Type 2SF

RoHS

Fast Acting Square Ceramic Surface Mount Fuse

E357828

Electrical Characteristic

Cartridge Catalog Number	Ampere Rating [In]	Voltage Rating (V)	Nominal Resistance Cold Ohms	Nominal Melting I^2t A^2 Sec
2SF.062	62mA (1/16A)	350V or less	5.7300	0.000205
2SF.080	80 mA		4.2525	0.000343
2SF.100	100 mA		3.2860	0.001421
2SF.125	125 mA		1.8360	0.002917
2SF.160	160 mA		1.2886	0.004704
2SF.200	200 mA		0.8707	0.009523
2SF.250	250 mA		0.6053	0.016274
2SF.315	315 mA		0.4075	0.030167
2SF.375	375 mA		0.4677	0.045084
2SF.400	400 mA		0.4402	0.056753
2SF.500	500 mA		0.2985	0.084872
2SF.630	630 mA		0.2023	0.145005
2SF.750	750 mA		0.1473	0.222872
2SF.800	800 mA		0.1301	0.273362
2SF001	1 A		0.1056	0.385045
2SF1.25	1.25 A		0.0795	0.644080
2SF1.50	1.5 A		0.0611	0.818880
2SF1.60	1.6 A		0.0591	1.038800
2SF002	2 A		0.0419	0.514100
2SF2.50	2.5 A		0.0315	1.008420
2SF003	3 A		0.0261	1.666500
2SF3.15	3.15A		0.0241	1.977600
2SF3.50	3.5 A		0.0224	2.567760
2SF004	4 A		0.0205	3.183520
2SF005	5 A		0.0148	5.454680
2SF6.30	6.3 A		0.0118	8.986600
2SF007	7 A		0.0101	10.52640
2SF008	8 A		0.0087	16.24150
2SF010	10 A		0.0064	27.25380
2SF012	12A		0.0054	39.40910
2SF015	15A		0.0037	103.6360

Approval

Certified products for U.S. and Canada 0.062~15A

TUV 0.062A~15A (250V/125V)

350V UL Pending

Electrical Characteristic

Rated current	1 In	2 In
	MIN	MAX
62mA~15A	4hr	5 sec

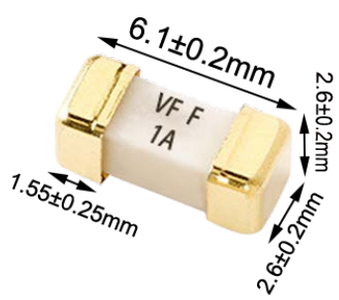
Environmental Temperature at 25°C

Interrupting Rating

62mA~15A: 50 amperes at 350V AC
100 amperes at 125V AC/DC

62mA~10A: 50 amperes at 250V AC

Mechanical Dimension



Physical Specification

Material

Body: Ceramic
Terminations: Gold plated brass caps

Packaging

1,000 Fuses in 7 inches dia. reel, or 5,000 fuses in 13 inches dia. reel,
12mm wide tape, per EIA Standard 481

Environmental Specification

Operating Temperature

-55°C to +125°C

Vibration

MIL-STD-202G, Method 201 (10-55 Hz, 0.06 inch, total excursion)

Salt Spray

MIL-STD-202G, Method 101, Test Condition B (48Hrs)

Insulation Resistance

MIL-STD-202G, Method 302, Test Condition A

Resistance to Solder Heat

MIL-STD-202G, Method 210, Test Condition B (10sec, at 260°C)

Thermal Shock

MIL-STD-202G, Method 107, Test Condition B (-65°C to +125°C)

