

**PulseGuard®
SMT ESD
Suppressor**



PulseGuard ESD suppressor provides protection for electronic devices against the threat of electrostatic discharge (ESD). Employing a voltage variable material to switch between high resistance and low resistance states, shunting ESD transients away from sensitive circuitry in applications like USB, IEEE1394, HDMI and DVI. PulseGuard suppressor complies with ESD specification IEC 61000-4-2.

0402 Specifications:

- **Continuous Operating Voltage:** 12VDC maximum
- **Clamping Voltage (2):** 250V typical
- **Peak Trigger Voltage (1):** 1,000V typical
- **Capacitance:** 0.04pF (test frequency 250MHz)
- **Leakage Current:** <1nA (12VDC test voltage)
- **Operating Temperature Range:** -65°C - 125°C
- **ESD Pulse Withstand:** 100 pulses minimum

0603 Specifications:

- **Continuous Operating Voltage:** 24VDC, maximum
- **Clamping Voltage (2):** 150V typical
- **Peak Trigger Voltage (1):** 500V typical
- **Capacitance:** 0.06pF (test frequency 250MHz)
- **Leakage Current:** <1nA (6VDC test voltage)
- **Operating Temperature Range:** -65°C - 125°C
- **ESD Pulse Withstand:** 1,000 pulses minimum

SOT-23 Specifications:

- **Continuous Operating Voltage:** 24VDC, maximum
- **Clamping Voltage (2):** 150V typical
- **Peak Trigger Voltage (1):** 500V typical
- **Capacitance:** 0.12pF (test frequency 250MHz)
- **Leakage Current:** <1nA (6VDC test voltage)
- **Operating Temperature Range:** -65°C - 125°C
- **ESD Pulse Withstand:** 1,000 pulses minimum

(4)0805 Specifications:

- **Continuous Operating Voltage:** 24VDC, maximum
- **Clamping Voltage (2):** 150V typical
- **Peak Trigger Voltage (1):** 500V typical
- **Capacitance:** 0.055pF (test frequency 250MHz)
- **Leakage Current:** <1nA (6VDC test voltage)
- **Operating Temperature Range:** -65°C - 125°C
- **ESD Pulse Withstand:** 1,000 pulses minimum

Notes: (1) Measured per IEC 61000-4-2 8kV contact discharge, (2) IEC61000-4-2 8kV contact discharge after 25ns

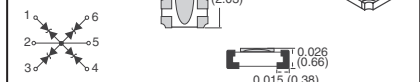
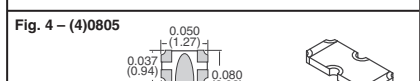
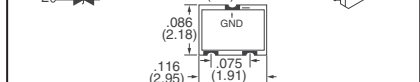
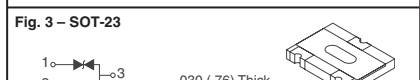
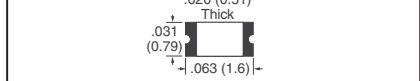
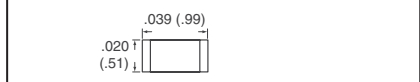
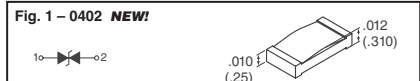


Fig.	Digi-Key Part No.	Cut Tape Price Each	Tape & Reel Pricing	Littelfuse Part No.
1	F2862CT-ND†	1.19 1.09	3950.00/10,000	PGB1010402ZKR
2	F2594CT-ND	.82 .76	316.00/1,000	PGB1010603MR
3	F2596CT-ND	1.43 1.32	1569.00/3,000	PGB102ST23WR
4	F2595CT-ND	2.42 2.23	935.00/1,000	PGB1040805MR

† NEW! ‡ For Tape and Reel part number change CT-ND to TR-ND.

**TeleLink®
Fuse "0461"
Series**

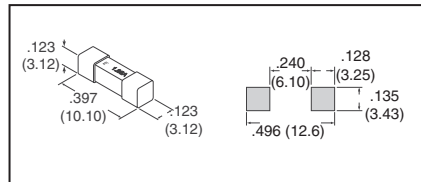


Surface mount overcurrent protection from power cross and allows compliance with lightning surges. Meets UL 60950 3rd Edition (formerly UL 1459) power cross requirements stand alone.

Designed to allow compliance with Bellcore/Telcordia GR-1089-CORE and TIA-968-A surge specifications.

Specifications:

- **Voltage Ratings:** 600V
- **Operating Temperature Range:** -55°C - 125°C
- **Materials:** Body: Ceramic; Terminations: Silver Plated Brass Caps
- **Soldering Parameters:** Reflow Solder -230°C, 30 seconds maximum. Wave solder -260°C, 3 seconds maximum
- **Packaging Specifications:** 24mm Tape and Reel per EIA-RS481. (IEC 286 part 3); 2500 fuses per reel



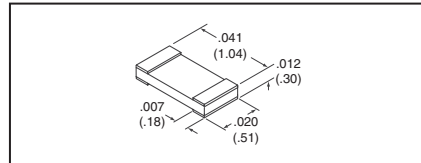
% of Amp. Rating	Opening Time (Minimum/Maximum)
100%	4 hours, minimum
250%	1 sec. minimum; 120 maximum

Amp Rate	Digi-Key Part No.	Cut Tape Price Each	Tape & Reel Pricing
0461 Series			
.5	F1449CT-ND	1.76 1.62 1.36	F1449TR-ND 641.00/M
1.25	F1550CT-ND	1.76 1.62 1.36	F1550TR-ND 641.00/M
2.00	F1551CT-ND	1.76 1.62 1.36	F1551TR-ND 641.00/M

**"0402" (1005)
SlimLine™
Very Fast Acting
Thin-Film 0435 Series**



Specifications:
• **Operating Temperature:** -55°C - 90°C • **Voltage Rating:** 32V
• **Materials:** Body: Epoxy Substrate; Terminations: Copper/Nickel/Tin-Lead Cover Coat: Conformal Coating • **Soldering Parameter:** Reflow Solder -260°C, 30 seconds maximum • **Packaging Specification:** 8mm Paper Tape and Reel per EIA-RS481-1 (IEC 286, part 3); 10,000 per reel. • **Interrupting Ratings:** 35A at 24 V AC/DC



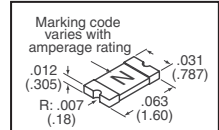
% of Amp. Rating	Opening Time (Minimum/Maximum)
100%	4 hours, minimum
200%	5 Sec., maximum
300%	0.2 Sec., maximum

Amp Rate	Digi-Key Part No.	Cut Tape Price Each	Tape & Reel Pricing
0435 Series - Very Fast Acting			
.250	F1440CT-ND	1.22 1.12 .94	F1440TR-ND 405.00/M
.375	F1441CT-ND	1.22 1.12 .94	F1441TR-ND 405.00/M
.500	F1442CT-ND	1.22 1.12 .94	F1442TR-ND 405.00/M
.750	F1443CT-ND	1.22 1.12 .94	F1443TR-ND 405.00/M
1.00	F1444CT-ND	1.22 1.12 .94	F1444TR-ND 405.00/M
1.25	F1445CT-ND	1.22 1.12 .94	F1445TR-ND 405.00/M
1.50	F1446CT-ND	1.22 1.12 .94	F1446TR-ND 405.00/M
1.75	F1447CT-ND	1.22 1.12 .94	F1447TR-ND 405.00/M
2.00	F1448CT-ND	1.22 1.12 .94	F1448TR-ND 405.00/M

**"0603" (1608) SlimLine™
Very Fast Acting
Thin-Film 0467 Series**



SlimLine 0603 Lead Free complies with electronic industry environmental standards for lead reduction. Alloy based element construction provides superior inrush withstand characteristics (I²t) over ceramic or glass based 0603 fuse products.



Specifications: • **Voltage Rating:** 32V AC/DC • **Construction Material:** Body: Advanced High Temperature Substrate; Terminations: Copper/Nickel/100% Tin; Element Cover Coat: Conformal Coating
• **Interrupting Ratings:** 50A at 32V AC/DC (0.25 - 1A), 35A at 32V AC/DC (1.25 - 5A) • **Operating Temperature:** -55°C - 90°C • **Tape and Reel Specifications:** 8mm wide reels that are in compliance with EIA-RS481-2 (IEC 286, part 3)

% of Amp. Rating	Opening Time at 25°C
100%	4 hours, minimum
200%	5 sec., maximum
300%	0.2 sec., maximum

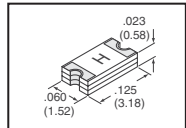
Amp Rate	Marking Code	Digi-Key Part No.	Cut Tape Price Each	Tape & Reel Pricing
0467 Series				
.250	D	F1389CT-ND*	1.02 .94 .79	F1389TR-ND 352.00/M
.375	E	F1390CT-ND*	1.02 .94 .79	F1390TR-ND 352.00/M
.500	F	F1391CT-ND*	1.02 .94 .79	F1391TR-ND 352.00/M
.750	G	F1392CT-ND*	1.02 .94 .79	F1392TR-ND 352.00/M
1.00	H	F1393CT-ND*	1.02 .94 .79	F1393TR-ND 352.00/M
1.25	J	F1394CT-ND*	1.02 .94 .79	F1394TR-ND 352.00/M
1.50	K	F1395CT-ND*	1.02 .94 .79	F1395TR-ND 352.00/M
1.75	L	F1396CT-ND*	1.02 .94 .79	F1396TR-ND 352.00/M
2.00	N	F1397CT-ND*	1.02 .94 .79	F1397TR-ND 352.00/M
2.50	O	F1398CT-ND*	1.02 .94 .79	F1398TR-ND 352.00/M
3.00	P	F1399CT-ND*	1.02 .94 .79	F1399TR-ND 352.00/M
3.50	R	F1400CT-ND*	1.02 .94 .79	F1400TR-ND 352.00/M
4.00	S	F1401CT-ND*	1.02 .94 .79	F1401TR-ND 352.00/M
5.00	T	F1402CT-ND*	1.02 .94 .79	F1402TR-ND 352.00/M

