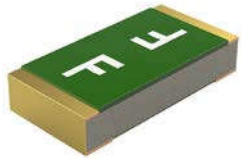
Surface Mount Fuse, 3.2 x 1.6 mm, Super-Quick-Acting FF, 32 VAC, 63 VDC



Exemplary part photo depending on part no.

UL 248-14 · 125 VAC · 125 VDC · Super-Quick-Acting FF

See below:
Approvals and Compliances

Description

- UL characteristic
- Low melting I²t-values, fast interruption
- Impermeable to potting compound

Applications

- Secondary Protection DC and AC
- Circuits without inrush
- Semiconductor protection

Weblinks

pdf data sheet, html datasheet, General Product Information, Distributor-Stock-Check, Detailed request for product, Microsite

Technical Data

Rated Voltage	32 - 125 VAC, 63 - 125 VDC
Rated current	0.375 - 4 A
Breaking Capacity	50 A
Characteristic	Super-Quick-Acting FF
Mounting	PCB,SMT
Admissible Ambient Air Temp.	-55 °C to 90 °C
Climatic Category	55/090/21 acc. to IEC 60068-1
Material: Housing	Fiber-reinforced plastic, UL 94V-0
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 Soldering Profile
Solderability	245 °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 Sensitivity Level	MSL 1, J-STD-020
Case Resistance	acc. to EIA/IS-722, Test 4.7 >100 MΩ (between leeds and body)
Flammability	min. UL 94V-1 (acc. to EIA/IS-722, Test 4.12)
Moisture Resistance Test	MIL-STD-202, Method 106 (50 cycles in a temp./mister chamber)
Resistance to Solvents	MIL-STD-202, Method 215
Terminal Strength	MIL-STD-202, Method 211A (Deflection of board 1 mm for 1 minute)

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: USF 1206

Approval Logo	Certificates	Certification Body	Description
c UL us	UL Approvals	UL	UR File Number: E41599

Product standards

Product standards that are referenced

Organization	Design	Standard	Description
	Designed according to	UL 248-14	Low voltage fuses - Part 14: Additional fuses
	Designed according to	CSA22.2 No. 248.14	Low-Voltage Fuses - Part 14: Supplemental Fuses

Application standards

Application standards where the product can be used

Organization	Design	Standard	Description
	Designed for applications acc.	IEC/UL 62368-1	Audio/video, information and communication technology equipment - Part 1: Safety requirements

Compliances

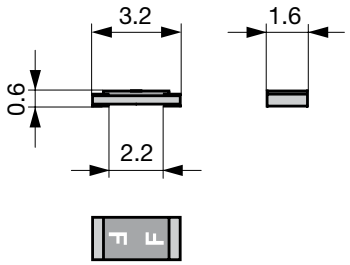
The product complies with following Guide Lines

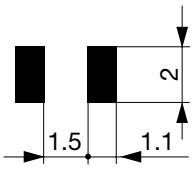
Identification	Details	Initiator	Description
	CE declaration of conformity	SCHURTER AG	The CE marking declares that the product complies with the applicable requirements laid down in the harmonisation of Community legislation on its affixing in accordance with EU Regulation 765/2008.
	UKCA declaration of conformity	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.

Dimension [mm]

