Surface Mount -Positive temperature coefficient Fuse PPSM Series

Description

The PPSM are designed specifically to provide over current protection for sensitive electronic equipment, the over current events are usually caused by voltage transients induced by lightning and other transient overvoltage.

PPSM Series/0805

Feature

- For surface mounted application to optimize board space
- Low profile package
- Lead free device size 0.18*0.12 inch/4.5*3.2 mm
- High temperature soldering guaranteed:260℃/40 seconds at terminals

Applications

- USB peripherals
- Disk drives
- CD-ROMs
- Plug and play protection for motherboards and peripherals
- Mobile phones-battery and protection
- Disk drives
- PDAs/digital cameras
- Game console port protection

Electrical characteristics per line@25℃(unless otherwise specified)

PPSM-Performance Specification

Model	I_{hold}@25℃	I_{trip}@25℃	V_{max}	I_{max}	Maximum Time to Trip		P_d typ.	Resistance (Ω)	
	(A)	(A)	(Vdc)	(A)	Current (A)	Time (Sec)	(W)	Ri_{min}	$R1_{max}$
PPSM010	0.10	0.30	15.0	40	0.5	1.50	0.50	1.000	7.500
PPSM020	0.20	0.50	9.0	40	8.0	0.02	0.50	0.650	3.500
PPSM035	0.35	0.75	6.0	40	8.0	0.10	0.50	0.250	1.200
PPSM050	0.50	1.00	6.0	40	8.0	0.10	0.50	0.150	0.900
PPSM075	0.75	1.50	6.0	40	8.0	0.20	0.60	0.090	0.350
PPSM100	1.00	2.00	6.0	40	8.0	0.30	0.60	0.060	0.250
PPSM110	1.10	2.20	6.0	40	8.0	0.30	0.60	0.060	0.210

PPSM-Ihold Versus Temperature

Model	Hold current (I_{hold}/A) versus maximum ambient operating temperature (T_{mao}/℃)								
	-40	-20	0	25	40	50	60	70	85
PPSM010	0.15	0.13	0.12	0.10	0.09	0.08	0.07	0.06	0.05
PPSM020	0.28	0.25	0.23	0.20	0.17	0.14	0.12	0.10	0.07
PPSM035	0.47	0.44	0.39	0.35	0.30	0.27	0.24	0.20	0.14
PPSM050	0.68	0.62	0.55	0.50	0.40	0.37	0.33	0.29	0.23
PPSM075	1.00	0.90	0.79	0.75	0.63	0.57	0.53	0.42	0.35
PPSM100	1.45	1.35	1.20	1.00	0.92	0.84	0.75	0.65	0.52
PPSM110	1.45	1.35	1.20	1.10	0.92	0.84	0.75	0.65	0.52

I_{hold} = Hold Current. Maximum current device will not trip in 25℃ still air.

I_{trip} = Trip Current. Minimum current at which the device will always trip in 25℃ still air.

I_{MAX} = Maximum fault current device can withstand without damage at rated voltage (V_{max}).

V_{MAX} = Maximum operating voltage device can withstand without damage at rated current (I_{max}).

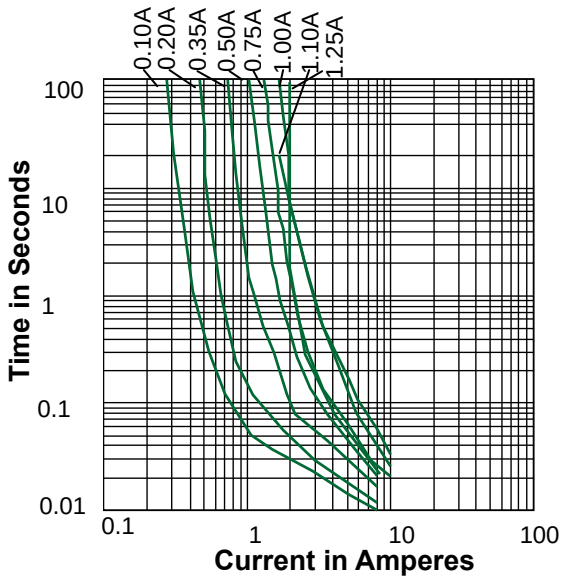
P_d = Power dissipation when device is in the tripped state in 25℃ still air environment at rated voltage.

