

电路保护元器件专业制造商

Revision: A

Date: 2018-04-24 No.: 1 OF 1



MSMD1812 Series

Features

- ◆ Surface Mount Devices
- ◆ Standard 4532mm(1812mils) footprint
- ◆ Surface mount packaging for automated assembly
- ◆ Compatible with Pb and Pb-free solder Re flow profiles.
- ◆ UL(E352136), C-UL(E352136), TUV(R50322001)
- ◆ 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:

| | 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) | |
|----------------|----------------------|----------------------|------------|------------|--------|--------|-------------------------|---------|---------------------|
| P/N | I _H , (A) | Ι _Τ , (Α) | V max, (V) | I max, (A) | (A) | (Sec.) | Pd _{typ} , (W) | R min, | R1 _{max} , |
| TLC-MSMD010 | 0.10 | 0.30 | 60 | 10 | 0.5 | 1.50 | 0.8 | 0.700 | 15.00 |
| TLC-MSMD014 | 0.14 | 0.34 | 60 | 10 | 1.5 | 0.15 | 0.8 | 0.400 | 6.50 |
| TLC-MSMD020 | 0.20 | 0.40 | 30 | 10 | 8.0 | 0.20 | 8.0 | 0.750 | 5.00 |
| TLC-MSMD020/60 | 0.20 | 0.40 | 60 | 10 | 1.5 | 0.15 | 8.0 | 0.400 | 6.000 |
| TLC-MSMD030 | 0.30 | 0.60 | 30 | 10 | 8.0 | 0.10 | 8.0 | 0.300 | 3.000 |
| TLC-MSMD035 | 0.35 | 0.70 | 16 | 40 | 8.0 | 0.10 | 8.0 | 0.200 | 1.800 |
| TLC-MSMD050 | 0.50 | 1.00 | 15 | 40 | 8.0 | 0.15 | 8.0 | 0.150 | 1.000 |
| TLC-MSMD075 | 0.75 | 1.50 | 16 | 40 | 8.0 | 0.20 | 8.0 | 0.110 | 0.450 |
| TLC-MSMD075/24 | 0.75 | 1.50 | 24 | 40 | 8.0 | 0.20 | 0.8 | 0.110 | 0.450 |
| TLC-MSMD075/33 | 0.75 | 1.50 | 33 | 40 | 8.0 | 0.20 | 8.0 | 0.110 | 0.450 |
| TLC-MSMD110 | 1.10 | 2.20 | 6 | 100 | 8.0 | 0.30 | 0.8 | 0.040 | 0.225 |
| TLC-MSMD110/16 | 1.10 | 2.20 | 16 | 100 | 8.0 | 0.50 | 0.8 | 0.040 | 0.225 |
| TLC-MSMD110/24 | 1.10 | 2.20 | 24 | 100 | 8.0 | 0.50 | 1.2 | 0.055 | 0.180 |
| TLC-MSMD125 | 1.25 | 2.50 | 6 | 40 | 8.0 | 0.40 | 0.8 | 0.035 | 0.140 |
| TLC-MSMD150 | 1.50 | 3.00 | 6 | 100 | 8.0 | 0.50 | 0.8 | 0.030 | 0.120 |
| TLC-MSMD150/12 | 1.50 | 3.00 | 12 | 100 | 8.0 | 0.50 | 1.0 | 0.030 | 0.120 |
| TLC-MSMD150/16 | 1.50 | 3.00 | 16 | 100 | 8.0 | 0.50 | 0.8 | 0.030 | 0.120 |
| TLC-MSMD150/24 | 1.50 | 3.00 | 24 | 100 | 8.0 | 1.50 | 1.2 | 0.030 | 0.140 |
| TLC-MSMD160 | 1.60 | 3.20 | 8 | 100 | 8.0 | 1.00 | 1.0 | 0.025 | 0.120 |
| TLC-MSMD160/12 | 1.60 | 3.20 | 12 | 100 | 8.0 | 1.00 | 1.0 | 0.025 | 0.120 |
| TLC-MSMD160/16 | 1.60 | 3.20 | 16 | 40 | 8.0 | 1.00 | 1.0 | 0.025 | 0.120 |
| TLC-MSMD200 | 2.00 | 4.00 | 8 | 100 | 8.0 | 3.00 | 1.2 | 0.020 | 0.080 |
| TLC-MSMD250/16 | 2.50 | 5.00 | 16 | 100 | 8.0 | 5.00 | 1.2 | 0.015 | 0.100 |
| TLC-MSMD260 | 2.60 | 5.20 | 6 | 100 | 8.0 | 5.00 | 1.2 | 0.015 | 0.080 |
| TLC-MSMD300 | 3.00 | 6.00 | 6 | 100 | 8.0 | 5.00 | 1.2 | 0.012 | 0.060 |



