

### Description

The PPMM 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.



### 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°C/40 seconds at terminals

**SMD1812**

### Applications

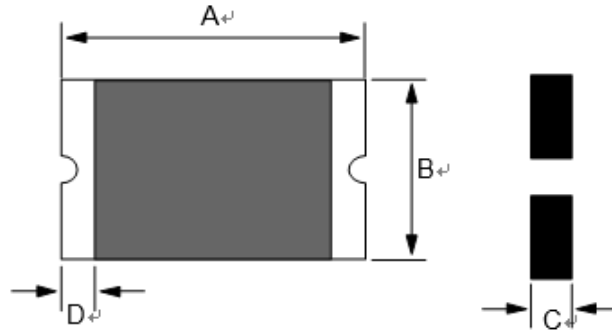
PPMM device are ideal for the over current protection of I/O interfaces, VCC bus and other vulnerable circuits used in telecom, computer industrial and consumer electronic application, When the current reaches its trip current, its internal impedance will increase rapidly, so as to reduce the over current.

### Electrical Characteristics

Model	UL、 TUV、 CSA	V <sub>max</sub>	I <sub>max</sub>	I <sub>hold@25°C</sub>	I <sub>trip@25°C</sub>	P <sub>d</sub> typ.	Resistance (Ω)		最大动作时间	
		(Vdc)	(A)	(A)	(A)	(W)	R <sub>imin</sub>	R <sub>1max</sub>	(A)	(Sec)
PPMM010	√	60	10	0.1	0.3	0.8	0.70	15.00	0.5	1.5
PPMM010/50	×	50	10	0.1	0.3	0.8	0.70	15.00	0.5	1.5
PPMM014	√	60	10	0.14	0.34	0.8	0.40	6.50	1.5	0.15
PPMM014/50	×	50	10	0.14	0.34	0.8	0.40	6.50	1.5	0.15
PPMM020	√	30	10	0.2	0.4	0.8	0.75	5.00	8	0.2
PPMM020/60	√	60	10	0.2	0.4	0.8	0.40	6.00	1.5	0.15
PPMM020/50	×	50	10	0.2	0.4	0.8	0.40	6.00	1.5	0.15
PPMM030	√	30	10	0.3	0.6	0.8	0.30	3.00	8	0.1
PPMM035	√	16	40	0.35	0.7	0.8	0.20	1.80	8	0.1
PPMM035/30	×	30	40	0.35	0.7	0.8	0.20	1.80	8	0.1
PPMM050	√	15	40	0.5	1	0.8	0.15	1.00	8	0.15
PPMM050/16	×	16	40	0.5	1	0.8	0.15	1.00	8	0.15
PPMM050/30	×	30	40	0.5	1	0.8	0.15	1.00	8	0.15