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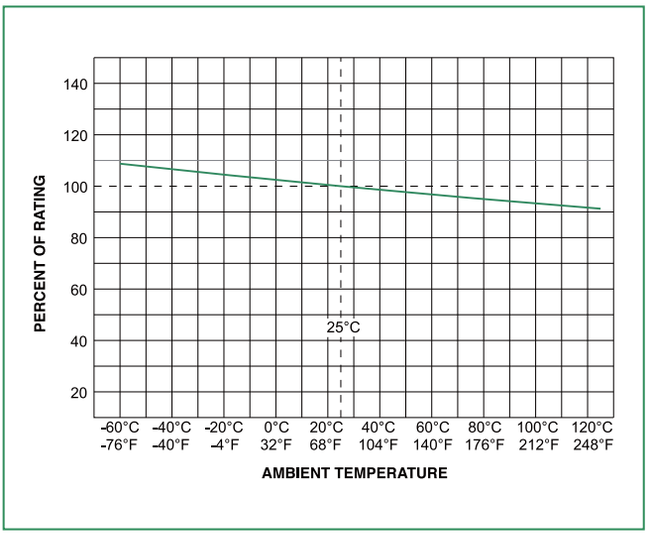
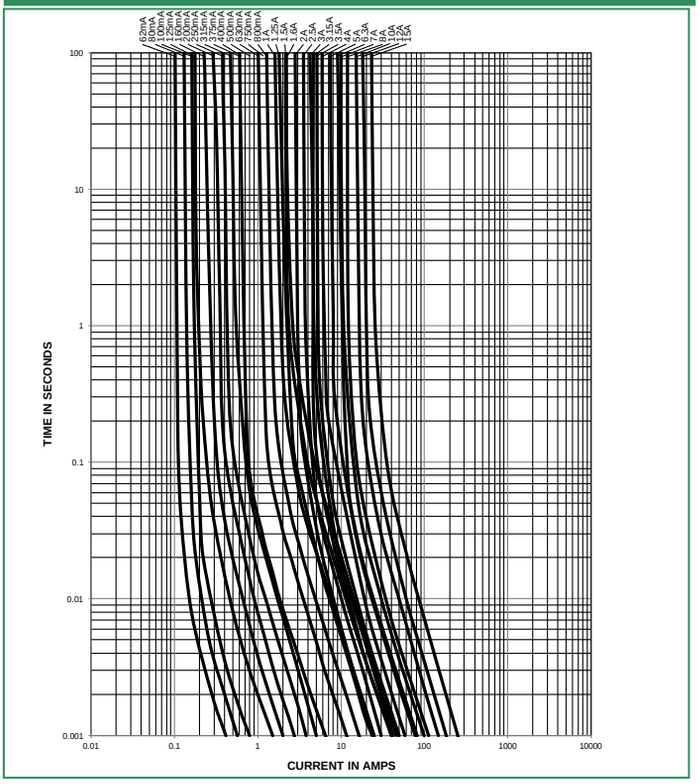
Temperature Rerating Curve



Note:

