

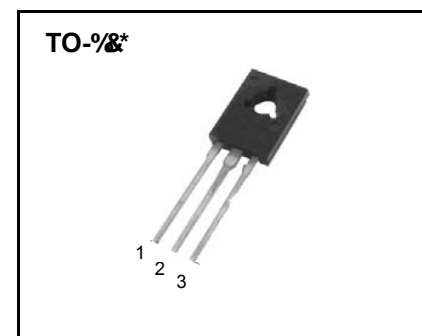
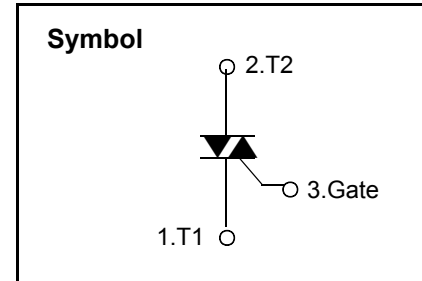
Standard Triac

Features

- ◆ Repetitive Peak Off-State Voltage : 600V
- ◆ R.M.S On-State Current ($I_{T(RMS)}$) = 4 A)

General Description

This device is suitable for direct coupling to TTL, HTL, CMOS and application such as various logic functions, low power AC switching applications, such as fan speed, small light controllers and home appliance equipment.



Absolute Maximum Ratings ($T_j = 25^\circ\text{C}$ unless otherwise specified)

| Symbol | Parameter | Condition | Ratings | Units |
|--------------|-----------------------------------|--|------------|----------------------|
| V_{DRM} | Repetitive Peak Off-State Voltage | Since wave, 50 to 60Hz | 600 | V |
| $I_{T(RMS)}$ | R.M.S On-State Current | $T_j = 125^\circ\text{C}$, Full Sine wave | 4.0 | A |
| I_{TSM} | Surge On-State Current | One Cycle, 50Hz/60Hz, Peak, Non-Repetitive | 25/27 | A |
| I^2_t | I^2_t | $t_p = 10\text{ms}$ | 3.1 | A^2s |
| $P_{G(AV)}$ | Average Gate Power Dissipation | $T_j = 125^\circ\text{C}$ | 0.5 | W |
| I_{GM} | Peak Gate Current | $T_j = 125^\circ\text{C}$ | 2 | A |
| T_j | Operating Junction Temperature | | - 40 ~ 125 | $^\circ\text{C}$ |
| T_{STG} | Storage Temperature | | - 40 ~ 150 | $^\circ\text{C}$ |



Electrical Characteristics

| Symbol | Items | | Conditions | Ratings | | | Unit |
|-------------|---|----------------------|--|---------|------|------|------------------|
| | | | | Min. | Typ. | Max. | |
| I_{DRM} | Repetitive Peak Off-State Current | | $V_D = V_{DRM}$, Single Phase, Half Wave $T_j = 125\text{ }^\circ\text{C}$ | --- | --- | 1.0 | mA |
| V_{TM} | Peak On-State Voltage | | $I_{TM} = 5.5\text{A}$, $t_p = 380\mu\text{s}$ | -- | -- | 1.55 | V |
| I_{GT1}^+ | I | Gate Trigger Current | $V_D = 12\text{V}$, $R_L = 30\ \Omega$ | — | — | 10 | mA |
| I_{GT1}^- | II | | | — | - | 10 | |
| I_{GT3}^- | III | | | — | - | 10 | |
| I_{GT4}^+ | IV | | | !!! | !! | 25 | |
| V_{GT1}^+ | I | Gate Trigger Voltage | $V_D = 12\text{V}$, $R_L = 30\ \Omega$ | --- | --- | 1.5 | V |
| V_{GT1}^- | II | | | --- | --- | 1.5 | |
| V_{GT3}^- | III | | | — | — | 1.5 | |
| V_{GT4}^+ | IV | | | --- | --- | 1.5 | |
| V_{GD} | Non-Trigger Gate Voltage | | $T_j = 125\text{ }^\circ\text{C}$, $V_D = V_{DRM}$ $R_L = 3.3\text{k}\Omega$ | 0.2 | --- | — | V |
| dv/dt | Critical Rate of Rise Off-State Voltage | | $T_j = 125\text{ }^\circ\text{C}$, $V_D = 2/3 V_{DRM}$ | 50 | — | — | V/ μs |
| I_H | Holding Current | | $I_T = 0.2\text{A}$ | --- | --- | 15 | mA |

