

### Features

- ◆ Surface Mount Devices
- ◆ Standard 4532mm(1812mils) footprint
- ◆ Surface mount packaging for automated assembly
- ◆ Compatible with Pb and Pb-free solder reflow profiles.
- ◆ Agency recognition: UL approved

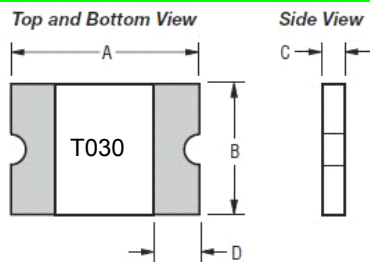
### Applications

- ◆ Overcurrent and overtemperature protection of automotive electronics
- ◆ PC motherboards, Hard disk driver, and PC peripherals
- ◆ POS Equipment
- ◆ USB port protection
- ◆ HDMI source protection

## Electrical Characteristics (电气特性):

P/N	保持电流	跳脱电流	最大电压	最大电流	最大动作时间		消耗功率	电阻范围(Ω)	
	$I_H$ (A)	$I_T$ (A)	$V_{max}$ (V)	$I_{max}$ (A)	(A)	(Sec.)	$Pd_{typ}$ (W)	$R_{min}$	$R1_{max}$
MSMD010	0.10	0.30	60	10	0.5	1.50	0.8	0.700	15.000
MSMD014	0.14	0.34	60	10	1.5	0.15	0.8	0.400	6.500
MSMD020	0.20	0.40	30	10	8.0	0.02	0.8	0.750	5.00
MSMD020/60	0.20	0.40	60	10	1.5	0.15	0.8	0.400	6.000
MSMD030	0.30	0.60	30	10	8.0	0.10	0.8	0.300	3.000
MSMD035	0.35	0.70	16	10	8.0	0.10	0.8	0.200	1.800
MSMD050	0.50	1.00	16	30	8.0	0.15	0.8	0.150	1.000
MSMD075	0.75	1.50	16	40	8.0	0.20	0.8	0.110	0.450
MSMD075/24	0.75	1.50	24	40	8.0	0.20	0.8	0.110	0.450
MSMD075/33	0.75	1.50	33	40	8.0	0.20	0.8	0.110	0.450
MSMD110	1.10	2.20	6	100	8.0	0.30	0.8	0.040	0.225
MSMD110/16	1.10	2.20	16	100	8.0	0.50	0.8	0.040	0.225
MSMD110/24	1.10	2.20	24	100	8.0	0.50	0.8	0.055	0.180
MSMD125	1.25	2.50	6	40	8.0	0.40	0.8	0.035	0.140
MSMD150	1.50	3.00	6	100	8.0	0.50	0.8	0.030	0.120
MSMD150/12	1.50	3.00	12	100	8.0	0.50	1.0	0.030	0.120
MSMD150/24	1.50	3.00	24	20	8.0	1.50	1.0	0.030	0.140
MSMD160	1.60	3.20	8	100	8.0	0.50	0.8	0.025	0.120
MSMD160/12	1.60	3.20	12	100	8.0	1.00	1.0	0.025	0.120
MSMD160/16	1.60	3.20	16	100	8.0	1.00	1.0	0.025	0.120
MSMD200	2.00	4.00	16	100	8.0	3.00	0.8	0.020	0.080
MSMD250/16	2.50	5.00	16	100	8.0	5.00	1.2	0.015	0.100
MSMD260	2.60	5.20	16	100	8.0	5.00	0.8	0.015	0.080
MSMD300	3.00	6.00	12	100	8.0	5.00	0.8	0.012	0.060