1. Derating depicted in this curve is in addition to the standard derating of 25% for continuous operation.

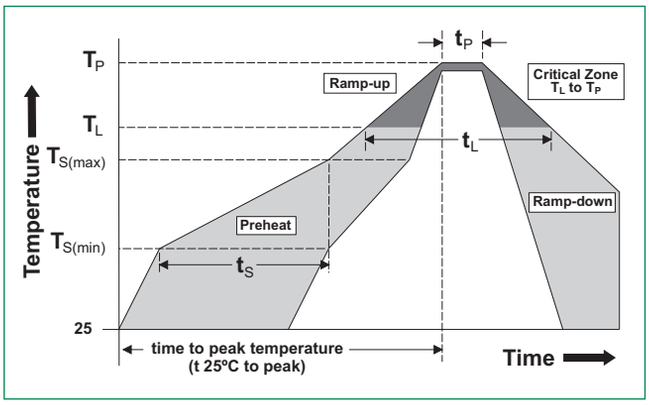
Average Time Current Curves

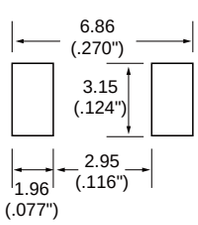


Soldering Parameters

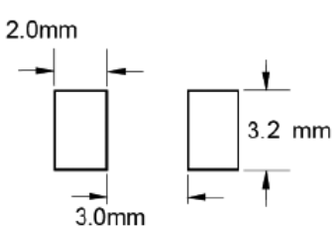
Reflow Condition		Pb – Free assembly
Pre Heat	**-Temperature Min ($T_{s(min)}$)**	150°C
	-Temperature Max ($T_{s(max)}$)	200°C
	-Time (Min to Max) (t_s)	60 – 180 secs
Average ramp up rate (Liquidus Temp (T_L) to peak		5°C/second max.
$T_{S(max)}$ to T_L - Ramp-up Rate		5°C/second max.
Reflow	**-Temperature (T_L) (Liquidus)**	217°C
	-Temperature (t_L)	60 – 150 seconds
Peak Temperature (T_P)		$260^{+0/-5}$ °C
Time within 5°C of actual peak Temperature (t_p)		20 – 40 seconds
Ramp-down Rate		5°C/second max.
Time 25°C to peak Temperature (T_P)		8 minutes max.
Do not exceed		260°C

Wave Soldering Parameters	260°C Peak Temperature, 10 seconds max.





Recommended pad layout <=20A



Recommended pad layout >20A

Note: Minimum copper layer thickness=100um.

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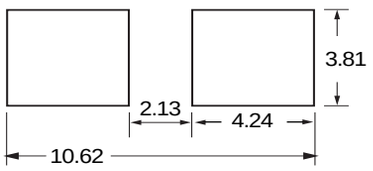
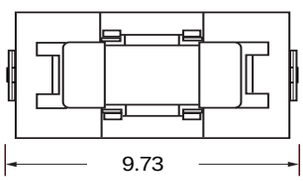
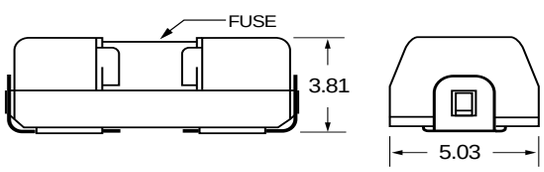
With Fuse Block: 62mA~10A

Mechanical Dimension(mm)

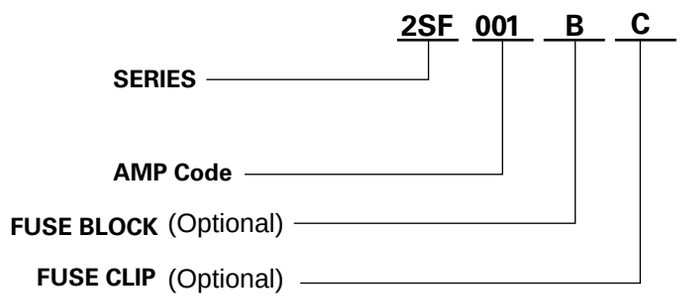


Recommended Pad Layout



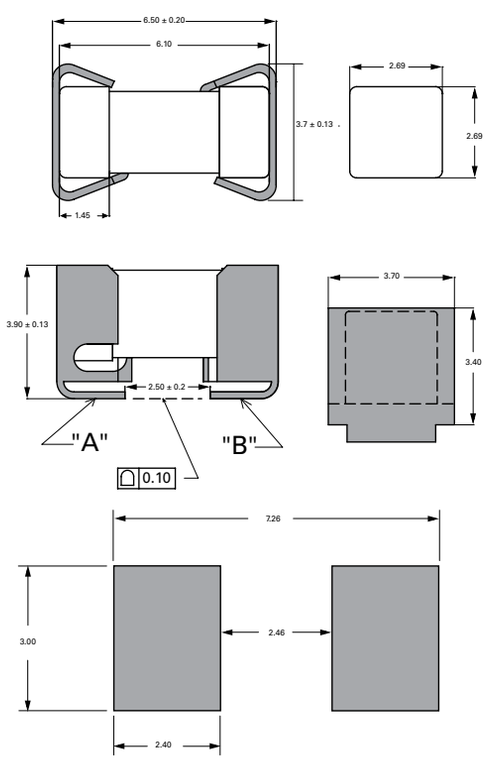


Part Numbering System



With Fuse Clip: 62mA~10A

Mechanical Dimension(mm)



PCB Recommendation for Thermal Management

1. Minimum Copper Layer Thickness = 100um
2. Minimum Copper Trace Width = 10mm

Note:

Alternate methods of thermal management may be used. In such cases, under normal operations, the maximum temperature of the fuse body should not exceed 80°C in a 25°C ambient environment.

Revised: 05/21/24 V3.0.

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