

FUSES

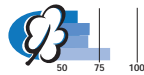
Resettable fuses

PFSM

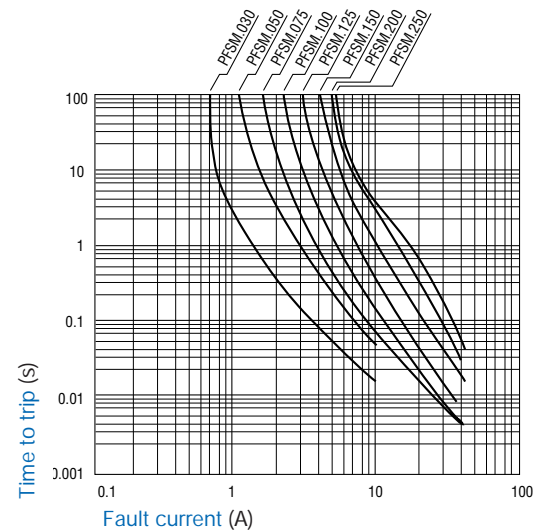
Surface Mount PTC-Fuses Type PFSM

5,4 x 8,0 mm
fast tripping
Packaged per EIA 481-2

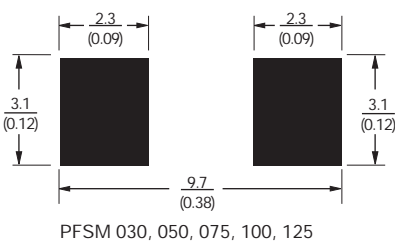
Agency recognition:
UL, CSA, TÜV



Typical Time to Trip at 23 °C

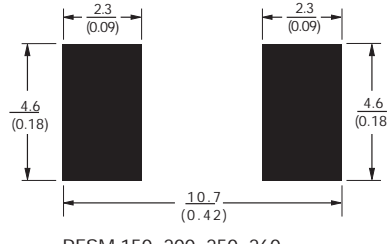


Recommended Pad Layout



PFSM 030, 050, 075, 100, 125

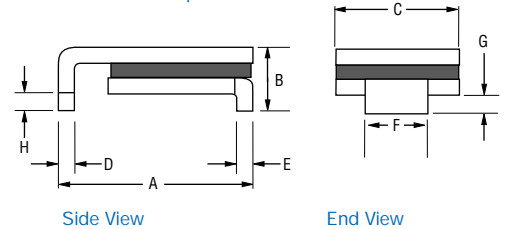
Recommended Pad Layout



PFSM 150, 200, 250, 260

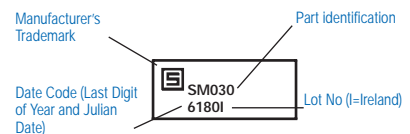
Dimensions in $\frac{\text{mm}}{\text{(Inches)}}$

Terminal material: tin-plated brass



Typical Part Marking

Layout may vary



Applications

Almost anywhere there is a low voltage power supply and a load to be protected, including:

- PC Motherboards
- Computer Cards
- POS-Equipment

Environmental Characteristics

Operating/Storage Temperature	-40 °C to +85 °C	
Maximum Device Surface Temperature in Tripped State	125 °C	
Passive Aging	+85 °C, 1000 hours	±5% typ. resist. change
Humidity Aging	+85 °C, 85% R.H. 1000 hours	±5% typ. resist. change
Thermal Shock *)	+85 °C/-40 °C 10 times	±10% typ. resist. change
Mechanical Shock	MIL-STD-202, Method 213, Condition 1 (100 g, 6 sec.)	No resistance change
Solvent Resistance	MIL-STD-202, Method 215	No change
Vibration	MIL-STD-883C, Method 2007.1, Condition A	No change

*) MIL-STD-202F, Method 107G

Test Procedures And Requirements For Model PFSM Series

Test	Test Conditions	Accept/Reject Criteria
Visual/Mech.	Verify dimensions and materials	Per PF physical description
Resistance	In still air @ 23 °C	$R_{min} \leq R \leq R_{max}$
Time to Trip	At specified current, V_{max} , 23 °C	$T \leq \text{max. time to trip (sec.)}$
Hold Current	30 min. at I_{hold}	No trip
Trip Cycle Life	V_{max} , I_{max} , 100 cycles	No arcing or burning
Trip Endurance	V_{max} , 48 hours	No arcing or burning
Solderability	MIL-STD-202, Method 208	95% min. coverage

Electrical Characteristics

Type / Typ	I _{max} A	V _{max} V	I _{hold} A	I _{trip} A	Initial Resistance		1 Hour (R1) Post-Reflow Resistance		Max. Time to trip at 23 °C		Tripped Power Dissipation
					Ohms at 23 °C		Ohms at 23 °C		Amps	Seconds	Watts at 23 °C
					R _{min.}	R _{max.}	R _{1 max.}		max.	nom.	
PFSM.030.2	10	60	0.30	0.60	1.20	2.40	4.80		1.5	3.0	1.7
PFSM.050.2	10	30	0.50	1.00	0.35	0.70	1.40		2.5	4.0	1.7
PFSM.075.2	40	30	0.75	1.50	0.35	0.70	1.00		8.0	0.30	1.7
PFSM.100.2	40	15	1.10	2.20	0.12	0.24	0.48		8.0	0.50	1.7
PFSM.125.2	40	15	1.25	2.50	0.07	0.14	0.25		8.0	2.0	1.7
PFSM.150.2	40	15	1.50	3.00	0.06	0.12	0.25		8.0	5.0	1.9
PFSM.200.2	40	15	2.00	4.00	0.05	0.10	0.125		8.0	12.0	1.9
PFSM.250.2	40	15	2.50	5.00	0.035	0.08	0.085		8.0	25.0	1.9
PFSM.260.2	40	6	2.60	5.20	0.0025	0.075	0.075		8.0	20.0	1.7