Model	UL、 TUV、 CSA	V <sub>max</sub>	I <sub>max</sub>	I <sub>hold@25°C</sub>	I <sub>trip@25°C</sub>	P <sub>d typ.</sub>	Resistance (Ω)		最大动作时间	
		(Vdc)	(A)	(A)	(A)	(W)	R <sub>i min</sub>	R <sub>1 max</sub>	(A)	(Sec)
PPMM075	✓	16	40	0.75	1.5	0.8	0.11	0.45	8	0.2
PPMM075-P	×	16	100	0.75	1.5	0.8	0.11	0.45	8	0.2
PPMM075/24	✓	24	40	0.75	1.5	0.8	0.11	0.45	8	0.2
PPMM075/33	✓	33	40	0.75	1.5	0.8	0.11	0.50	8	0.2
PPMM110	✓	6	100	1.1	2.2	0.8	0.04	0.23	8	0.3
PPMM110/8	×	8	100	1.1	2.2	0.8	0.04	0.23	8	0.3
PPMM110/12	×	12	100	1.1	2.2	0.8	0.40	0.23	8	0.3
PPMM110/16	✓	16	100	1.1	2.2	0.8	0.04	0.23	8	0.5
PPMM110/24	✓	24	100	1.1	2.2	1.2	0.06	0.18	8	0.5
PPMM110/33	×	33	100	1.1	2.2	1.2	0.06	0.18	8	0.5
PPMM125	✓	6	40	1.25	2.5	0.8	0.04	0.14	8	0.4
PPMM125/8	×	8	100	1.25	2.5	0.8	0.04	0.14	8	0.4
PPMM125/12	×	12	100	1.25	2.5	0.8	0.04	0.14	8	0.4
PPMM125/16	×	16	100	1.25	2.5	0.8	0.04	0.14	8	0.4
PPMM125-P	×	16	100	1.25	2.5	0.8	0.04	0.14	8	0.4
PPMM150	✓	6	100	1.5	3	0.8	0.03	0.12	8	0.5
PPMM150/8	×	8	100	1.5	3	0.8	0.03	0.12	8	0.5
PPMM150/12	✓	12	100	1.5	3	1.0	0.03	0.12	8	0.5
PPMM150/16	TUV	16	100	1.5	3	1.0	0.03	0.12	8	0.5
PPMM150/24	✓	24	100	1.5	3	1.2	0.03	0.14	8	1.5
PPMM160/6	×	6	100	1.6	3.2	1	0.025	0.12	8	1
PPMM160	✓	8	100	1.6	3.2	1	0.025	0.12	8	1
PPMM160/12	✓	12	100	1.6	3.2	1	0.025	0.12	8	1
PPMM160/16	✓	16	100	1.6	3.2	1	0.025	0.12	8	1
PPMM200	UL	8	40	2	4	1.2	0.02	0.08	8	3
PPMM200	TUV	8	100	2	4	1.2	0.02	0.08	8	3
PPMM200/12	×	12	100	2	4	1.2	0.02	0.08	8	3
PPMM200/16	×	16	100	2	4	1.2	0.02	0.08	8	3

Model	UL、 TUV、 CSA	$V_{max}$	$I_{max}$	$I_{hold@25^{\circ}C}$	$I_{trip@25^{\circ}C}$	$P_d$ typ.	Resistance ( $\Omega$ )		最大动作时间	
		(Vdc)	(A)	(A)	(A)		$R_{i_{min}}$	$R_{1_{max}}$	(A)	(Sec)
PPMM200/8S	UL	8	40	2	4	1.2	0.02	0.08	8	3
PPMM200/6S	×	6	40	2	4	1.2	0.02	0.08	8	3
PPMM250/16	√	16	100	2.5	5	1.2	0.015	0.1	8	5
PPMM250/12	×	12	100	2.5	5	1.2	0.015	0.1	8	5
PPMM250/8	×	8	100	2.5	5	1.2	0.015	0.1	8	5
PPMM250/8S	×	8	100	2.5	5	1.2	0.015	0.1	8	5
PPMM250/6S	×	6	100	2.5	5	1.2	0.015	0.1	8	5
PPMM260	√	6	100	2.6	5.2	1.2	0.015	0.08	8	5
PPMM260/12	×	12	100	2.6	5.2	1.2	0.015	0.08	8	5
PPMM260/16	×	16	100	2.6	5.2	1.2	0.015	0.08	8	5
PPMM260/8S	×	8	100	2.6	5.2	1.2	0.015	0.08	8	5
PPMM260/6S	×	6	100	2.6	5.2	1.2	0.015	0.08	8	5
PPMM300	×	12	100	3	6	1.2	0.012	0.06	8	5
PPMM300/6	√	6	100	3	6	1.2	0.012	0.06	8	5
PPMM300/8	×	8	100	3	6	1.2	0.012	0.06	8	5

