

### 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

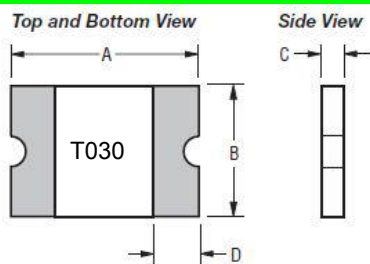
### Applications

- ◆ 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 (電氣特性):

P/N	保持電流	跳脫電流	最大電壓	最大電流	最大動作時間		消耗功率	電阻範圍(Ω)	
	I <sub>H</sub> , (A)	I <sub>T</sub> , (A)	V <sub>max</sub> , (V)	I <sub>max</sub> , (A)	(A)	(Sec.)	P <sub>d</sub> typ(W)	R <sub>min</sub>	R <sub>1max</sub>
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) (產品尺寸) :



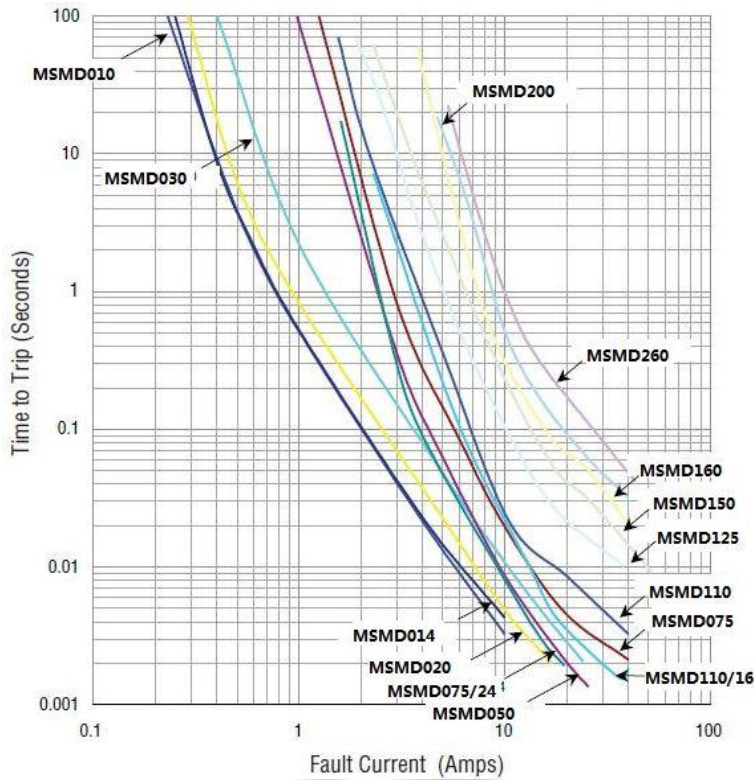
T 030
Manufacturer's Trademark
Holding current:0.30A

P/N	Marking (標識)	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) (環境溫度與工作電流關係特性曲線)

P/N	Ambient Operating Temperature(工作環境溫度)								
	-40°C	-20°C	0°C	25°C	40°C	50°C	60°C	70°C	85°C
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下的動作保護時間曲線表):



◆ 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 (安規認證):

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

## Package information (包裝資訊):

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