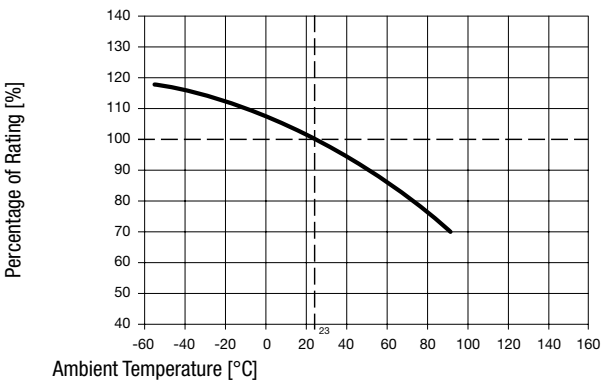
3.2 mm

Reflow soldering pads





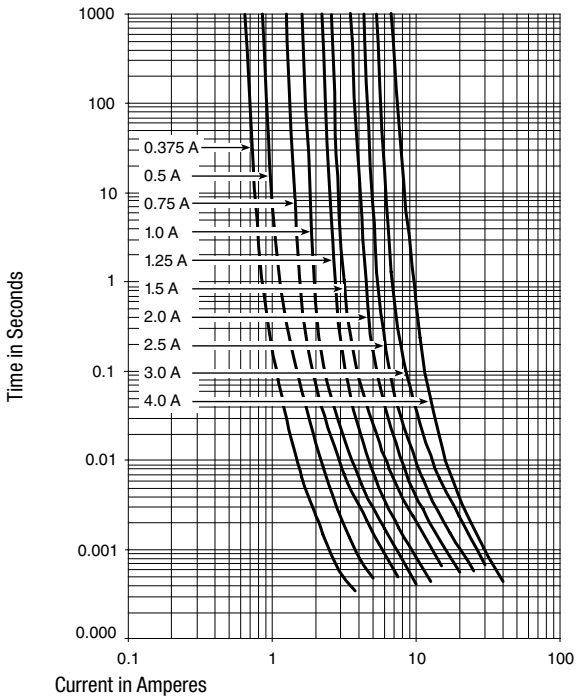
Derating Curves



Pre-Arcing Time

Rated Current In	1.0 x In min.	2.0 x In max.
0.375 A - 4 A	4 h	60 s

Time-Current-Curves



All Variants

Rated Current [A]	Rated Voltage [VAC]	Rated Voltage [VDC]	Marking	Breaking Capacity	Voltage Drop 1.0 I_n typ. [mV]	Cold Resistance typ. [mΩ]	Melting I^2t 8.0 I_n typ. [A^2s]	cULus	Order Number	
0.375	125	125	E	1)	140	360	0.005	●	3413.0112.11	▮
0.375	125	125	E	1)	140	360	0.005	●	3413.0112.22	▮
0.375	125	125	E	1)	140	360	0.005	●	3413.0112.24	
0.375	125	125	E	1)	140	360	0.005	●	3413.0112.26	
0.5	125	125	F	1)	125	200	0.012	●	3413.0113.11	
0.5	125	125	F	1)	125	200	0.012	●	3413.0113.22	▮
0.5	125	125	F	1)	125	200	0.012	●	3413.0113.24	
0.5	125	125	F	1)	125	200	0.012	●	3413.0113.26	
0.75	32	63	G	2)	125	135	0.029	●	3413.0114.11	
0.75	32	63	G	2)	125	135	0.029	●	3413.0114.22	▮
0.75	32	63	G	2)	125	135	0.029	●	3413.0114.24	
0.75	32	63	G	2)	125	135	0.029	●	3413.0114.26	
1	32	63	H	2)	100	85	0.042	●	3413.0115.11	
1	32	63	H	2)	100	85	0.042	●	3413.0115.22	▮
1	32	63	H	2)	100	85	0.042	●	3413.0115.24	
1	32	63	H	2)	100	85	0.042	●	3413.0115.26	
1.25	32	63	J	2)	80	50	0.069	●	3413.0116.11	
1.25	32	63	J	2)	80	50	0.069	●	3413.0116.22	
1.25	32	63	J	2)	80	50	0.069	●	3413.0116.24	
1.25	32	63	J	2)	80	50	0.069	●	3413.0116.26	
1.5	32	63	K	2)	80	45	0.15	●	3413.0117.11	
1.5	32	63	K	2)	80	45	0.15	●	3413.0117.22	▮
1.5	32	63	K	2)	80	45	0.15	●	3413.0117.24	

Rated Current [A]	Rated Voltage [VAC]	Rated Voltage [VDC]	Marking	Breaking Capacity	Voltage Drop 1.0 I_n typ. [mV]	Cold Resistance typ. [mΩ]	Melting I^2t 8.0 I_n typ. [A^2s]	cULus	Order Number	
1.5	32	63	K	2)	80	45	0.15	●	3413.0117.26	
2	32	63	N	2)	70	30	0.23	●	3413.0119.11	
2	32	63	N	2)	70	30	0.23	●	3413.0119.22	▮
2	32	63	N	2)	70	30	0.23	●	3413.0119.24	
2	32	63	N	2)	70	30	0.23	●	3413.0119.26	
2.5	32	63	O	2)	70	25	0.37	●	3413.0120.11	▮
2.5	32	63	O	2)	70	25	0.37	●	3413.0120.22	▮
2.5	32	63	O	2)	70	25	0.37	●	3413.0120.24	
2.5	32	63	O	2)	70	25	0.37	●	3413.0120.26	
3	32	63	P	2)	70	20	0.63	●	3413.0121.11	
3	32	63	P	2)	70	20	0.63	●	3413.0121.22	▮
3	32	63	P	2)	70	20	0.63	●	3413.0121.24	
3	32	63	P	2)	70	20	0.63	●	3413.0121.26	
4	32	63	S	2)	60	13	0.72	●	3413.0123.11	
4	32	63	S	2)	60	13	0.72	●	3413.0123.22	▮
4	32	63	S	2)	60	13	0.72	●	3413.0123.24	
4	32	63	S	2)	60	13	0.72	●	3413.0123.26	

▮ Most Popular.

Availability for all products can be searched real-time:https://www.schurter.com/en/Stock-Check/Stock-Check-SCHURTER

1) UL: 50 A @ 125 VAC/DC

2) UL: 50 A @ 32 VAC / 50 A @ 63 VDC

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

Packaging Unit
acc. IEC 60286-3 Type 2a

.xx = .11	100 pcs. in tape in ESD-plastic bag
.xx = .22	1000 pcs. in tape [W: 8mm and P1: 4mm] on reel [A: 18cm]
.xx = .24	5000 pcs. in tape [W: 8mm and P1: 4mm] on reel [A: 33cm]
.xx = .26	15000 pcs. in tape [W: 8mm and P1: 4mm] on reel [A: 33cm]

21.03.2022

The specifications, descriptions and illustrations indicated in this document are based on current information. All content is subject to modifications and amendments. Information furnished is believed to be accurate and reliable. However, users should independently evaluate the suitability and test each product selected for their own applications.