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产品尺寸 (Unit: mm):



| P/N | Marking | Α | | В | | С | | D |
|----------------|---------|------|------|------|------|------|------|------|
| P/IN | (标识) | Min. | Max. | Min. | Max. | Min. | Max. | Min. |
| TLC-MSMD010 | T010 | 4.37 | 4.73 | 3.07 | 3.41 | 0.80 | 1.20 | 0.30 |
| TLC-MSMD014 | T014 | 4.37 | 4.73 | 3.07 | 3.41 | 0.80 | 1.20 | 0.30 |
| TLC-MSMD020 | T020 | 4.37 | 4.73 | 3.07 | 3.41 | 0.80 | 1.20 | 0.30 |
| TLC-MSMD020/60 | T020 | 4.37 | 4.73 | 3.07 | 3.41 | 0.80 | 1.20 | 0.30 |
| TLC-MSMD030 | T030 | 4.37 | 4.73 | 3.07 | 3.41 | 0.80 | 1.20 | 0.30 |
| TLC-MSMD035 | T035 | 4.37 | 4.73 | 3.07 | 3.41 | 0.60 | 1.00 | 0.30 |
| TLC-MSMD050 | T050 | 4.37 | 4.73 | 3.07 | 3.41 | 0.60 | 1.00 | 0.30 |
| TLC-MSMD075 | T075 | 4.37 | 4.73 | 3.07 | 3.41 | 0.60 | 1.00 | 0.30 |
| TLC-MSMD075/24 | T075 | 4.37 | 4.73 | 3.07 | 3.41 | 0.60 | 1.00 | 0.30 |
| TLC-MSMD075/33 | T075 | 4.37 | 4.73 | 3.07 | 3.41 | 0.60 | 1.00 | 0.30 |
| TLC-MSMD110 | T110 | 4.37 | 4.73 | 3.07 | 3.41 | 0.60 | 1.00 | 0.30 |
| TLC-MSMD110/16 | T110 | 4.37 | 4.73 | 3.07 | 3.41 | 0.60 | 1.00 | 0.30 |
| TLC-MSMD110/24 | T110 | 4.37 | 4.73 | 3.07 | 3.41 | 0.80 | 1.20 | 0.30 |
| TLC-MSMD125 | T125 | 4.37 | 4.73 | 3.07 | 3.41 | 0.45 | 0.85 | 0.30 |
| TLC-MSMD150 | T150 | 4.37 | 4.73 | 3.07 | 3.41 | 0.45 | 0.85 | 0.30 |
| TLC-MSMD150/12 | T150 | 4.37 | 4.73 | 3.07 | 3.41 | 0.45 | 0.85 | 0.30 |
| TLC-MSMD150/16 | T150 | 4.37 | 4.73 | 3.07 | 3.41 | 0.45 | 0.85 | 0.30 |
| TLC-MSMD150/24 | T150 | 4.37 | 4.73 | 3.07 | 3.41 | 1.20 | 1.70 | 0.30 |
| TLC-MSMD160 | T160 | 4.37 | 4.73 | 3.07 | 3.41 | 0.45 | 0.85 | 0.30 |
| TLC-MSMD160/12 | T160 | 4.37 | 4.73 | 3.07 | 3.41 | 0.45 | 0.85 | 0.30 |
| TLC-MSMD160/16 | T160 | 4.37 | 4.73 | 3.07 | 3.41 | 0.45 | 0.85 | 0.30 |
| TLC-MSMD200 | T200 | 4.37 | 4.73 | 3.07 | 3.41 | 0.60 | 1.00 | 0.30 |
| TLC-MSMD250/16 | T250 | 4.37 | 4.73 | 3.07 | 3.41 | 0.60 | 1.00 | 0.30 |
| TLC-MSMD260 | T260 | 4.37 | 4.73 | 3.07 | 3.41 | 0.60 | 1.00 | 0.30 |
| TLC-MSMD300 | T300 | 4.37 | 4.73 | 3.07 | 3.41 | 0.60 | 1.00 | 0.30 |



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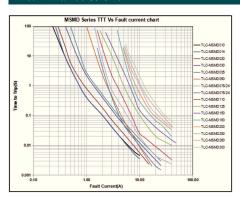


MSMD1812 Series

环境温度与工作电流关系特性曲线:

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



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MSMD1812 Series

| 你准已衣奴里 . | |
|---|-----------|
| Model | Q'ty/Reel |
| TLC-MSMD150/24 | 1000pcs |
| TLC-MSMD010~TLC-MSMD035, TLC-MSMD110/24, | 1500pcs |
| TLC-MSMD200~TLC-MSMD300 | 1500pcs |
| TLC-MSMD050~TLC-MSMD160 | 2000pcs |
| Note: Reel packaging per EIA-481-1 standard | |

6. Agency Recognition:







Caution:Operation beyond the rated voltage or current may result in rupture electrical arcing or flame.Specifications are subject to change without notice.