Packaging

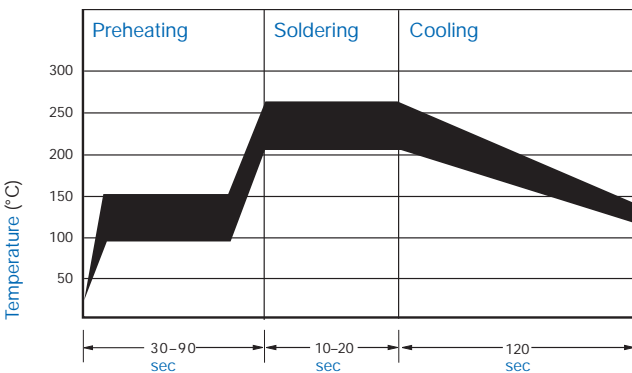
Blister tape PFSM.030 to PFSM.125 = 2000 pcs. per reel
PFSM.150 to PFSM.260 = 1500 pcs. per reel

Dimensions

Type / Typ	A		B		C		D		E		F		G		H	
	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.
PFSM.030.2	6.73	7.98		3.18		5.44	0.56	0.71	0.56	0.71	2.16	2.41	0.66	1.37	0.43	
PFSM.050.2	6.73	7.98		3.18		5.44	0.56	0.71	0.20	0.30	2.16	2.41	0.66	1.37	0.43	
PFSM.075.2	6.73	7.98		3.18		5.44	0.56	0.71	0.56	0.71	2.16	2.41	0.66	1.37	0.43	
PFSM.100.2	6.73	7.98		3.00		5.44	0.56	0.71	0.56	0.71	2.16	2.41	0.66	1.37	0.43	
PFSM.125.2	6.73	7.98		3.00		5.44	0.56	0.71	0.56	0.71	2.16	2.41	0.66	1.37	0.43	
PFSM.150.2	8.00	9.50		3.00		6.71	0.56	0.71	0.56	0.71	3.68	3.94	0.66	1.37	0.43	
PFSM.200.2	8.00	9.50		3.00		6.71	0.56	0.71	0.56	0.71	3.68	3.94	0.66	1.37	0.43	
PFSM.250.2	8.00	9.50		3.00		6.71	0.56	0.71	0.56	0.71	3.68	3.94	0.66	1.37	0.43	
PFSM.260.2	6.73	7.98		3.00		5.44	0.56	0.71	0.56	0.71	2.16	2.41	0.66	1.37	0.43	

Dimensions in mm

Solder Reflow And Rework Recommendations



Solder reflow

- Recommended reflow methods: I_R, vapor phase oven, hot air oven
- Devices are not designed to be wave soldered to the bottom side of the board
- Gluing the devices is not recommended
- Recommended maximum paste thickness is 0.25 mm (.010 inch)
- Devices can be cleaned using standard industry methods and solvents

Note :

If reflow temperatures exceed the recommended profile, devices may not meet the performance requirements

Rework

- A device should not be reworked

Thermal Derating Chart - I_{hold} (Amps)

Type	Ambient Operating Temperature									
	40 °C	-20 °C	0 °C	23 °C	40 °C	50 °C	60 °C	70 °C	85 °C	
PFSM.030.2	0.45	0.40	0.35	0.30	0.25	0.23	0.20	0.17	0.14	
PFSM.050.2	0.76	0.67	0.59	0.50	0.42	0.38	0.33	0.29	0.23	
PFSM.075.2	1.13	1.01	0.88	0.75	0.62	0.56	0.50	0.44	0.34	
PFSM.100.2	1.66	1.47	1.29	1.10	0.91	0.83	0.73	0.64	0.50	
PFSM.125.2	1.89	1.68	1.46	1.25	1.04	0.94	0.83	0.73	0.56	
PFSM.150.2	2.27	2.01	1.76	1.50	1.25	1.13	0.99	0.87	0.68	
PFSM.200.2	3.02	2.68	2.34	2.00	1.66	1.50	1.32	1.16	0.90	
PFSM.250.2	3.78	3.35	2.93	2.50	2.08	1.88	1.65	1.45	1.13	
PFSM.260.2	3.64	3.25	2.91	2.60	2.26	2.08	1.95	1.74	1.48	

How To Order

PTC-Fuse _____ PF SM . XXX . X
Style _____
SM = 8 mm Surface Mount Component

Hold Current, I_{hold}
030-250 (0.30 Amps-2.50 Amps)

Packaging Options
Packaged per EIA 481-2
.2 = Blister tape