$Ri_{min/max}$ = Minimum/Maximum device resistance prior to tripping at 25℃.

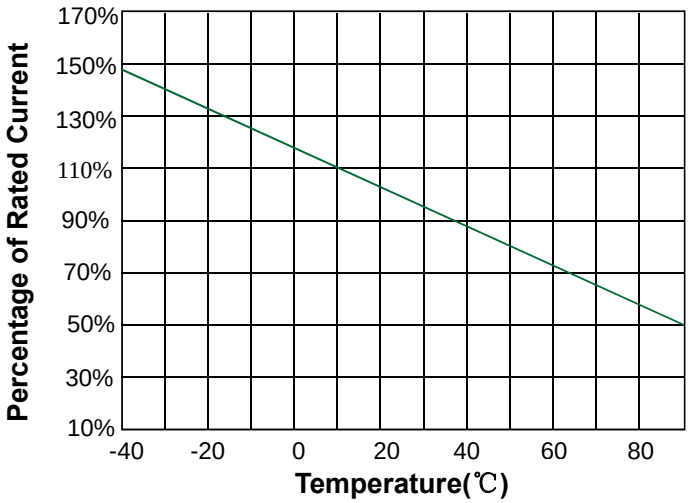
$R1_{max}$ = Maximum device resistance is measured one hour post reflow.

CAUTION : Operation beyond the specified ratings may result in damage and possible arcing and flame.

Average Time Current Curves



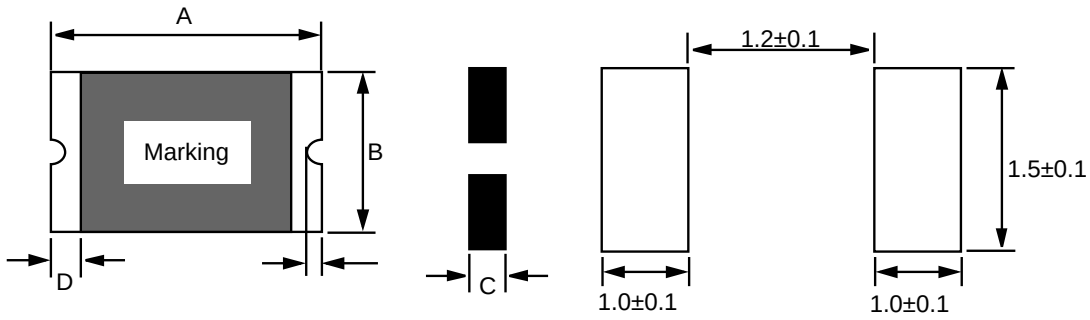
Temperature Rerating Curve



Environmental Specifications

Test	Conditions	Resistance change
Passive aging	+85℃, 1000hrs.	±5% typical
Humidity aging	+85℃, 85% R.H., 168 hours	±5% typical
Thermal shock	+85℃ to -40℃, 20 times	±33% typical
Resistance to solvent	MIL-STD-202, Method 215	No change
Vibration	MIL-STD-202, Method 201	No change
Ambient operating condition : -40℃ to +85℃		
Maximum surface temperature of the device in the tripped state is 125℃		

Product dimension(0805)



Recommended Pad Layout (mm)

Model	A		B		C		D
	Min.	Max.	Min.	Max.	Min.	Max.	Min.
PPSM010	2.00	2.20	1.20	1.50	0.55	0.95	0.20
PPSM020	2.00	2.20	1.20	1.50	0.55	0.95	0.20
PPSM035	2.00	2.20	1.20	1.50	0.40	0.80	0.20
PPSM050	2.00	2.20	1.20	1.50	0.40	0.80	0.20
PPSM075	2.00	2.20	1.20	1.50	0.75	1.25	0.20
PPSM100	2.00	2.20	1.20	1.50	0.75	1.25	0.20
PPSM110	2.00	2.20	1.20	1.50	0.75	1.25	0.20

Ordering information

Device	Package	Shipping
PPSM010/020/035/050	0805(Pb-Free)	5000 / Tape & Reel
PPSM075/100/110/125	0805(Pb-Free)	4000/ Tape & Reel

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