

# MSKSEMI

SEMICONDUCTOR



ESD



TVS



TSS



MOV

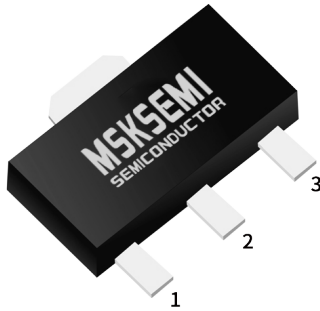


GDT



PLED

Product data sheet



SOT-89

| Package | Pin assignment |    |   |
|---------|----------------|----|---|
|         | 1              | 2  | 3 |
| All     | T1             | T2 | G |

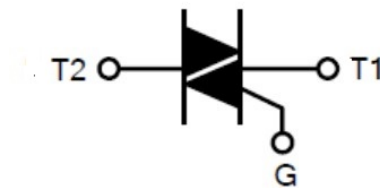
## FEATURES

This device of sensitive TRIAC product is a glass passivated device, has a low gate trigger current, high stability in gate trigger current to variation of operating temperature and high off state voltage.

## APPLICATIONS

This device is suitable for low power AC switching application, phase control application such as fan speed and temperature modulation control, lighting control and static switching relay.

## SYMBOL:



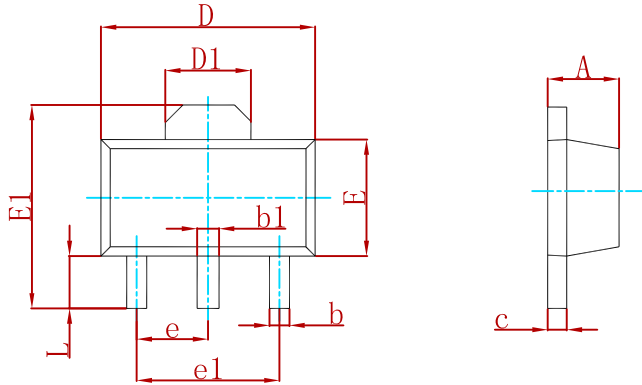
## ABSOLUTE MAXIMUM RATINGS (T<sub>J</sub>=25°C)

| PARAMETER  | SYMBOL                              | VALUE      | UNIT             |      |
|--|-------------------------------------|------------|------------------|------|
| Repetitive Peak Off-State Voltages                           | V <sub>DRM</sub> , V <sub>RRM</sub> | 600        | V                |      |
| RMS on-State Current   | I <sub>T(RMS)</sub>                 | 2          | A                |      |
| Non-Repetitive Peak On-State Current                         | I <sub>TSM</sub>                    | 20         | A                |      |
| I <sup>2</sup> t for fusing                                  | I <sup>2</sup> t                    | 2.6        | A <sup>2</sup> s |      |
| Repetitive rate of rise of on-state current after triggering | dI <sub>T</sub> /dt                 | I          | 50               | A/μs |
|  |                                     | II         | 50               |      |
|  |                                     | III        | 50               |      |
|  |                                     | IV         | 10               |      |
| Peak gate current  | I <sub>GM</sub>                     | 1.8        | A                |      |
| Peak Gate Power  | P <sub>GM</sub>                     | 4          | W                |      |
| Average Gate Power   | P <sub>G(AV)</sub>                  | 0.5        | W                |      |
| Operating junction temperature                               | T <sub>J</sub>                      | +125       | °C               |      |
| Storage Temperature  | T <sub>STG</sub>                    | -40 ~ +150 | °C               |      |

**ELECTRICAL CHARACTERISTICS (T<sub>J</sub>=25°C)**

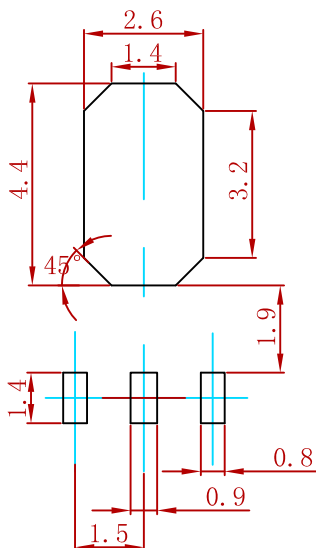
| PARAMETER   | SYMBOL                               | TEST CONDITIONS  | MIN | MAX | UNITS |
|---|--------------------------------------|--|-----|-----|-------|
| Peak Repetitive Forward or Reverse Blocking Current | I <sub>DRM</sub><br>I <sub>RRM</sub> | V <sub>AK</sub> = Rated V <sub>DRM</sub> or V <sub>RRM</sub> ; |     | 10  | uA    |
| Gate Trigger Current                                | I <sub>GT</sub>                      | V <sub>D</sub> =12V,<br>R <sub>L</sub> =100Ω                   | I   | 10  | mA    |
|   |                                      |  | II  | 10  |       |
|   |                                      |  | III | 10  |       |
|   |                                      |  | IV  | 25  |       |
| Gate Trigger Voltage                                | V <sub>GT</sub>                      | V <sub>D</sub> =12V, I <sub>T</sub> =100mA                     |     | 1.5 | V     |
| Peak Forward On-State Voltage                       | V <sub>TM</sub>                      | I <sub>T</sub> =4.0A,  |     | 1.7 | V     |
| Latch Current                                       | I <sub>L</sub>                       | V <sub>D</sub> =12V<br>I <sub>G</sub> =0.1A,                   | I   | 15  | mA    |
|   |                                      |  | II  | 15  |       |
|   |                                      |  | III | 15  |       |
|   |                                      |  | IV  | 20  |       |
| Holding Current                                     | I <sub>H</sub>                       | V <sub>D</sub> =12V ,I <sub>G</sub> =0.1A                      |     | 15  | mA    |
| Gate Non-Trigger Voltage                            | V <sub>GD</sub>                      | V <sub>D</sub> =V <sub>DRM</sub>                               | 0.2 |     | V     |
| Critical Rate of Rise of Off-State Voltage          | dV/dt                                | V <sub>D</sub> =67%V <sub>DRM</sub> , R <sub>GK</sub> =1kΩ,    | 20  |     | V/μs  |

**PACKAGE MECHANICAL DATA**



| Symbol | Dimensions In Millimeters |       | Dimensions In Inches |       |
|--------|---------------------------|-------|----------------------|-------|
|        | Min                       | Max   | Min                  | Max   |
| A      | 1.400                     | 1.600 | 0.055                | 0.063 |
| b      | 0.320                     | 0.520 | 0.013                | 0.020 |
| b1     | 0.400                     | 0.580 | 0.016                | 0.023 |
| c      | 0.350                     | 0.440 | 0.014                | 0.017 |
| D      | 4.400                     | 4.600 | 0.173                | 0.181 |
| D1     | 1.550 REF.                |       | 0.061 REF.           |       |
| E      | 2.300                     | 2.600 | 0.091                | 0.102 |
| E1     | 3.940                     | 4.250 | 0.155                | 0.167 |
| e      | 1.500 TYP.                |       | 0.060 TYP.           |       |
| e1     | 3.000 TYP.                |       | 0.118 TYP.           |       |
| L      | 0.900                     | 1.200 | 0.035                | 0.047 |

**Suggested Pad Layout**



Note:  
 1. Controlling dimension: in millimeters.  
 2. General tolerance: ±0.05mm.  
 3. The pad layout is for reference purposes only.

**REEL SPECIFICATION**

| P/N          | PKG    | QTY  |
|--------------|--------|------|
| BT134-600-MS | SOT-89 | 1000 |

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