## Product Dimensions & Marking (Unit: mm) (产品尺寸) :



T
030

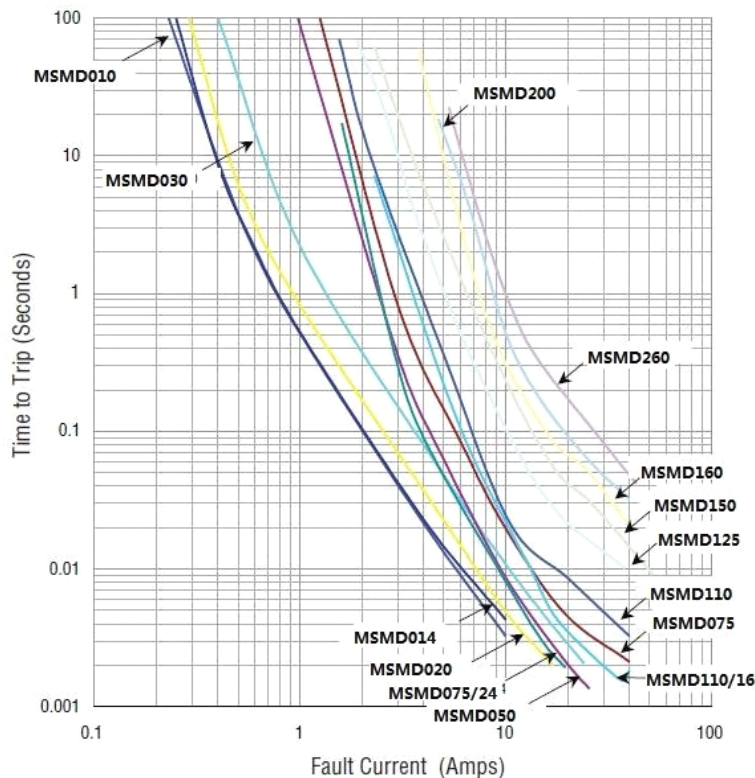
Manufacturer's Trademark
 Holding current:0.30A

P/N	Marking (标识)	A		B		C		D
		Min.(最小)	Max.(最大)	Min.(最小)	Max.(最大)	Min.(最小)	Max.(最大)	Min.(最小)
MSMD010	T010	4.37	4.73	3.07	3.41	0.80	1.20	0.30
MSMD014	T014	4.37	4.73	3.07	3.41	0.80	1.20	0.30
MSMD020	T020	4.37	4.73	3.07	3.41	0.80	1.20	0.30
MSMD020/60	T020	4.37	4.73	3.07	3.41	0.80	1.20	0.30
MSMD030	T030	4.37	4.73	3.07	3.41	0.80	1.20	0.30
MSMD035	T035	4.37	4.73	3.07	3.41	0.60	1.00	0.30
MSMD050	T050	4.37	4.73	3.07	3.41	0.60	1.00	0.30
MSMD075	T075	4.37	4.73	3.07	3.41	0.60	1.00	0.30
MSMD075/24	T075	4.37	4.73	3.07	3.41	0.60	1.00	0.30
MSMD075/33	T075	4.37	4.73	3.07	3.41	0.60	1.00	0.30
MSMD110	T110	4.37	4.73	3.07	3.41	0.60	1.00	0.30
MSMD110/16	T110	4.37	4.73	3.07	3.41	0.60	1.00	0.30
MSMD110/24	T110	4.37	4.73	3.07	3.41	0.90	1.30	0.30
MSMD125	T125	4.37	4.73	3.07	3.41	0.60	1.00	0.30
MSMD150	T150	4.37	4.73	3.07	3.41	0.45	0.85	0.30
MSMD150/12	T150	4.37	4.73	3.07	3.41	0.45	0.85	0.30
MSMD150/24	T150	4.37	4.73	3.07	3.41	0.90	1.30	0.30
MSMD160	T160	4.37	4.73	3.07	3.41	0.45	0.85	0.30
MSMD160/12	T160	4.37	4.73	3.07	3.41	0.45	0.85	0.30
MSMD160/16	T160	4.37	4.73	3.07	3.41	0.45	0.85	0.30
MSMD200	T200	4.37	4.73	3.07	3.41	0.70	1.10	0.30
MSMD250/16	T250	4.37	4.73	3.07	3.41	0.70	1.10	0.30
MSMD260	T260	4.37	4.73	3.07	3.41	0.70	1.10	0.30
MSMD300	T300	4.37	4.73	3.07	3.41	0.70	1.10	0.30