• **467-KIT-ND Digi-Key® 467 Series Fuse**
Very Fast Acting Slim Line™ Lead Free
10 each of parts indicated, plus a plastic storage box\$99.95

**"1206" (3216) Lead-Free
SlimLine™ Very Fast
Acting and Slo-Blo®
Thin-Film 0466 and
0468 Series**



Features: • Complies with electronic industry environmental standards for lead reduction • Product is compatible with lead-free solders and higher temperature profiles • Element covering material is resistant to industry standard cleaning operations
• Mounting pad and electrical performance is identical to Littelfuse 429 and 433 Series products • Alloy based element construction provides superior inrush withstand characteristics (I²t) over ceramic or glass based 1206 chip fuse products



Specifications: • **Voltage Ratings:** 125V (.125-.375A), 63V (.500-2.0A), 32V (2.5A, 3.0), 24V (4-10A) • **Operating Temperature:** -55°C - 90°C • **Interrupting Ratings:** 60A at 32V AC/DC (0.125-.375A 50A at 125V AC/DC), 0.5-2A (50A at 63V AC/DC), 2.5-3A (50A at 32V AC/DC), 4-10A (35A at 24V AC/DC) • **Construction Material:** Body: Advanced High Temperature Substrate, Terminations: Copper/Nickel/100% Tin, Element Cover Coat: Conformal Coating • **Tape and Reel Specifications:** 8mm Tape and Reel per EIA-RS481-2 (IEC 286, part 3)

% of Amp. Rating	Very Fast Acting	Slo-Blo®
100%	4 hours minimum	—
200%	5 sec., maximum	1 sec. minimum, 120 sec. maximum
300%	0.2 sec., maximum	0.1 sec. minimum, 3 sec. maximum
800%	—	0.002 sec. minimum, .05 sec. maximum

Amp. Rate	Marking Code	Digi-Key Part No.	Cut Tape Price Each	Tape & Reel Pricing
0466 Series - Very Fast-Acting				
.125	B	F1450CT-ND*	.81 .75 .63	F1450TR-ND 280.00/M
.2	C	F1451CT-ND*	.81 .75 .63	F1451TR-ND 280.00/M
.25	D	F1452CT-ND*	.81 .75 .63	F1452TR-ND 280.00/M

(Continued)

Digi-Reel® Most SMT cutdown parts are available on a Digi-Reel®. For Digi-Reel part number, change 1-ND to 6-ND or CT-ND to DKR-ND. See Digi-Key® Services on page 2 for additional information.

More Product Available Online: www.digikey.com

Toll-Free: 1-800-344-4539 • Phone 218-681-6674 • Fax: 218-681-3380

**"1206" (3216) Lead-Free SlimLine™
Very Fast Acting and Slo-Blo® Thin-Film
Film 0466 and 0468 Series (Cont.)**



Amp. Rate	Marking Code	Digi-Key Part No.	Cut Tape Price Each	Digi-Key Part No.	Tape & Reel Pricing 5,000
			1 10 100		
.375	E	F1453CT-ND	.81 .75 .63	F1453TR-ND	280.00/M
.5	F	F1454CT-ND	.81 .75 .63	F1454TR-ND	280.00/M
.75	G	F1455CT-ND	.81 .75 .63	F1455TR-ND	280.00/M
1	H	F1456CT-ND	.81 .75 .63	F1456TR-ND	280.00/M
1.25	J	F1465CT-ND	.81 .75 .63	F1465TR-ND	280.00/M
1.5	K	F1462CT-ND	.81 .75 .63	F1462TR-ND	280.00/M
1.75	L	F1466CT-ND	.81 .75 .63	F1466TR-ND	280.00/M
2	N	F1457CT-ND	.81 .75 .63	F1457TR-ND	280.00/M
2.5	O	F1464CT-ND	.81 .75 .63	F1464TR-ND	280.00/M
3	P	F1458CT-ND	.81 .75 .63	F1458TR-ND	280.00/M
4	S	F1459CT-ND	.81 .75 .63	F1459TR-ND	280.00/M
5	T	F1460CT-ND	.81 .75 .63	F1460TR-ND	280.00/M

0468 Series — Slo-Blo®					
Amp. Rate	Marking Code	Digi-Key Part No.	Cut Tape Price Each	Digi-Key Part No.	Tape & Reel Pricing 5,000
			1 10 100		
1.00	TH	F2658CT-ND	1.22 1.12 .94	F2658TR-ND	421.00/M
1.50	TK	F2699CT-ND	1.22 1.12 .94	F2699TR-ND	421.00/M
2.00	TN	F2570CT-ND	1.22 1.12 .94	F2570TR-ND	421.00/M
3.00	TP	F2571CT-ND	1.22 1.12 .94	F2571TR-ND	421.00/M

• **466-KIT-ND Digi-Key® 466 Series Fuse Very Fast Acting SlimLine™ Lead Free** 10 each of parts indicated, plus a plastic storage box **\$89.95**

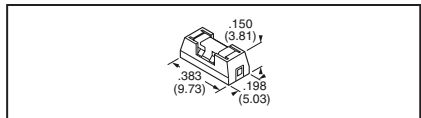
**SMF Omni-Blok® Fuse Block with Nano2®
Very Fast Acting and Slo-Blo® Fuses**



The SMF Omni-Blok® Fuseholder permits quick and easy replacement of Nano2® SMF surface mount fuses. The fuse block and pre-installed fuse combination can be placed on the PC board in one efficient manufacturing operation.

Specifications:

- **Electrical:** 10A, 125V
- **Molded Parts:** Thermoplastic (94V-0)
- **Ambient Temperature:** -55°C ~ 125°C
- **Soldering Parameters:** Infrared: 445°F (230°C), 30 seconds
- **Packaging:** 16mm wide Tape and Reel per EIA Standard 481. Installed fuses have silver plated end caps, installed to accommodate solder reflow process. Use 451 Series Fast Acting Fuse with tin/lead alloy plated end caps for replacement purposes of the 154 Series product. Use 452 Series Slo-Blo® Fuse with tin/lead alloy plated end caps for replacement purposes of the 154xxxT Series.



Amp. Rate	Digi-Key Part No.	Cut Tape Price Each	Digi-Key Part No.	Tape & Reel Pricing 1,500
		1 10 100		
154 Series - Very Fast Acting				
.250	F1219CT-ND	2.93 2.70 2.27	F1219TR-ND	1134.00/M
.500	F1220CT-ND	2.93 2.70 2.27	F1220TR-ND	1134.00/M
.750	F1221CT-ND	2.49 2.30 1.93	F1221TR-ND	963.00/M
1.000	F1222CT-ND	2.49 2.30 1.93	F1222TR-ND	963.00/M
1.500	F1223CT-ND	2.49 2.30 1.93	F1223TR-ND	963.00/M
2.000	F1224CT-ND	2.49 2.30 1.93	F1224TR-ND	963.00/M
2.500	F1225CT-ND	2.49 2.30 1.93	F1225TR-ND	963.00/M
3.000	F1226CT-ND	2.49 2.30 1.93	F1226TR-ND	963.00/M
4.000	F1227CT-ND	2.49 2.30 1.93	F1227TR-ND	963.00/M
5.000	F1228CT-ND	2.49 2.30 1.93	F1228TR-ND	963.00/M
7.000	F1229CT-ND	2.49 2.30 1.93	F1229TR-ND	963.00/M
8.000	F1239CT-ND	2.49 2.30 1.93	F1239TR-ND	963.00/M
10.000	F1251CT-ND	2.67 2.46 2.07	F1251TR-ND	1031.00/M

Amp. Rate	Digi-Key Part No.	Cut Tape Price Each	Digi-Key Part No.	Tape & Reel Pricing 1,500
		1 10 100		
154xxxT Series - Slo-Blo®				
.375	F1300CT-ND	3.66 3.37 2.84	F1300TR-ND	1415.00/M
.500	F1301CT-ND	3.66 3.37 2.84	F1301TR-ND	1415.00/M
.750	F1302CT-ND	3.22 2.97 2.50	F1302TR-ND	1246.00/M
1.000	F1303CT-ND	3.22 2.97 2.50	F1303TR-ND	1246.00/M
1.500	F1304CT-ND	3.22 2.97 2.50	F1304TR-ND	1246.00/M
2.000	F1305CT-ND	3.22 2.97 2.50	F1305TR-ND	1246.00/M
2.500	F1306CT-ND	3.22 2.97 2.50	F1306TR-ND	1246.00/M
3.000	F1307CT-ND	3.22 2.97 2.50	F1307TR-ND	1246.00/M
3.500	F1308CT-ND	3.22 2.97 2.50	F1308TR-ND	1246.00/M
4.000	F1309CT-ND	3.22 2.97 2.50	F1309TR-ND	1246.00/M
5.000	F1310CT-ND	3.22 2.97 2.50	F1310TR-ND	1246.00/M

• **154-KIT-ND Digi-Key® 154 Series Fuseblock with Fuse Fast Acting and Slo-Blo® Surface Mount Nano2®** 5 each of parts indicated, plus a plastic storage box **\$149.95**

Nano2® SMF Very Fast-Acting and Slo-Blo® Fuses



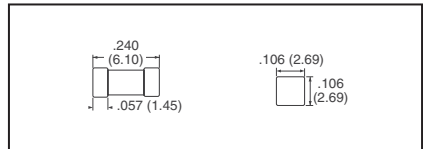
1-5 Amp R451 Series .25-5 Amp R451 Series

Nano2® Surface Mount Fuses incorporate proven Picofuse performance and dependability in a flat top design which permits efficient pick and place assembly.

