



**JST134W-600E 1A TRIAC**

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Rev.A.1.1

## DESCRIPTION:

The JST134W-600E triac is suitable for general purpose AC switching. It can be used as an ON/OFF function

ELECTRICAL CHARACTERISTICS ( $T_j=25$  unless otherwise specified)

| Symbol      | Test Condition                                | Quadrant | Value |     | Unit       |
|-------------|---|----------|-------|-----|------------|
| $I_{GT}$    | $V_D=12V$ $R_L=33$                            | - -      | MAX.  | 10  | mA         |
|             |   |          |       | 25  |            |
| $V_{GT}$    |   | ALL      | MAX.  | 1.3 | V          |
| $V_{GD}$    | $V_D=V_{DRM}$ $T_j=125$<br>$R_L=3.3k$         | ALL      | MIN.  | 0.2 | V          |
| $I_L$       | $I_G=1.2I_{GT}$                               | - -      | MAX.  | 15  | mA         |
|             |   |          |       | 25  |            |
| $I_H$       | $I_T=100mA$                                   |          | MAX.  | 20  | mA         |
| $dV/dt$     | $V_D=400V$ Gate Open $T_j=110$                |          | MIN.  | 300 | V/ $\mu s$ |
| $(dV/dt)_c$ | $(dI/dt)_c=1.8A/ms$ , $T_j=110$               |          | MIN.  | 6   | V/ $\mu s$ |
| $t_{on}$    | $I_G=40mA$ $I_A=200mA$ $I_R=20mA$<br>$T_j=25$ |          | TYP.  | 3   | $\mu s$    |
| $t_{off}$   |   |          |       | 30  |            |

## STATIC CHARACTERISTICS

| Symbol    | Parameter                   |           | Value(MAX.) | Unit    |
|-----------|-----------------------------|-----------|-------------|---------|
| $V_{TM}$  | $I_{TM}=5A$ $t_p=380\mu s$  | $T_j=25$  | 1.55        | V       |
| $V_{TO}$  | Threshold voltage           | $T_j=125$ | 0.92        | V       |
| $R_D$     | Dynamic resistance          | $T_j=125$ | 107         | m       |
| $I_{DRM}$ | $V_D=V_{DRM}$ $V_R=V_{RRM}$ | $T_j=25$  | 5           | $\mu A$ |
| $I_{RRM}$ |                             | $T_j=125$ | 0.25        | mA      |

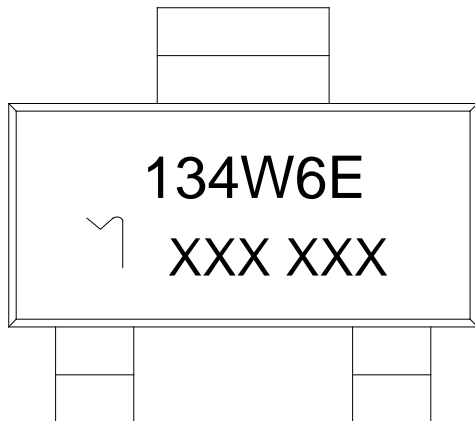
## THERMAL RESISTANCES

| Symbol        | Parameter                | Value | Unit |
|---------------|--------------------------|-------|------|
| $R_{th(j-c)}$ | junction to case (AC)    | 18    | $/W$ |
| $R_{th(j-a)}$ | junction to ambient (AC) | 150   | $/W$ |

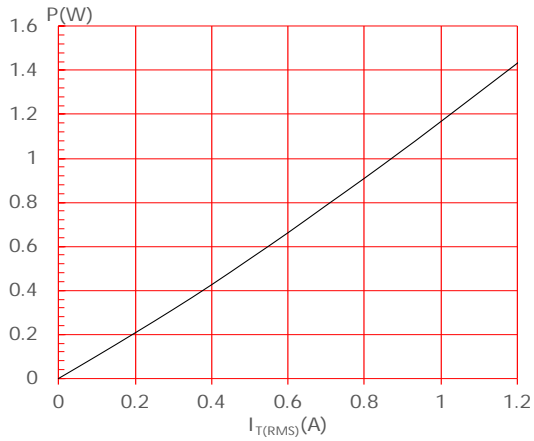
ORDERING INFORMATION

|                                   |           |                  |                 |                                     |  |
|-----------------------------------|-----------|------------------|-----------------|-------------------------------------|--|
| <b>J</b>                          | <b>ST</b> | <b>134</b>       | <b>W</b>        | <b>-600</b>                         | <b>E</b>   |
| JieJie Microelectronics Co., Ltd. | Triacs    | $I_{T(RMS)}: 1A$ | $W: SOT-223-2L$ | $600: V_{DRM} / V_{RRM} \quad 600V$ | $E: I_{GT1-3} \quad 10mA \quad I_{GT4} \quad 25mA$ |

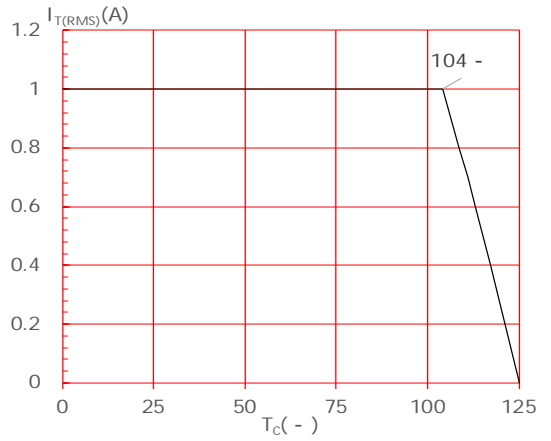
MARKING



**FIG.1:** Maximum power dissipation versus RMS on-state current



**FIG.2:** RMS on-state current versus case temperature



**FIG.3:** RMS on-state current versus ambient temperature (printed circuit board FR4, copper thickness: 35 $\mu$ m) (full cycle)



**FIG.4:** Surge peak on-state current versus number of cycles

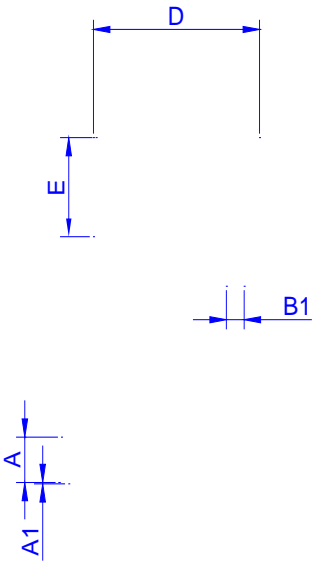




FIG.8 Test circuit for inductive and resistive loads to



PACKAGE MECHANICAL DATA



|      |       |       |       |       |       |       |
|------|-------|-------|-------|-------|-------|-------|
| P0   | 3.90  | 4.00  | 4.10  | 0.154 | 0.157 | 0.161 |
| P1   | 7.90  | 8.00  | 8.10  | 0.311 | 0.315 | 0.319 |
| P2   | 1.95  | 2.00  | 2.05  | 0.077 | 0.079 | 0.081 |
| 10P0 | 39.80 | 40.00 | 40.20 | 1.567 | 1.575 | 1.583 |
| A0   | 6.85  | 6.95  | 7.05  | 0.269 | 0.273 | 0.276 |
| B0   | 7.15  | 7.25  | 7.35  | 0.280 | 0.284 | 0.288 |
| K0   | 1.95  | 2.05  | 2.15  | 0.076 | 0.080 | 0.084 |
| T    | 0.20  | 0.25  | 0.30  | 0.008 | 0.010 | 0.012 |