## Thermal Derating Chart – I<sub>hold</sub> (Amps) (环境温度与工作电流关系特性曲线)

P/N	Ambient Operating Temperature(工作环境温度)								
	-40℃	-20℃	0℃	25℃	40℃	50℃	60℃	70℃	85℃
MSMD010	0.16	0.14	0.12	0.10	0.08	0.07	0.06	0.05	0.03
MSMD014	0.23	0.19	0.17	0.14	0.12	0.10	0.09	0.08	0.06
MSMD020	0.29	0.26	0.23	0.20	0.17	0.15	0.14	0.12	0.10
MSMD020/60	0.29	0.26	0.23	0.20	0.17	0.15	0.14	0.12	0.10
MSMD030	0.44	0.39	0.35	0.30	0.26	0.23	0.21	0.18	0.15
MSMD035	0.51	0.46	0.41	0.35	0.30	0.27	0.25	0.21	0.18
MSMD050	0.77	0.68	0.59	0.50	0.44	0.40	0.37	0.33	0.29
MSMD075	1.15	1.01	0.88	0.75	0.65	0.60	0.55	0.49	0.43
MSMD075/24	1.15	1.01	0.88	0.75	0.65	0.60	0.55	0.49	0.43
MSMD075/33	1.15	1.01	0.88	0.75	0.65	0.60	0.55	0.49	0.43
MSMD110	1.59	1.43	1.26	1.10	0.95	0.87	0.80	0.71	0.60
MSMD110/16	1.59	1.43	1.26	1.10	0.95	0.87	0.80	0.71	0.60
MSMD110/24	2.00	1.70	1.40	1.10	0.95	0.88	0.80	0.73	0.61
MSMD125	1.80	1.63	1.43	1.25	1.08	0.99	0.91	0.81	0.68
MSMD150	2.17	1.95	1.72	1.50	1.30	1.18	1.09	0.97	0.82
MSMD150/12	2.17	1.95	1.72	1.50	1.30	1.18	1.09	0.97	0.82
MSMD150/24	2.17	1.95	1.72	1.50	1.30	1.18	1.09	0.97	0.82
MSMD160	2.30	2.20	1.90	1.60	1.45	1.30	1.15	1.03	0.91
MSMD160/12	2.30	2.20	1.90	1.60	1.45	1.30	1.15	1.03	0.91
MSMD160/16	2.30	2.20	1.90	1.60	1.45	1.30	1.15	1.03	0.91
MSMD200	3.08	2.71	2.35	2.00	1.80	1.60	1.50	1.40	1.25
MSMD250/16	3.85	3.45	3.00	2.50	2.05	1.85	1.75	1.30	1.10
MSMD260	4.00	3.52	3.06	2.60	2.34	2.08	1.95	1.39	1.04
MSMD300	4.40	3.90	3.50	3.00	2.60	2.30	2.10	1.80	1.50

## Typical time to trip at 25°C (25°C下的动作保护时间曲线表):



◆ The Time to Trip curves represent typical performance of a device in a simulated application environment. Actual performance in specific customer applications may differ from these values due to the influence of other variables.

## Agency Approvals (安规认证):

- Agency Approvals: UL、CSA、TUV
- Regulation/Standard: RoHS 2.0(2011/65/CE)

## Package information (包装信息):

Model	Q'ty/Reel
MSMD010 ~ MSMD030, MSMD110/24, MSMD150/24, MSMD200~MSMD300	1500 pcs
MSMD050 ~ MSMD160	2000 pcs

Note: Reel packaging per EIA-481-1 standard