- **Recommended Soldering Parameters:** Infrared Reflow for 30 seconds is 500°F (260°C) for Very Fast-Acting; 445°F (230°C) for Slo-Blo®. Wave Solder is 500°F (260°C) for 10 seconds for Very Fast-Acting; 500°F (260°C) for 3 seconds maximum for Slo-Blo®.
- **Construction Materials:** Body is ceramic, Caps are tin-lead alloy plated brass.

RoHS Compliant Terminations: Gold over nickel plated caps.
• **Operating Temperature Range:** -55°C ~ 125°C

- **Voltage Rating:** 125V, 65V: F1151



Fast Acting			Slo-Blo®	
Rating	Amps	Opening Time	Rating	Opening Time (Minimum/Maximum)
100%	1/16-15	4 hours minimum	100%	4 hrs. minimum
200%	1/16-10	5 sec., maximum	200%	1 sec. / 60 sec.
200%	12-15	20 sec., maximum	300%	0.2 / 3 sec.
—	—	—	800%	0.02 / 0.1 sec.

Amp. Rate	Digi-Key Part No.	Cut Tape Price Each	Digi-Key Part No.	Tape & Reel Pricing 1,000
		1 10 100		
R451 Series - Very Fast Acting				
.250	F2572CT-ND	1.19 1.10 .92	—	—
.375	F2573CT-ND	1.19 1.10 .92	F2573TR-ND	460.00
.500	F2574CT-ND	1.19 1.10 .92	F2574TR-ND	460.00
.630	F2575CT-ND	1.19 1.10 .92	F2575TR-ND	460.00
.750	F2576CT-ND	1.19 1.10 .92	F2576TR-ND	460.00
1.000	F2577CT-ND	1.19 1.10 .92	F2577TR-ND	460.00
1.250	F2578CT-ND	1.19 1.10 .92	F2578TR-ND	460.00
1.500	F2579CT-ND	1.19 1.10 .92	F2579TR-ND	460.00
1.600	F2580CT-ND	1.19 1.10 .92	F2580TR-ND	460.00
2.000	F2581CT-ND	1.19 1.10 .92	F2581TR-ND	460.00
2.500	F2582CT-ND	1.19 1.10 .92	F2582TR-ND	460.00
3.000	F2583CT-ND	1.19 1.10 .92	F2583TR-ND	460.00
3.150	F2584CT-ND	1.19 1.10 .92	F2584TR-ND	460.00
3.500	F2585CT-ND	1.19 1.10 .92	F2585TR-ND	460.00
4.000	F2586CT-ND	1.19 1.10 .92	F2586TR-ND	460.00

Amp. Rate	Digi-Key Part No.	Cut Tape Price Each	Digi-Key Part No.	Tape & Reel Pricing 1,000
		1 10 100		
5.000	F2587CT-ND	1.19 1.10 .92	F2587TR-ND	460.00
6.300	F2588CT-ND	1.19 1.10 .92	F2588TR-ND	460.00
7.000	F2589CT-ND	1.19 1.10 .92	F2589TR-ND	460.00
8.000	F2590CT-ND	1.19 1.10 .92	F2590TR-ND	460.00
10.000	F2591CT-ND	1.88 1.74 1.46	F2591TR-ND	728.00
12.000	F2592CT-ND	1.88 1.74 1.46	F2592TR-ND	728.00
15.000	F2593CT-ND	1.88 1.74 1.46	F2593TR-ND	728.00

R452 Series - Slo-Blo®					
Amp. Rate	Digi-Key Part No.	Cut Tape Price Each	Digi-Key Part No.	Tape & Reel Pricing 1,000	
		1 10 100			
0.375	F2597CT-ND	1.61 1.48 1.25	F2597TR-ND	622.00	
0.500	F2598CT-ND	1.61 1.48 1.25	F2598TR-ND	622.00	
0.750	F2599CT-ND	1.61 1.48 1.25	F2599TR-ND	622.00	
1.000	F2600CT-ND	1.61 1.48 1.25	F2600TR-ND	622.00	
1.500	F2601CT-ND	1.61 1.48 1.25	F2601TR-ND	622.00	
2.000	F2602CT-ND	1.61 1.48 1.25	F2602TR-ND	622.00	
2.500	F2603CT-ND	1.61 1.48 1.25	F2603TR-ND	622.00	
3.000	F2604CT-ND	1.61 1.48 1.25	F2604TR-ND	622.00	
3.500	F2605CT-ND	1.61 1.48 1.25	F2605TR-ND	622.00	
4.000	F2606CT-ND	1.61 1.48 1.25	F2606TR-ND	622.00	
5.000	F2607CT-ND	1.61 1.48 1.25	F2607TR-ND	622.00	

**PICO II™
Very Fast-Acting Pico Fuses**



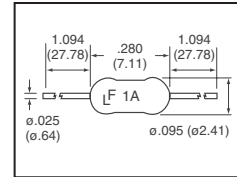
Patents: U.S. Patent #2,385,281

Construction Materials: Body:UL 94V-0 epoxy coating, green

RoHS Compliant

Product: Pure tin coated copper wire leads

- **Rated:** 300 amps at rated voltage VDC 50A VAC
- **Operating Temp.:** -55°C ~ 125°C



Electrical Characteristics:

Rating	Amperage	Opening Time
100%	1/16-15	4 hours, minimum
200%	1/16-7	1 seconds, maximum
200%	10	3 seconds, maximum
200%	12-15	10 seconds, maximum

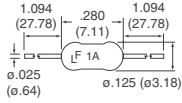
Amp. Rating	Voltage Rating	Digi-Key Part No.	Price Each
		1 10 100	
0251 Series - Non Color-Coded Type (Bulk)			
.062	125	F2307-ND	1.13 1.05 .79
.125	125	F2308-ND	.72 .66 .50
.250	125	F2309-ND	.72 .66 .50
.375	125	F2310-ND	.72 .66 .50
.500	125	F2311-ND	.53 .49 .37
.630	125	F2312-ND	.53 .49 .37
.750	125	F2313-ND	.53 .49 .37
1.000	125	F2313-ND	.53 .49 .37
1.250	125	F2323-ND	.53 .49 .37
1.500	125	F2319-ND	.53 .49 .37
2.000	125	F2314-ND	.53 .49 .37
2.500	125	F2321-ND	.53 .49 .37
3.000	125	F2315-ND	.53 .49 .37
3.500	125	F2322-ND	.53 .49 .37
4.000	125	F2316-ND	.53 .49 .37
5.000	125	F2317-ND	.53 .49 .37
7.000	125	F2318-ND	.53 .49 .37
10.000	125	F2320-ND	.53 .49 .37
12.000	32	F2351-ND	.72 .66 .50
15.000	32	F2352-ND	.72 .66 .50

• **251L-473L-KIT-ND Digi-Key® 251 Series Fuse Very Fast Acting and 473 Series Fuse Slo-Blo® Axial Pico II™** 5 each of parts indicated, plastic storage box not included **\$99.95**

Digi-Reel® Most SMT cutdown parts are available on a Digi-Reel®. For Digi-Reel part number, change 1-ND to 6-ND or CT-ND to DKR-ND. See Digi-Key® Services on page 2 for additional information.