**Construction And Dimension (Unit: mm)**


Top and bottom view

side view

Model	Marking	A		B		C		D
		Min	Max	Min	Max	Min	Max	Min
PPMM010	T010	4.37	4.73	3.07	3.41	0.8	1.2	0.3
PPMM010/50	T010	4.37	4.73	3.07	3.41	0.8	1.2	0.3
PPMM014	T014	4.37	4.73	3.07	3.41	0.8	1.2	0.3
PPMM014/50	T014	4.37	4.73	3.07	3.41	0.8	1.2	0.3
PPMM020	T020	4.37	4.73	3.07	3.41	0.8	1.2	0.3
PPMM020/60	T020	4.37	4.73	3.07	3.41	0.8	1.2	0.3
PPMM020/50	T020	4.37	4.73	3.07	3.41	0.8	1.2	0.3
PPMM030	T030	4.37	4.73	3.07	3.41	0.8	1.2	0.3
PPMM035	T035	4.37	4.73	3.07	3.41	0.6	1	0.3
PPMM035/30	T035	4.37	4.73	3.07	3.41	0.6	1	0.3
PPMM050	T050	4.37	4.73	3.07	3.41	0.6	1	0.3
PPMM050/16	T050	4.37	4.73	3.07	3.41	0.6	1	0.3
PPMM050/30	T050	4.37	4.73	3.07	3.41	0.6	1	0.3
PPMM075	T075	4.37	4.73	3.07	3.41	0.6	1	0.3
PPMM075-P	T075	4.37	4.73	3.07	3.41	0.6	1	0.3
PPMM075/24	T075	4.37	4.73	3.07	3.41	0.6	1	0.3
PPMM075/33	T075	4.37	4.73	3.07	3.41	0.6	1	0.3
PPMM110	T110	4.37	4.73	3.07	3.41	0.6	1	0.3
PPMM110/8	T110	4.37	4.73	3.07	3.41	0.6	1	0.3
PPMM110/12	T110	4.37	4.73	3.07	3.41	0.6	1	0.3
PPMM110/16	T110	4.37	4.73	3.07	3.41	0.6	1	0.3
PPMM110/24	T110	4.37	4.73	3.07	3.41	0.8	1.2	0.3
PPMM110/33	T110	4.37	4.73	3.07	3.41	1.1	1.5	0.3
PPMM125	T125	4.37	4.73	3.07	3.41	0.45	0.85	0.3
PPMM125/8	T125	4.37	4.73	3.07	3.41	0.45	0.85	0.3
PPMM125/12	T125	4.37	4.73	3.07	3.41	0.45	0.85	0.3
PPMM125/16	T125	4.37	4.73	3.07	3.41	0.45	0.85	0.3
PPMM125-P	T125	4.37	4.73	3.07	3.41	0.45	0.85	0.3

Model	Marking	A		B		C		D
		Min	Max	Min	Max	Min	Max	Min
PPMM150	T150	4.37	4.73	3.07	3.41	0.45	0.85	0.3
PPMM150/8	T150	4.37	4.73	3.07	3.41	0.45	0.85	0.3
PPMM150/12	T150	4.37	4.73	3.07	3.41	0.45	0.85	0.3
PPMM150/16	T150	4.37	4.73	3.07	3.41	0.45	0.85	0.3
PPMM150/24	T150	4.37	4.73	3.07	3.41	1.2	1.7	0.3
PPMM160/6	T160	4.37	4.73	3.07	3.41	0.45	0.85	0.3
PPMM160	T160	4.37	4.73	3.07	3.41	0.45	0.85	0.3
PPMM160/12	T160	4.37	4.73	3.07	3.41	0.45	0.85	0.3
PPMM160/16	T160	4.37	4.73	3.07	3.41	0.45	0.85	0.3
PPMM200	T200	4.37	4.73	3.07	3.41	0.6	1	0.3
PPMM200/12	T200	4.37	4.73	3.07	3.41	0.6	1	0.3
PPMM200/16	T200	4.37	4.73	3.07	3.41	0.9	1.3	0.3
PPMM200/8S	T200	4.37	4.73	3.07	3.41	0.4	0.6	0.3
PPMM200/6S	T200	4.37	4.73	3.07	3.41	0.4	0.6	0.3
PPMM250/16	T250	4.37	4.73	3.07	3.41	0.9	1.3	0.3
PPMM250/12	T250	4.37	4.73	3.07	3.41	0.6	1	0.3
PPMM250/8	T250	4.37	4.73	3.07	3.41	0.6	1	0.3
PPMM250/8S	T250	4.37	4.73	3.07	3.41	0.4	0.6	0.3
PPMM250/6S	T250	4.37	4.73	3.07	3.41	0.4	0.6	0.3
PPMM260	T260	4.37	4.73	3.07	3.41	0.6	1	0.3
PPMM260/12	T260	4.37	4.73	3.07	3.41	0.6	1	0.3
PPMM260/16	T260	4.37	4.73	3.07	3.41	0.9	1.3	0.3
PPMM260/8S	T260	4.37	4.73	3.07	3.41	0.4	0.6	0.3
PPMM260/6S	T260	4.37	4.73	3.07	3.41	0.4	0.6	0.3
PPMM300	T300	4.37	4.73	3.07	3.41	0.6	1	0.3
PPMM300/6	T300	4.37	4.73	3.07	3.41	0.6	1	0.3
PPMM300/8	T300	4.37	4.73	3.07	3.41	0.6	1	0.3

