | 63                       | s       | 1)                   | 300                                 | 61.6                                | 9.6                               | 4.65                                                          | ● ●                                                                                                                                                                     | 3413.0223.xx |
| 6.3                    | 32                       | 63                       | t       | 1)                   | 300                                 | 55.3                                | 7.1                               | 4.84                                                          | ● ●                                                                                                                                                                     | 3413.0224.xx |

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1) UL: 63 A @ 32 VAC, 63 A @ 63 VDC

1) Additional internal testing: 150 A @ 24 VAC/DC, 400 A @ 12 VDC, 600 A @ 9 VDC

## Packaging Unit

.xx = .11 Blister Tape of 100 pcs. in Plastic Bag  
.xx = .22 Blister Tape 18 cm Reel (1000 pcs.)  
.xx = .24 Blister Tape 25.4 cm Reel (5000 pcs.)  
.xx = .26 Blister Tape 33 cm Reel (15000 pcs.)