More Product Available Online: www.digikey.com

Slo-Blo® Pico Fuses



Construction Materials: Body-UL94V0 epoxy coating, gold. Leads-solder coated copper wire. • **RoHS Compliant Product:** Pure tin coated copper wire leads • **Operating Temperature Range:** -55°C - 125°C

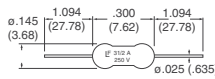
Electrical Characteristics

Rating	Opening Time	Rating	Opening Time
100%	4 hrs., minimum	200%	60 sec., maximum
300%	3 sec., maximum	800%	0.1 sec., maximum

Amp Rating	Digi-Key Part No.	Cut Tape Price Each	Digi-Key Part No.	T&R Pricing 1,000
0473L Series - Non-Color Coded Type - RoHS Compliant				
.375	F2338CT-ND	2.21 2.03	F2338TR-ND	853.00
.500	F2339CT-ND*	2.21 2.03	F2339TR-ND	853.00
.750	F2340CT-ND*	2.21 2.03	F2340TR-ND	853.00
1.00	F2341CT-ND*	2.21 2.03	F2341TR-ND	853.00
1.50	F2347CT-ND*	2.21 2.03	F2347TR-ND	853.00
2.00	F2342CT-ND*	2.21 2.03	F2342TR-ND	853.00
2.25	F2350CT-ND	2.21 2.03	F2350TR-ND	853.00
2.50	F2348CT-ND	2.21 2.03	F2348TR-ND	853.00
3.00	F2343CT-ND*	2.21 2.03	F2343TR-ND	853.00
3.50	F2349CT-ND*	2.21 2.03	F2349TR-ND	853.00
4.00	F2344CT-ND*	2.21 2.03	F2344TR-ND	853.00
5.00	F2345CT-ND*	2.21 2.03	F2345TR-ND	853.00
7.00	F2346CT-ND	2.21 2.03	F2346TR-ND	853.00

*251L-473L-KIT-ND Digi-Key® 251 Series Fuse *Very Fast Acting* and 473 Series Fuse *Slo-Blo® Axial Pico II™* 5 each of parts indicated, plastic storage box not included — **RoHS Compliant** \$99.96

PICO II™ 250 Volt Very Fast-Acting Pico Fuses



Interrupting Rating: 50 Amperes at 250VAC

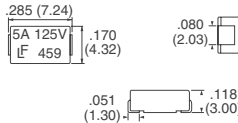
Construction Materials: Encapsulated, epoxy-coated body; Pure tin coated copper leads; green in color

Electrical Characteristics

% Amp Rating	Opening Time (Minimum/Maximum)
100%	4 hours, minimum
200%	1 sec. maximum
300%	0.1 sec. maximum

Amp Rating	Voltage Rating	Digi-Key Part No.	Price Each	1	10	100
0263L Series						
.062	250	F2324-ND	2.41	2.23	1.67	
.125		F2325-ND	1.92	1.77	1.33	
.250		F2326-ND	1.92	1.77	1.33	
.375		F2327-ND	1.92	1.77	1.33	
.500		F2328-ND	1.92	1.77	1.33	
.750	250	F2329-ND	1.59	1.47	1.10	
1.00		F2330-ND	1.59	1.47	1.10	
1.50		F2335-ND	1.59	1.47	1.10	
2.00		F2331-ND	1.59	1.47	1.10	
2.50		F2336-ND	1.59	1.47	1.10	
3.00	250	F2332-ND	1.59	1.47	1.10	
3.50		F2337-ND	1.59	1.47	1.10	
4.00		F2333-ND	1.59	1.47	1.10	
4.00		F2333-ND	1.59	1.47	1.10	
5.00		F2334-ND	1.59	1.47	1.10	

Pico SMD Very Fast-Acting and Slo-Blo® SMT Fuses



EIA Case Code 7343 Laser etched for ease of identification.

• **Operating Temperature:** -55°C - 125°C

• **Soldering Methods:** *Infrared Reflow* is 500°F (260°C) maximum temperature for *Very Fast-Acting*; 446°F (230°C) maximum temperature for *Slo-Blo®*. *Thru the wave soldering* is 500°F (260°C), 10 seconds maximum.

• **Voltage Rating:** 125

Rating	Fast-Acting Opening Time	Slo-Blo® Opening Time
100%	4 hrs. minimum	4 hrs., minimum
200%	1 sec. maximum	60 sec., maximum
300%	—	3 sec., maximum
800%	—	0.1 sec. maximum

Amp Rating	Digi-Key Part No.	Cut Tape Price Each	Digi-Key Part No.	T&R Pricing 500
R459 Series - Very Fast-Acting				
.125	F1160CT-ND	1.41 1.30 1.09	F1160TR-ND	300.00
.250	F1161CT-ND	1.41 1.30 1.09	F1161TR-ND	300.00
.375	F1162CT-ND	1.41 1.30 1.09	F1162TR-ND	300.00
.500	F1163CT-ND	1.05 .97 .81	F1163TR-ND	223.00
.750	F1164CT-ND	1.05 .97 .81	F1164TR-ND	223.00
1.00	F1165CT-ND	1.05 .97 .81	F1165TR-ND	223.00
1.50	F1166CT-ND	1.05 .97 .81	F1166TR-ND	223.00
2.00	F1167CT-ND	1.05 .97 .81	F1167TR-ND	223.00
2.50	F1168CT-ND	1.05 .97 .81	F1168TR-ND	223.00
3.00	F1169CT-ND	1.05 .97 .81	F1169TR-ND	223.00
3.50	F1170CT-ND	1.05 .97 .81	F1170TR-ND	223.00
4.00	F1171CT-ND	1.05 .97 .81	F1171TR-ND	223.00
5.00	F1172CT-ND	1.05 .97 .81	F1172TR-ND	223.00

Amp Rating	Digi-Key Part No.	Cut Tape Price Each	Digi-Key Part No.	T&R Pricing 500
R460 Series - Slo-Blo®				
.375	F1180CT-ND	2.22 2.04 1.72	F1180TR-ND	473.00
.500	F1181CT-ND	2.22 2.04 1.72	F1181TR-ND	473.00
.750	F1182CT-ND	2.22 2.04 1.72	F1182TR-ND	473.00
1.00	F1183CT-ND	2.22 2.04 1.72	F1183TR-ND	473.00
1.50	F1184CT-ND	2.22 2.04 1.72	F1184TR-ND	473.00
2.00	F1185CT-ND	2.22 2.04 1.72	F1185TR-ND	473.00
2.50	F1186CT-ND	2.22 2.04 1.72	F1186TR-ND	473.00
3.00	F1187CT-ND	2.22 2.04 1.72	F1187TR-ND	473.00
3.50	F1188CT-ND	2.22 2.04 1.72	F1188TR-ND	473.00
4.00	F1189CT-ND	2.22 2.04 1.72	F1189TR-ND	473.00
5.00	F1190CT-ND	2.22 2.04 1.72	F1190TR-ND	473.00

Metric (5x20mm) Fuses (UL Standards)

Fast-Acting 235 Series

Medium-Acting 234 Series

Slo-Blo® 239 Series

• **Operating Temperature:** -55°C - 125°C

• **Designed to** UL/CSA/ANCE 248 Standard

Amp Rating	Voltage Rating	Digi-Key Part No.	Price Each	5	100	250
235P Series — Fast-Acting						
.250	250	F2670-ND	.80	.58	.52	
.300		F2671-ND	.80	.58	.52	
.400		F2672-ND	.80	.58	.52	
.500		F2673-ND	.44	.32	.28	
.600		F2674-ND	.44	.32	.28	
.700	250	F2675-ND	.44	.32	.28	
.800		F2676-ND	.44	.32	.28	
1.00		F2677-ND	.35	.26	.23	
1.25		F2678-ND	.35	.26	.23	
1.60		F2679-ND	.35	.26	.23	
2.00	250	F2680-ND	.35	.26	.23	
2.50		F2681-ND	.35	.26	.23	
3.00		F2682-ND	.35	.26	.23	

Amp Rating	Voltage Rating	Digi-Key Part No.	Price Each	5	100	250
4.00	125	F2683-ND	.35	.26	.23	
5.00		F2684-ND	.35	.26	.23	
6.00		F2685-ND	.35	.26	.23	

Amp Rating	Voltage Rating	Digi-Key Part No.	Price Each	5	100	250
234P Series — Medium-Acting						
1.00	250	F2686-ND	.85	.62	.55	
1.60		F2687-ND	.85	.62	.55	
2.00		F2688-ND	.85	.62	.55	
2.50		F2689-ND	.85	.62	.55	
3.00		F2690-ND	.85	.62	.55	

Amp Rating	Voltage Rating	Digi-Key Part No.	Price Each	5	100	250
3.50	250	F2691-ND	.85	.62	.55	
4.00		F2692-ND	.85	.62	.55	
5.00		F2693-ND	.85	.62	.55	
5.00		F2693-ND	.85	.62	.55	
6.00		F2694-ND	.85	.62	.55	

Amp Rating	Voltage Rating	Digi-Key Part No.	Price Each	5	100	250
239P Series — Time Lag (Slo-Blo®)						
.250	250	F2695-ND	1.11	.81	.72	
.300		F2696-ND	1.11	.81	.72	
.400		F2697-ND	.85	.62	.55	
.500		F2698-ND	.85	.62	.55	
.600		F2699-ND	.85	.62	.55	

Amp Rating	Voltage Rating	Digi-Key Part No.	Price Each	5	100	250
.700	250	F2700-ND	.85	.62	.55	
.800		F2701-ND	.85	.62	.55	
1.00		F2702-ND	.85	.62	.55	
1.25		F2703-ND	.85	.62	.55	
1.60		F2704-ND	.85	.62	.55	
2.00	250	F2705-ND	.85	.62	.55	
2.50		F2706-ND	.85	.62	.55	
3.00		F2707-ND	.85	.62	.55	

Metric (5x20mm) Fuses (IEC Standards)



Slo-Blo® High Breaking Capacity 215P Series
Fast-Acting High Breaking Capacity 216/216P Series

Fast-Acting 217/217P Series

Slo-Blo® 218P Series

Approvals:

215P Series: CE 200mA - 12A; SEMKO 200mA - 10 Amperes; BSI approved 200mA - 6.3 Amperes; UL and CSA recognized 500mA - 12 Amperes; CCC Certified 1 - 6.3 Amperes; PSE 1 - 12 Amperes

216/216P Series: UL and CSA recognized .050-10 Amperes; VDE approved .080 -250, 400-1.6, 2.5-4.0, 6.3 Amperes; CCC Certified .080 -800 Amperes; BSI 1-6.3 Amperes; SEMKO approved .080 -125 Amperes

217/217P Series: SEMKO .032 -800 Amperes; VDE approved .032-6.3 Amperes; BSI approved .400 - 6.3 Amperes; UL and CSA recognized .032 - 6.3 Amperes; CCC Certified .080-800 Amperes

218P Series: SEMKO .800 - 6.3 Amperes; VDE approved .032 - 6.3 Amperes; BSI approved .080 - 6.3 Amperes; UL and CSA recognized .032 -15 Amperes

Interrupting Capacity: 215P & 216/216P Series: 1500 Amperes @ 250VAC. 217/217P Series: 35 Amperes or 10 x rated current, whichever is greater, to a maximum of 100 Amps @ 250VAC. 218P Series: 35 Amperes or 10 x rated current, whichever is greater to a maximum of 100 Amps @ 250VAC.