**Thermal Derating Chart-I<sub>hold</sub>**


Model	Ambient Operating Temperature								
	-40°C	-20°C	0°C	25°C	40°C	50°C	60°C	70°C	85°C
PPMM010	0.16	0.14	0.12	0.1	0.08	0.07	0.06	0.05	0.03
PPMM010/50	0.16	0.14	0.12	0.1	0.08	0.07	0.06	0.05	0.03
PPMM014	0.23	0.19	0.17	0.14	0.12	0.1	0.09	0.08	0.06
PPMM014/50	0.23	0.19	0.17	0.14	0.12	0.1	0.09	0.08	0.06
PPMM020	0.29	0.26	0.23	0.2	0.17	0.15	0.14	0.12	0.1
PPMM020/60	0.29	0.26	0.23	0.2	0.17	0.15	0.14	0.12	0.1
PPMM020/50	0.29	0.26	0.23	0.2	0.17	0.15	0.14	0.12	0.1
PPMM030	0.44	0.39	0.35	0.3	0.26	0.23	0.21	0.18	0.15
PPMM035	0.51	0.46	0.41	0.35	0.3	0.27	0.25	0.21	0.18
PPMM035/30	0.51	0.46	0.41	0.35	0.3	0.27	0.25	0.21	0.18
PPMM050	0.77	0.68	0.59	0.5	0.44	0.4	0.37	0.33	0.29
PPMM050/16	0.77	0.68	0.59	0.5	0.44	0.4	0.37	0.33	0.29
PPMM050/30	0.77	0.68	0.59	0.5	0.44	0.4	0.37	0.33	0.29
PPMM075	1.15	1.01	0.88	0.75	0.65	0.6	0.55	0.49	0.43
PPMM075-P	1.15	1.01	0.88	0.75	0.65	0.6	0.55	0.49	0.43
PPMM075/24	1.15	1.01	0.88	0.75	0.65	0.6	0.55	0.49	0.43
PPMM075/33	1.15	1.01	0.88	0.75	0.65	0.6	0.55	0.49	0.43
PPMM110	1.59	1.43	1.26	1.1	0.95	0.87	0.8	0.71	0.6
PPMM110/8	1.59	1.43	1.26	1.1	0.95	0.87	0.8	0.71	0.6
PPMM110/12	1.59	1.43	1.26	1.1	0.95	0.87	0.8	0.71	0.6
PPMM110/16	1.59	1.43	1.26	1.1	0.95	0.87	0.8	0.71	0.6
PPMM110/24	2	1.7	1.4	1.1	0.95	0.88	0.8	0.73	0.61
PPMM110/33	2	1.7	1.4	1.1	0.95	0.88	0.8	0.73	0.61
PPMM125	1.8	1.63	1.43	1.25	1.08	0.99	0.91	0.81	0.68
PPMM125/8	1.8	1.63	1.43	1.25	1.08	0.99	0.91	0.81	0.68
PPMM125/12	1.8	1.63	1.43	1.25	1.08	0.99	0.91	0.81	0.68
PPMM125/16	1.8	1.63	1.43	1.25	1.08	0.99	0.91	0.81	0.68
PPMM125-P	1.8	1.63	1.43	1.25	1.08	0.99	0.91	0.81	0.68
PPMM150	2.17	1.95	1.72	1.5	1.3	1.18	1.09	0.97	0.82
PPMM150/8	2.17	1.95	1.72	1.5	1.3	1.18	1.09	0.97	0.82
PPMM150/12	2.17	1.95	1.72	1.5	1.3	1.18	1.09	0.97	0.82
PPMM150/16	2.17	1.95	1.72	1.5	1.3	1.18	1.09	0.97	0.82
PPMM150/24	2.17	1.95	1.72	1.5	1.3	1.18	1.09	0.97	0.82
PPMM160/6	2.3	2.2	1.9	1.6	1.45	1.3	1.15	1.03	0.91
PPMM160	2.3	2.2	1.9	1.6	1.45	1.3	1.15	1.03	0.91
PPMM160/12	2.3	2.2	1.9	1.6	1.45	1.3	1.15	1.03	0.91
PPMM160/16	2.3	2.2	1.9	1.6	1.45	1.3	1.15	1.03	0.91
PPMM200	3.08	2.71	2.35	2	1.8	1.6	1.5	1.4	1.25
PPMM200/12	3.08	2.71	2.35	2	1.8	1.6	1.5	1.4	1.25
PPMM200/16	3.08	2.71	2.35	2	1.8	1.6	1.5	1.4	1.25
PPMM200/8S	3.08	2.71	2.35	2	1.8	1.6	1.5	1.4	1.25
PPMM200/6S	3.08	2.71	2.35	2	1.8	1.6	1.5	1.4	1.25

