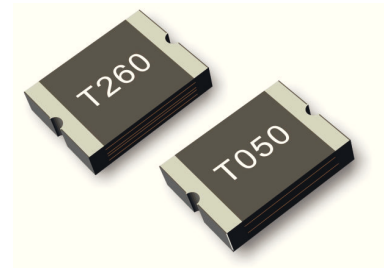


## Features

- ◆ Surface Mount Devices
- ◆ Standard 4532mm(1812mils) footprint
- ◆ Surface mount packaging for automated assembly
- ◆ Compatible with Pb and Pb-free solder Re flow profiles.
- ◆ RoHS, Reach, HF compliance

## Applications

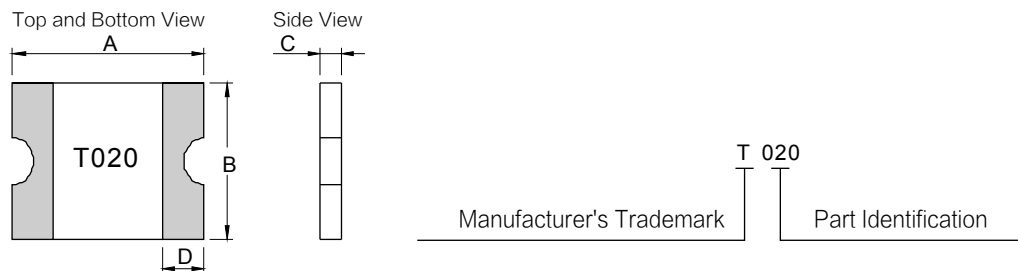
- ◆ Over current and over temperature protection of automotive electronics
- ◆ PC motherboards, Hard disk driver, and PC peripherals
- ◆ POS Equipment
- ◆ USB port protection
- ◆ HDMI source protection



## 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.) | $P_{d\ typ}$ , (W) | $R_{min}$  | $R1_{max}$ |
| MSMD010    | 0.10        | 0.30        | 60              | 10              | 0.5    | 1.50   | 0.8                | 0.700      | 15.00      |
| MSMD014    | 0.14        | 0.34        | 60              | 10              | 1.5    | 0.15   | 0.8                | 0.400      | 6.50       |
| MSMD020    | 0.20        | 0.40        | 30              | 10              | 8.0    | 0.20   | 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              | 40              | 8.0    | 0.10   | 0.8                | 0.200      | 1.800      |
| MSMD050    | 0.50        | 1.00        | 15              | 40              | 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   | 1.2                | 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      |
| MSMD150/16 | 1.50        | 3.00        | 16              | 100             | 8.0    | 0.50   | 0.8                | 0.030      | 0.120      |
| MSMD150/24 | 1.50        | 3.00        | 24              | 100             | 8.0    | 1.50   | 1.2                | 0.030      | 0.140      |
| MSMD160    | 1.60        | 3.20        | 8               | 100             | 8.0    | 1.00   | 1.0                | 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              | 40              | 8.0    | 1.00   | 1.0                | 0.025      | 0.120      |
| MSMD200    | 2.00        | 4.00        | 8               | 100             | 8.0    | 3.00   | 1.2                | 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        | 6               | 100             | 8.0    | 5.00   | 1.2                | 0.015      | 0.080      |
| MSMD300    | 3.00        | 6.00        | 6               | 100             | 8.0    | 5.00   | 1.2                | 0.012      | 0.060      |

产品尺寸 (Unit: mm) :

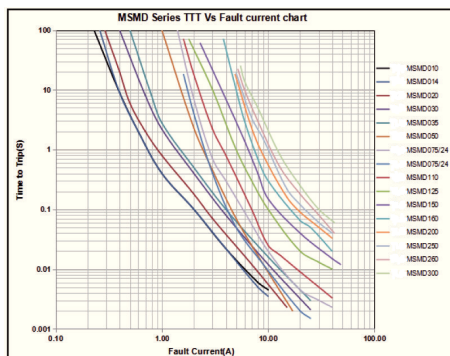


| P/N        | Marking<br>(标识) | A    |      | B    |      | C    |      | D    |
|------------|-----------------|------|------|------|------|------|------|------|
|            |                 | Min. | Max. | Min. | Max. | Min. | Max. |      |
| MSMD010    | T010            | 4.37 | 4.73 | 3.07 | 3.41 | 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 | 0.80 | 1.20 | 0.30 |
| MSMD125    | T125            | 4.37 | 4.73 | 3.07 | 3.41 | 0.45 | 0.85 | 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 |
| MSMD150/16 | 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 | 1.20 | 1.70 | 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 | 0.60 | 1.00 | 0.30 |
| MSMD250/16 | T250            | 4.37 | 4.73 | 3.07 | 3.41 | 0.60 | 1.00 | 0.30 |
| MSMD260    | T260            | 4.37 | 4.73 | 3.07 | 3.41 | 0.60 | 1.00 | 0.30 |
| MSMD300    | T300            | 4.37 | 4.73 | 3.07 | 3.41 | 0.60 | 1.00 | 0.30 |

环境温度与工作电流关系特性曲线：

| P/N        | 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 |
| MSMD150/16 | 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 |

动作电流时间曲线表：



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.

标准包装数量：

| Model                       | Q' t y/Reel |
|-----------------------------|-------------|
| MSMD150/24                  | 1000pcs     |
| MSMD010~MSMD035, MSMD110/24 | 1500pcs     |
| MSMD200~MSMD300             | 1500pcs     |
| MSMD050~MSMD160             | 2000pcs     |

Note: Reel packaging per EIA-481-1 standard