Amp Rating	Voltage Rating	Digi-Key Part No.	Price Each	5	100	250
215P — Series Slo-Blo® High Braking Capacity; Ceramic Body - RoHS Compliant						
1.00	250	F2659-ND	1.40	1.02	.90	
1.25		F2660-ND	1.40	1.02	.90	
1.60		F2661-ND	1.40	1.02	.90	
2.00		F2662-ND	1.40	1.02	.90	
2.50		F2663-ND	1.40	1.02	.90	

Amp Rating	Voltage Rating	Digi-Key Part No.	Price Each	5	100	250
3.15	250	F2664-ND	1.40	1.02	.90	
4.00		F2665-ND	1.40	1.02	.90	
5.00		F2666-ND	1.40	1.02	.90	
6.30		F2667-ND	1.40	1.02	.90	
8.00		F2668-ND	1.40	1.02	.90	
10.00		F2669-ND	1.40	1.02	.90	

Amp Rating	Voltage Rating	Digi-Key Part No.	Price Each	5	100	250
216 Series — Fast-Acting High Breaking Capacity; Ceramic Body						
.160	250	F905-ND	1.49	1.12	.99	

(Continued)

Digi-Reel® Most SMT cutdown parts are available on a Digi-Reel®. For Digi-Reel part number, change 1-ND to 6-ND or CT-ND to DKR-ND. See Digi-Key® Services on page 2 for additional information.

More Product Available Online: www.digikey.com

Toll-Free: 1-800-344-4539 • Phone 218-681-6674 • Fax: 218-681-3380

Metric (5x20mm) Fuses
(IEC Standards) (Cont.)

Amp Rating	Voltage Rating	Digi-Key Part No.	Price Each	5	100	250
216P Series — Fast-Acting High Breaking Capacity; Ceramic Body - RoHS Compliant						
.050	250	F2354-ND	1.73	1.26	1.12	
.080		F2355-ND	1.38	1.01	.89	
.100		F2356-ND	1.38	1.01	.89	
.125		F2357-ND	1.38	1.01	.89	
.160		F2358-ND	1.38	1.01	.89	
.200	250	F2359-ND	1.38	1.01	.89	
.250		F2360-ND	1.38	1.01	.89	
.315		F2361-ND	1.38	1.01	.89	
.400		F2362-ND	1.38	1.01	.89	
.500		F2363-ND	1.38	1.01	.89	
.630	250	F2364-ND	1.38	1.01	.89	
.800		F2365-ND	1.38	1.01	.89	
1.00		F2366-ND	1.25	.91	.81	
1.25		F2375-ND	1.25	.91	.81	
1.60		F2371-ND	1.25	.91	.81	
2.00	250	F2367-ND	1.25	.91	.81	
2.50		F2373-ND	1.25	.91	.81	
3.15		F2376-ND	1.25	.91	.81	
4.00		F2368-ND	1.25	.91	.81	
5.00		F2369-ND	1.25	.91	.81	
6.30	250	F2374-ND	1.25	.91	.81	
8.00		F2370-ND	1.25	.91	.81	
10.00		F2372-ND	1.25	.91	.81	
217P Series — Fast-Acting Type - RoHS Compliant						
.032	250	F2377-ND	1.67	1.21	1.08	
.040		F2378-ND	1.67	1.21	1.08	
.050		F2379-ND	1.67	1.21	1.08	
.063		F2380-ND	1.67	1.21	1.08	
.080		F2381-ND	.98	.71	.63	
.100	250	F2382-ND	.98	.71	.63	
.125		F2383-ND	.98	.71	.63	
.160		F2384-ND	.98	.71	.63	
.200		F2385-ND	.98	.71	.63	
.250		F2386-ND	.98	.71	.63	
.315	250	F2387-ND	.98	.71	.63	
.400		F2388-ND	.30	.22	.20	
.500		F2389-ND	.30	.22	.20	
.630		F2390-ND	.30	.22	.20	
.800		F2391-ND	.30	.22	.20	
1.00	250	F2392-ND	.30	.22	.20	
1.25		F2402-ND	.30	.22	.20	
1.60		F2397-ND	.30	.22	.20	
2.000		F2393-ND	.30	.22	.20	
2.500		F2400-ND	.30	.22	.20	
3.150	250	F2403-ND	.30	.22	.20	
4.000		F2394-ND	.30	.22	.20	
5.000		F2395-ND	.30	.22	.20	
6.300		F2401-ND	.30	.22	.20	
8.000		F2396-ND	.30	.22	.20	
10.00	250	F2398-ND	.30	.22	.20	
15.00		F2399-ND	.30	.22	.20	
218P Series — Slo-Blo® Type - RoHS Compliant						
.032	250	F2404-ND	2.24	1.62	1.44	
.040		F2405-ND	2.24	1.62	1.44	
.050		F2406-ND	2.24	1.62	1.44	
.063		F2407-ND	2.24	1.62	1.44	
.080		F2408-ND	2.24	1.62	1.44	
.100	250	F2409-ND	1.31	.95	.84	
.125		F2410-ND	1.31	.95	.84	
.160		F2411-ND	1.31	.95	.84	
.200		F2412-ND	1.31	.95	.84	
.250		F2413-ND	1.31	.95	.84	
.315	250	F2414-ND	1.31	.95	.84	
.400		F2415-ND	1.31	.95	.84	
.500		F2416-ND	.90	.65	.58	
.630		F2417-ND	.90	.65	.58	
.800		F2418-ND	.90	.65	.58	

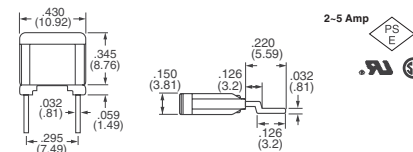
Amp Rating	Voltage Rating	Digi-Key Part No.	Price Each	5	100	250
1.00	250	F2419-ND	.90	.65	.58	
1.25		F2429-ND	.90	.65	.58	
1.60		F2424-ND	.90	.65	.58	
2.00		F2420-ND	.90	.65	.58	
2.50		F2427-ND	.90	.65	.58	
3.15	250	F2430-ND	.90	.65	.58	
4.00		F2421-ND	.90	.65	.58	
5.00		F2422-ND	.90	.65	.58	
6.30		F2428-ND	.90	.65	.58	
8.00		F2423-ND	1.40	1.02	.90	
10.00	250	F2425-ND	1.40	1.02	.90	
15.00		F2426-ND	1.40	1.02	.90	

• **216P-KIT-ND Digi-Key® 216 Series Fuse Fast Acting High Breaking Capacity** 5 each of parts indicated, plus a plastic storage box
RoHS Compliant..... \$159.97

• **217P-KIT-ND Digi-Key® 217 Series Fuse Fast Acting** 5 each of parts indicated, plus a plastic storage box
RoHS Compliant..... \$39.95

• **218P-KIT-ND Digi-Key® 218 Series Fuse Slo-Blo® Type** 5 each of parts indicated, plus a plastic storage box
RoHS Compliant..... \$89.95

350 Volt SMT Fuses
Fast-Acting EBF Series



• Ideal for use in electronic lighting ballast, power supply and power inverter applications • Rated for use in 125, 250, 277 and 350 VAC circuits.