Model	Ambient Operating Temperature								
	-40°C	-20°C	0°C	25°C	40°C	50°C	60°C	70°C	85°C
PPMM250/16	3.85	3.45	3	2.5	2.05	1.85	1.75	1.3	1.1
PPMM250/12	3.85	3.45	3	2.5	2.05	1.85	1.75	1.3	1.1
PPMM250/8	3.85	3.45	3	2.5	2.05	1.85	1.75	1.3	1.1
PPMM250/8S	3.85	3.45	3	2.5	2.05	1.85	1.75	1.3	1.1
PPMM250/6S	3.85	3.45	3	2.5	2.05	1.85	1.75	1.3	1.1
PPMM260	4	3.52	3.06	2.6	2.34	2.08	1.95	1.39	1.04
PPMM260/12	4	3.52	3.06	2.6	2.34	2.08	1.95	1.39	1.04
PPMM260/16	4	3.52	3.06	2.6	2.34	2.08	1.95	1.39	1.04
PPMM260/8S	4	3.52	3.06	2.6	2.34	2.08	1.95	1.39	1.04
PPMM260/6S	4	3.52	3.06	2.6	2.34	2.08	1.95	1.39	1.04
PPMM300	4.4	3.9	3.5	3	2.6	2.3	2.1	1.8	1.5
PPMM300/6	4.4	3.9	3.5	3	2.6	2.3	2.1	1.8	1.5
PPMM300/8	4.4	3.9	3.5	3	2.6	2.3	2.1	1.8	1.5

**Ordering information**

Model	Packing Q'ty(Pcs / Reel)	Model	Packing Q'ty(Pcs / Reel)
PPMM010	1500	PPMM150	2000
PPMM010/50	1500	PPMM150/8	2000
PPMM014	1500	PPMM150/12	2000
PPMM014/50	1500	PPMM150/16	2000
PPMM020	1500	PPMM150/24	1000
PPMM020/60	1500	PPMM160/6	2000
PPMM020/50	1500	PPMM160	2000
PPMM030	1500	PPMM160/12	2000
PPMM035	1500	PPMM160/16	2000
PPMM035/30	1500	PPMM200	1500
PPMM050	2000	PPMM200/12	1500
PPMM050/16	2000	PPMM200/16	1500
PPMM050/30	2000	PPMM200/8S	2000
PPMM075	2000	PPMM200/6S	2000
PPMM075-P	2000	PPMM250/16	1500
PPMM075/24	2000	PPMM250/12	1500
PPMM075/33	2000	PPMM250/8	1500
PPMM110	2000	PPMM250/8S	2000
PPMM110/8	2000	PPMM250/6S	2000
PPMM110/12	2000	PPMM260	1500
PPMM110/16	2000	PPMM260/12	1500
PPMM110/24	1500	PPMM260/16	1500


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