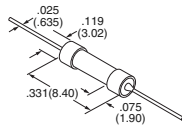
- **Agency Approvals:** UL recognized, CSA certified, MITI approved for 5 Amps
- **Interrupting Ratings:** 100 Amps at 350VAC
- **Operating Temperature:** -40°C ~ 125°C
- **Physical Specifications:** Materials: Nylon Body; Silver Plated Zinc Terminations
- **Packaging Specifications:** 24mm Tape and Reel per EIA-RS481 (equivalent to IEC 286, part 3); 800 fuses per reel

Electrical Characteristics

% Amp Rating	Opening Time
100%	4 hours, minimum
200%	0.15 sec. minimum, 5 sec. maximum

Amp Rating	Digi-Key Part No.	Cut Tape Price Each	Digi-Key Part No.	Tape & Reel Pricing
446P Series				
2	F2709CT-ND	1.10 1.02 .85	F2709TR-ND	375.20
3	F2710CT-ND	1.10 1.02 .85	F2710TR-ND	375.20
5	F2711CT-ND	1.10 1.02 .85	F2711TR-ND	375.20
7.5	F2712CT-ND	1.10 1.02 .85	F2712TR-ND	375.20
10	F2713CT-ND	1.10 1.02 .85	F2713TR-ND	375.20

Barrier Network Fuses



- Meets Barrier Network Standards (EN50020) for hazardous applications
- High interrupting rating
- Voltage Rating:** 250V
- Interrupting Ratings:** 4000 Amperes at 250 VAC/VDC

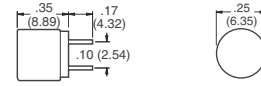
Part No.	Color Coding
F1290	Red
F1291	Green
F1292	Blue
F1293	Violet
F1294	Brown
F1295	Black

% Amp Rating	Opening Time
110%	4 hours, minimum
300%	10 seconds, maximum
1000%	0.002 seconds, maximum

Amp Rating	Digi-Key Part No.	Cut Tape Price Each	Digi-Key Part No.	Tape & Box Pricing
242 Series				
.050	F1290CT-ND	5.11 4.71 3.96	F1290TB-ND	1090.50
.080	F1291CT-ND	5.11 4.71 3.96	F1291TB-ND	1090.50
.100	F1292CT-ND	5.11 4.71 3.96	F1292TB-ND	1090.50
.160	F1293CT-ND	5.11 4.71 3.96	F1293TB-ND	1090.50
.200	F1294CT-ND	5.11 4.71 3.96	F1294TB-ND	1090.50
.250	F1295CT-ND	5.11 4.71 3.96	F1295TB-ND	1090.50

◆ **RoHS Compliant**

Microfuse
Very Fast-Acting Type



Operating Temperature Range: -55°C ~ 85°C

Electrical Characteristics

Rating	Amperage	Opening Time
100%	1/500 — 5	4 hrs., minimum
200%	1/500 — 3/10	5 sec., maximum
200%	4/10 — 5	2 sec., maximum

Amp Rating	Voltage Rating	Digi-Key Part No.	Price Each	1	100	250
273 Series — Fast-Acting Type						
.050	125	F855-ND	5.11	3.54	3.15	
.100		F857-ND	5.05	3.50	3.11	
.125		F858-ND	5.05	3.50	3.11	
.200		F859-ND	7.84	5.43	4.83	
.250		F860-ND	5.05	3.50	3.11	
.300	125	F861-ND	5.05	3.50	3.11	
.400		F862-ND	5.05	3.50	3.11	
.500		F863-ND	5.05	3.50	3.11	
.600		F864-ND	7.84	5.43	4.83	
.700		F865-ND	7.84	5.43	4.83	
.750	125	F866-ND	5.11	3.54	3.15	
1.00		F868-ND	5.05	3.50	3.11	
1.50		F869-ND	5.05	3.50	3.11	
2.00		F870-ND	5.05	3.50	3.11	
3.00		F871-ND	5.05	3.50	3.11	
4.00	125	F872-ND	5.05	3.50	3.11	
5.00		F873-ND	5.05	3.50	3.11	

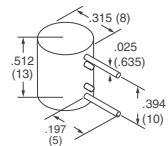
Safe-T-Plus Fuses

• Designed to allow equipment to meet "Intrinsically Safe" certification for applications in gas plants, petrochemical and processing industries where there is a danger of gas explosion from faulty circuits.

- Hermetically sealed
- Voltage Rating:** 125V

Interrupting Ratings: 50 Amps at 125VAC; 300 Amps at 125VDC

Agency Approvals: Meets CENELEC EN50 014 to 039 and IEC 60079-11 and BASEEFA BS 5501, part 7.



Electrical Characteristics

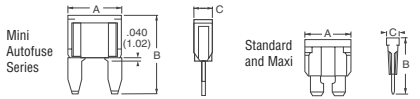
% Amp Rating	Opening Time
100%	4 hours, minimum
200%	5 seconds, maximum

Amp Rating	Voltage Drop	Digi-Key Part No.	Price Each	1	100	250
259 Series						
.062	2.1	F1311-ND	4.43	3.07	2.73	
.125	1.3	F1312-ND	4.43	3.07	2.73	
.250	0.83	F1313-ND	4.43	3.07	2.73	
.500	0.78	F1315-ND	4.43	3.07	2.73	
.750	0.23	F1316-ND	4.43	3.07	2.73	
1.00	0.24	F1317-ND	4.43	3.07	2.73	

Schedule of Limitations:

1. The fuse must be so mounted that creepage and clearance distances meet the requirements of Table 2 of EN50020: 1977 or Table 4 of EN50020: 1994 (equivalent to IEC 60079-11 4th Edition 1999).
2. When used in intrinsically safe apparatus it will be necessary to determine a surface temperature classification for the fuse.

ATO Fuse: Mini, ATO and Maxi



Designed and originated by Littelfuse for the automotive industry, the ATO fuse has become the original equipment circuit protection standard for foreign and domestic automobiles and trucks. This fuse can also be specified for a variety of low voltage electronic applications.

Design Standards: UL Standard for Automotive Blade Type Fuses, SAE (Society of Automotive Engineers) J1284

Color-Coding: Autofuse fuses are color-coded for easy amperage identification

Voltage Rating: 32V

Approvals: 297 Series: UL listed, 257 Series: UL listed 1-40 Amperes; CSA certified 3-30 Amperes, 299 Series: UL recognized 20-60 Amperes

Body Material: 297 & 299 Series: Nylon, 257 Series: Plastic.

Fuse Type	Dimensions - Inch (mm)		
	A	B	C
Mini-Fuse	.43 (10.92)	.63 (16.00)	.15 (3.81)
ATO Fuse	.75 (19.05)	.73 (18.54)	.20 (5.08)
Maxi-Fuse	1.15 (29.21)	1.35 (34.29)	.35 (8.89)

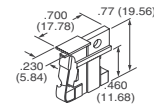
Amp Rating	Color Code	Digi-Key Part No.	Price Each		
			5	100	250
297 Series — Mini Fuses					
2	Grey	F986-ND	.64	.47	.41
3	Violet	F987-ND	.64	.47	.41
4	Pink	F988-ND	.64	.47	.41
5	Tan	F989-ND	.64	.47	.41
7.5	Brown	F990-ND	.64	.47	.41
10	Red	F991-ND	.64	.47	.41
15	Blue	F992-ND	.64	.47	.41
20	Yellow	F993-ND	.64	.47	.41
25	Natural	F994-ND	.64	.47	.41
30	Green	F995-ND	.64	.47	.41
257 Series — ATO Fuses					
1	Black	F2232-ND	.55	.40	.36
2	Grey	F2233-ND	.55	.40	.36
3	Violet	F996-ND	.55	.40	.36
4	Pink	F997-ND	.55	.40	.36
5	Tan	F998-ND	.55	.40	.36
7.5	Brown	F999-ND	.55	.40	.36
10	Red	F1015-ND	.55	.40	.36
15	Blue	F1016-ND	.55	.40	.36
20	Yellow	F1017-ND	.55	.40	.36
25	Natural	F1018-ND	.55	.40	.36
30	Green	F1019-ND	.55	.40	.36
35	Bl/Green	F2234-ND	.55	.40	.36
40	Amber	F1220-ND	.55	.40	.36
299 Series — Maxi Fuses					
20	Yellow	F1035-ND	1.61	1.17	1.04
30	Green	F1036-ND	1.61	1.17	1.04
40	Amber	F1037-ND	1.61	1.17	1.04
50	Red	F1038-ND	1.61	1.17	1.04
60	Blue	F1039-ND	1.61	1.17	1.04

Amp Rating	Color Code	Digi-Key Part No.	Price Each		
			5	100	250
225 Series — Cartridge Type					
2.500	250	F648-ND	.60	.45	.40
225P Series — Cartridge Type — RoHS Compliant					
.125	250	F2447-ND	.78	.57	.50
.250		F2448-ND	.78	.57	.50
.375		F2449-ND	.53	.39	.35
.500		F2450-ND	.53	.39	.35
.750		F2451-ND	.53	.39	.35
1.000	250	F2452-ND	.53	.39	.35
1.500		F2460-ND	.53	.39	.35
2.000		F2453-ND	.53	.39	.35
2.500		F2462-ND	.53	.39	.35
3.000		F2454-ND	.53	.39	.35
3.500	F2463-ND	.53	.39	.35	
224P Series — Pigtail Type — RoHS Compliant					
.125	250	F2431-ND	1.03	.75	.67
.250		F2432-ND	1.03	.75	.67
.375		F2433-ND	.79	.57	.51
.500		F2434-ND	.79	.57	.51
.750		F2435-ND	.79	.57	.51
1.000	250	F2436-ND	.79	.57	.51
1.500		F2443-ND	.79	.57	.51
2.000		F2437-ND	.79	.57	.51
2.500		F2445-ND	.79	.57	.51
3.000		F2438-ND	.79	.57	.51
3.500	F2446-ND	.79	.57	.51	
4.000	125	F2439-ND	.79	.57	.51

* 257-297-KIT-ND Digi-Key® 257/297 Series Fuse Mini and ATO 5 each of parts indicated, plus a plastic storage box \$33.95

Alarm Indicating Fuses

Electrical Characteristics	
% Amp Rating	Opening Time
100%	10 minutes, minimum
150%	5 minutes, maximum



Alarm Indicating Fuses are ideal for telecom and control panel circuits. Color coded flag conforms to telecom color standards to easily identify amperage ratings. This series has enhancements with an expanded amperage range and higher interrupting ratings, making this a viable replacement for competitive lines such as Bussmann: GMT and San-O: AX-1 series product.

Agency Approval File Numbers: UL E71611, CSA LR29862.

Construction Materials: Body: Polyphenylene Sulfide (UL 94V0). Terminations: Beryllium Copper, Tin Plated.

Voltage Rating: 125VAC or 60VDC.

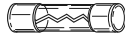
Interrupting Rating: 450 Amperes at 60VDC; 300 Amperes at 125 VAC/VDC.

Operating Temperature Range: -55°C - 125°C

Amp Rating	Color Code	Digi-Key Part No.	Price Each		
			1	10	100
0481 Series — Alarm Indicating Type					
2.00	Orange	F719-ND	2.40	2.22	1.66
3.00	Blue	F720-ND	2.40	2.22	1.66
3.50	Blue/Wht.	F721-ND	2.40	2.22	1.66
4.00	Brn./Wht.	F722-ND	2.40	2.22	1.66
5.00	Green	F723-ND	2.40	2.22	1.66
7.50	Blk./Wht.	F724-ND	2.40	2.22	1.66
10.00	Red/Wht.	F725-ND	2.40	2.22	1.66
12.00	Grn./Ylw.	F726-ND	2.40	2.22	1.66
15.00	Red/Blue	F727-ND	2.40	2.22	1.66

2AG Subminiature Fast-Acting Fuses

Pigtail Material: Tinned copper wire



Approvals: Listed by U.L. and Certified by CSA. Patented. U.L. recognized

Dimensions: Cartridge: Diameter: .177" (4.50mm); Length: .57" (14.48mm)

Electrical Characteristics:	
Rating	Opening Time
110%	4 hrs., minimum
135%	1 hr., maximum
200%	1 sec., maximum

Amp Rating	Voltage Rating	Digi-Key Part No.	Price Each		
			5	100	250
225 Series — Cartridge Type					
2.500	250	F648-ND	.60	.45	.40

Amp Rating	Voltage Rating	Digi-Key Part No.	Price Each		
			5	100	250
225P Series — Cartridge Type — RoHS Compliant					
.125	250	F2447-ND	.78	.57	.50
.250		F2448-ND	.78	.57	.50
.375		F2449-ND	.53	.39	.35
.500		F2450-ND	.53	.39	.35
.750		F2451-ND	.53	.39	.35
1.000	250	F2452-ND	.53	.39	.35
1.500		F2460-ND	.53	.39	.35
2.000		F2453-ND	.53	.39	.35
2.500		F2462-ND	.53	.39	.35
3.000		F2454-ND	.53	.39	.35
3.500	F2463-ND	.53	.39	.35	

Amp Rating	Voltage Rating	Digi-Key Part No.	Price Each		
			5	100	250
224P Series — Pigtail Type — RoHS Compliant					
.125	250	F2431-ND	1.03	.75	.67
.250		F2432-ND	1.03	.75	.67
.375		F2433-ND	.79	.57	.51
.500		F2434-ND	.79	.57	.51
.750		F2435-ND	.79	.57	.51
1.000	250	F2436-ND	.79	.57	.51
1.500		F2443-ND	.79	.57	.51
2.000		F2437-ND	.79	.57	.51
2.500		F2445-ND	.79	.57	.51
3.000		F2438-ND	.79	.57	.51
3.500	F2446-ND	.79	.57	.51	
4.000	125	F2439-ND	.79	.57	.51

Slo-Blo® Fuses

Approvals: Listed by U.L. and Certified by CSA through 3.5 Amperes. Recognized under the Components Program of U.L. from 4 through 7 Amperes, 229 Series 4 and 5 Amperes, 230 series 1 through 5 Amperes approved by METI.

Patents: U.S. Patents #4,409,729 and #4,445,106.

Dimensions:

Cartridge: Diameter: 177" (4.50mm); Length: .57" (14.48mm)

Pigtail: Diameter: .19" (4.83mm); Length: .60" (15.24mm)

Leads: Diameter: .025" (.64mm); Length: 1.50" (38.10mm)

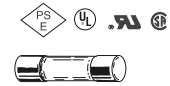
Electrical Characteristics:	
Rating	Opening Time
110%	4 hrs., minimum
135%	1 hr., maximum
200%	3 sec., minimum/ 20 sec., maximum

Amp Rating	Voltage Rating	Digi-Key Part No.	Price Each		
			5	100	250
229P Series — Cartridge Type					
.250	250	F2464-ND	.63	.46	.41
.375		F2465-ND	.63	.46	.41
.500		F2466-ND	.63	.46	.41
.750		F2467-ND	.63	.46	.41
1.000		F2468-ND	.63	.46	.41
1.250	250	F2477-ND	.63	.46	.41
1.500		F2474-ND	.63	.46	.41
2.000		F2469-ND	.63	.46	.41
2.250		F2478-ND	.63	.46	.41
2.500		F2475-ND	.63	.46	.41
3.000	250	F2470-ND	.63	.46	.41
3.500		F2476-ND	.63	.46	.41
4.000	125	F2471-ND	.63	.46	.41
5.000		F2472-ND	.63	.46	.41
7.000		F2473-ND	.63	.46	.41

Amp Rating	Voltage Rating	Digi-Key Part No.	Price Each		
			5	100	250
230P Series — Pigtail Type					
.250	250	F2479-ND	.88	.64	.57
.375		F2480-ND	.88	.64	.57
.500		F2481-ND	.88	.64	.57
.750		F2482-ND	.88	.64	.57
1.000		F2483-ND	.88	.64	.57
1.250	250	F2492-ND	.88	.64	.57
1.500		F2489-ND	.88	.64	.57
2.000		F2484-ND	.88	.64	.57
2.500		F2490-ND	.88	.64	.57
3.000		F2485-ND	.88	.64	.57
3.500	F2491-ND	.88	.64	.57	
4.000	125	F2486-ND	.88	.64	.57
5.000		F2487-ND	.88	.64	.57
7.000		F2488-ND	.88	.64	.57

3AB Ceramic Body Fast-Acting Fuses

Dimensions: Diameter: 1/4" (6.35mm); Length: 1-1/4" (31.75mm).



Approvals: Listed by UL and Certified by CSA through 15 Amperes at 250 VAC / 125 VDC. Recognized under the Components Program of U.L. from 20-30 Amperes, certified by CSA at 20 Amperes and approved by METI from 10-30 Amperes.

Electrical Characteristics:			
Rating	Amperage	Opening Time	
110%	1/8 - 30	4 hrs., minimum	
135%	1/8 - 30	1 hr., maximum	
200%	1/8 - 12	15 sec., maximum	
200%	15 - 30	30 sec., maximum	

Amp Rating	Voltage Rating	Digi-Key Part No.	Price Each		
			5	100	250
314 Series — Cartridge Type					
.250	250	F151-ND	1.51	1.13	1.01

Amp Rating	Voltage Rating	Digi-Key Part No.	Price Each		
			5	100	250
314P Series — Cartridge Type RoHS Compliant					
.125	250	F2567-ND	1.35	.98	.87
.250		F2568-ND	1.35	.98	.87
.375		F2569-ND	.83	.61	.54
.500		F2570-ND	.83	.61	.54
.750		F2571-ND	.83	.61	.54
1.000	250	F2572-ND	.83	.61	.54
2.000		F2573-ND	.83	.61	.54
3.000		F2574-ND	.83	.61	.54
4.000		F2575-ND	.83	.61	



Expertise Applied | Answers Delivered

3AB Ceramic Body Slo-Blo® Fuses

Dimensions: Diameter: 1/4" (6.35mm); Length: 1-1/4" (31.75mm)

Patents: U.S. Patents #4,409,729 and #4,445,106

Approvals: Certified by CSA from .250-30 Amperes. Recognized under the component program of Underwriters Laboratories for 12-30 Amperes. Listed by Underwriters Laboratories from .250-10 Amperes.



Electrical Characteristics:

Rating	Opening Time
110%	4 hrs., minimum
135%	1 hr., maximum
200%	5 sec., minimum

Amp Rating	Voltage Rating	Digi-Key Part No.	Price Each		
			5	100	250
326P Series — Cartridge Type					
.010	250	F2619-ND	3.56	2.58	2.30
.031		F2620-ND	3.56	2.58	2.30
.062		F2621-ND	3.56	2.58	2.30
.100		F2622-ND	3.56	2.58	2.30
.125		F2623-ND	3.56	2.58	2.30
.150	250	F2624-ND	3.56	2.58	2.30
.175		F2625-ND	1.47	1.07	.95
.187		F2626-ND	1.47	1.07	.95
.200		F2627-ND	1.47	1.07	.95
.250		F2628-ND	1.47	1.07	.95
.300	250	F2629-ND	1.47	1.07	.95
.375		F2630-ND	1.47	1.07	.95
.400		F2631-ND	1.47	1.07	.95
.500		F2632-ND	1.47	1.07	.95
.600		F2633-ND	1.47	1.07	.95
.700	250	F2634-ND	1.47	1.07	.95
.750		F2635-ND	1.47	1.07	.95
.800		F2636-ND	1.47	1.07	.95
1.000		F2637-ND	1.47	1.07	.95
1.200		F2644-ND	1.47	1.07	.95
1.250	250	F2656-ND	1.47	1.07	.95
1.500		F2645-ND	1.47	1.07	.95
1.600		F2646-ND	1.47	1.07	.95
2.000		F2638-ND	1.47	1.07	.95
2.500		F2650-ND	1.47	1.07	.95
2.800	250	F2651-ND	1.47	1.07	.95
3.000		F2639-ND	1.47	1.07	.95
3.200		F2654-ND	1.47	1.07	.95
4.000		F2640-ND	1.47	1.07	.95
5.000		F2641-ND	1.47	1.07	.95
6.250	250	F2657-ND	1.47	1.07	.95
7.000		F2642-ND	1.47	1.07	.95
8.000		F2643-ND	1.47	1.07	.95
10.000		F2647-ND	1.47	1.07	.95
12.000		F2648-ND	1.47	1.07	.95
15.000	250	F2649-ND	1.47	1.07	.95
20.000		F2652-ND	1.47	1.07	.95
25.000		F2653-ND	1.47	1.07	.95
30.000		F2655-ND	1.47	1.07	.95

3AG Glass Body Fast-Acting Fuses

Approvals: Listed by UL and Certified by CSA through 30 Amperes. .010-10 Amperes listed to UL 248-14 (UL 198-G) 12-30 Amperes listed to UL 275.

Dimensions: 312 Series: Diameter: .25" (6.35mm); Length: 1.25" (31.75mm).

318 Series: Diameter: .275" (6.99mm); Length: 1.275" (32.39mm); Pigtail Diameter: .032" (.81mm); Pigtail Length: 1.50" (38.10mm); Pigtail Material: Solder-coated copper.



Electrical Characteristics:

Rating	Opening Time
110%	4 hrs., minimum
135%	1 hr., maximum
200%	5 sec., maximum

Amp Rating	Voltage Rating	Digi-Key Part No.	Price Each		
			5	100	250
312 Series — Cartridge Type					
.150	250	F105-ND	1.09	.82	.73
2.500	250	F120-ND	.29	.22	.20

Amp Rating	Voltage Rating	Digi-Key Part No.	Price Each		
			5	100	250
312P Series - Cartridge Type — RoHS Compliant					
.062	250	F2495-ND*	1.82	1.33	1.18
.100		F2496-ND*	1.82	1.33	1.18
.125		F2497-ND*	1.06	.77	.68
.150		F2498-ND*	1.06	.77	.68
.175		F2499-ND*	1.06	.77	.68
.187	250	F2500-ND	1.06	.77	.68
.200		F2501-ND*	1.06	.77	.68
.250		F2502-ND*	1.06	.77	.68
.300		F2503-ND*	1.06	.77	.68
.375		F2504-ND*	.31	.23	.20
.500	250	F2505-ND*	.31	.23	.20
.600		F2506-ND*	.31	.23	.20
.750		F2507-ND*	.31	.23	.20
1.000		F2508-ND*	.31	.23	.20
1.250		F2521-ND*	.31	.23	.20
1.500	250	F2516-ND*	.31	.23	.20
1.600		F2517-ND*	.31	.23	.20
1.750		F2522-ND*	.31	.23	.20
1.800		F2518-ND*	.31	.23	.20
2.000		F2509-ND*	.31	.23	.20
2.250	250	F2523-ND*	.31	.23	.20
2.500		F2520-ND*	.31	.23	.20
3.000		F2510-ND*	.31	.23	.20
4.000		F2511-ND*	.31	.23	.20
5.000		F2512-ND*	.31	.23	.20
6.000	250	F2513-ND*	.31	.23	.20
7.000		F2514-ND*	.31	.23	.20
8.000		F2515-ND*	.31	.23	.20
10.000		F2519-ND*	.31	.23	.20
15.000		32	F2764-ND	.57	.42
20.000	F2765-ND		.55	.40	.35
25.000	F2766-ND		.57	.42	.37
30.000	F2767-ND		.57	.42	.37
318 Series — Pigtail Type					
3.000	250	F221-ND	.83	.63	.56
318P Series — Pigtail Type — RoHS Compliant					
.125	250	F2603-ND	1.68	1.22	1.08
.250		F2604-ND	1.68	1.22	1.08
.300		F2605-ND	1.68	1.22	1.08
.375		F2606-ND	.74	.54	.48
.500		F2607-ND	.74	.54	.48
1.000	250	F2608-ND	.74	.54	.48
1.500		F2616-ND	.74	.54	.48
1.600		F2617-ND	.74	.54	.48
2.000		F2609-ND	.74	.54	.48
2.500		F2618-ND	.74	.54	.48
3.000	250	F2610-ND	.74	.54	.48
4.000		F2611-ND	.74	.54	.48
5.000		F2612-ND	.74	.54	.48
6.000		F2613-ND	.74	.54	.48
7.000		F2614-ND	.74	.54	.48
8.000		F2615-ND	.74	.54	.48

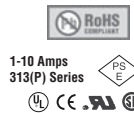
* 312P-KIT-ND Digi-Key® 312 Series Fast Acting 3AG Cartridge 5 each of parts indicated, and 10 each of fuse clips part numbers F040-ND and F052-ND, plus a plastic storage box
RoHS Compliant \$109.96

3AG Glass Body Slo-Blo® Fuses

Approvals: Listed by Underwriters Laboratories and Certified by CSA .010 through 10 Amperes. 12-30 Amperes recognized under the Components Program of UL. 313(P) Series approved by METI from 1-10 Amperes.

Dimensions: 313(P) Series: Diameter: .25" (6.35mm); Length: 1.25" (31.75mm).

315(P) Series: Diameter: .275" (6.99mm); Length: 1.275" (32.39mm); Pigtail Diameter: 1/100-15A: .032" (.813mm), 20-30A: .040" (1.016mm); Pigtail Material: Tin-coated copper.



1-10 Amps 313(P) Series



Electrical Characteristics:

Rating	Opening Time
100%	4 hrs., minimum
135%	1 hr., maximum
200%	5 sec., minimum

Amp Rating	Voltage Rating	Digi-Key Part No.	Price Each		
			5	100	250
313P Series — Cartridge Type					
.010	250	F2524-ND	3.75	2.73	2.42
.031		F2525-ND	3.75	2.73	2.42

Amp Rating	Voltage Rating	Digi-Key Part No.	Price Each		
			5	100	250
.040	250	F2526-ND*	3.75	2.73	2.42
.062		F2527-ND*	1.94	1.41	1.25
.100		F2528-ND*	1.94	1.41	1.25
.125		F2529-ND*	1.94	1.41	1.25
.150		F2530-ND	1.94	1.41	1.25
.175	250	F2531-ND	1.12	.81	.72
.187		F2532-ND*	1.12	.81	.72
.200		F2533-ND*	1.12	.81	.72
.250		F2534-ND*	1.12	.81	.72
.300		F2535-ND*	1.12	.81	.72
.375	250	F2536-ND*	1.12	.81	.72
.400		F2537-ND*	1.12	.81	.72
.500		F2538-ND*	.85	.62	.55
.600		F2539-ND*	.85	.62	.55
.700		F2540-ND	.85	.62	.55
.750	250	F2541-ND*	.85	.62	.55
.800		F2542-ND*	.85	.62	.55
1.000		F2543-ND*	.85	.62	.55
1.200		F2550-ND	.85	.62	.55
1.250		F2564-ND*	.85	.62	.55
1.500	250	F2551-ND*	.85	.62	.55
1.600		F2552-ND*	.85	.62	.55
1.800		F2553-ND	.85	.62	.55
2.000		F2544-ND*	.85	.62	.55
2.250		F2565-ND*	.85	.62	.55
2.500	250	F2557-ND*	.85	.62	.55
2.800		F2558-ND	.85	.62	.55
3.000		F2545-ND*	.85	.62	.55
3.200		F2561-ND*	.85	.62	.55
4.000		F2546-ND*	.98	.71	.63
5.000	250	F2547-ND*	.98	.71	.63
6.250		F2566-ND*	.98	.71	.63
6.300		F2563-ND	.98	.71	.63
7.000		F2548-ND*	.98	.71	.63
8.000		F2549-ND*	.98	.71	.63
10.000	32	F2554-ND*	.98	.71	.63
12.000		F2555-ND*	.98	.71	.63
15.000		F2556-ND*	.98	.71	.63
20.000		F2559-ND*	1.25	.91	.81
25.000		F2560-ND*	1.25	.91	.81
30.000	F2562-ND*	1.25	.91	.81	
315P Series — Pigtail Type					
.100	250	F2586-ND	3.27	2.37	2.11
.250		F2587-ND	1.32	.96	.85
.300		F2588-ND	1.32	.96	.85
.375		F2589-ND	1.32	.96	.85
.500		F2590-ND	1.32	.96	.85
.600	250	F2591-ND	1.32	.96	.85
.750		F2592-ND	1.32	.96	.85
1.000		F2593-ND	1.32	.96	.85
1.500		F2599-ND	1.32	.96	.85
1.600		F2600-ND	1.32	.96	.85
2.000	250	F2594-ND	1.32	.96	.85
2.500		F2601-ND	1.32	.96	.85
3.000		F2595-ND	1.32	.96	.85
3.200		F2602-ND	1.32	.96	.85
4.000		F2596-ND	1.32	.96	.85
5.000	250	F2597-ND	1.32	.96	.85
7.000		F2598-ND	1.32	.96	.85

* 313P-KIT-ND Digi-Key® 313 Series Slo-Blo® 3AG Cartridge 5 each of parts indicated, and 10 each of fuse clips part numbers F040-ND and F052-ND, plus a plastic storage box. \$89.95

More Product Available Online: www.digikey.com

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