Fig 1. Gate Characteristics

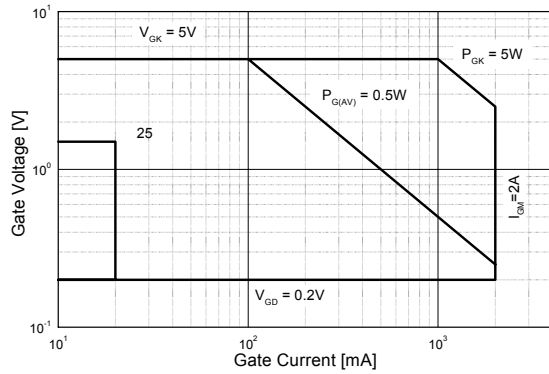


Fig 2. On-State Voltage

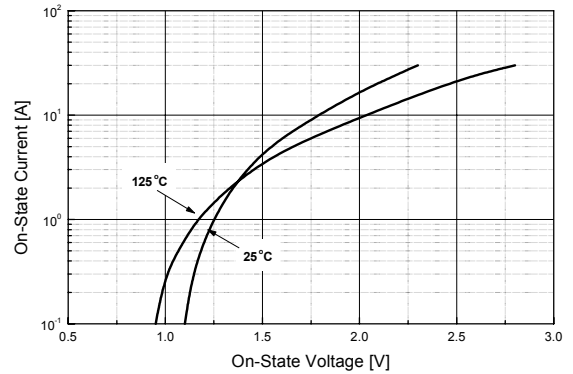


Fig 3. On State Current vs. Maximum Power Dissipation

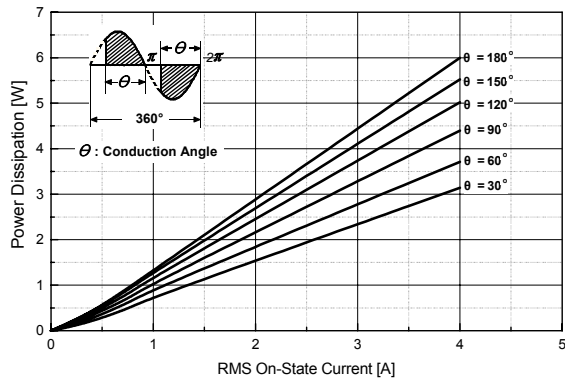


Fig 4. On State Current vs. Allowable Case Temperature

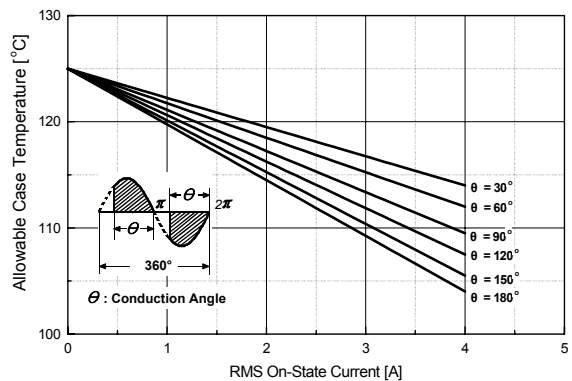


Fig 5. Surge On-State Current Rating (Non-Repetitive)

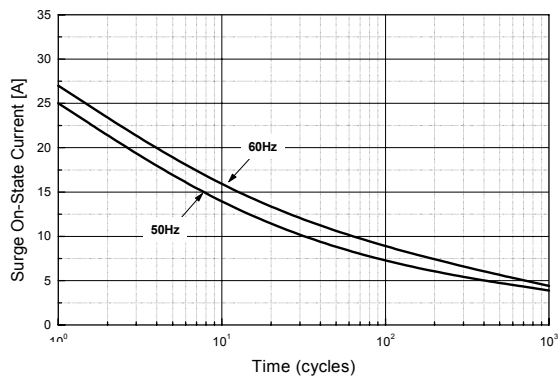


Fig 6. Gate Trigger Voltage vs. Junction Temperature

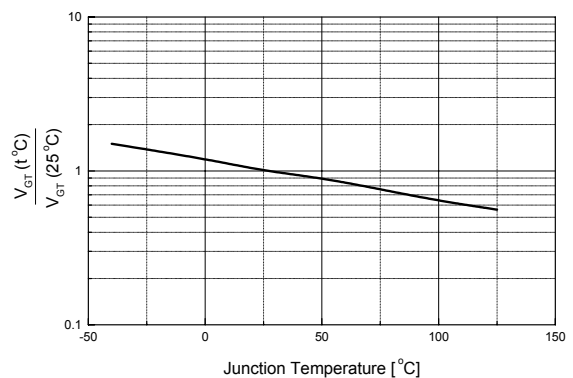


Fig 7. Gate Trigger Current vs. Junction Temperature

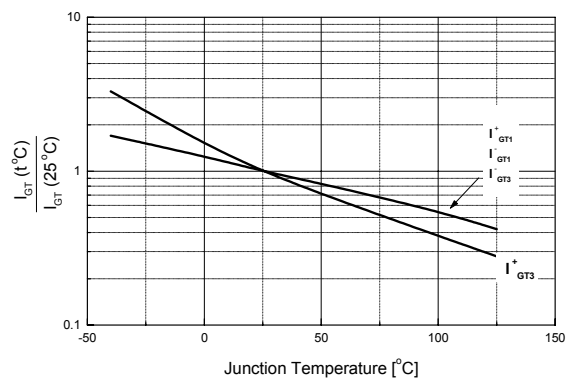
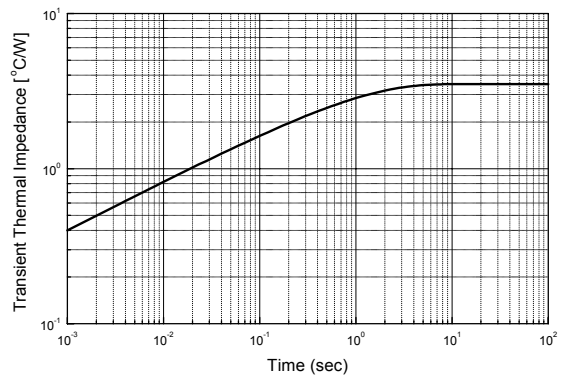
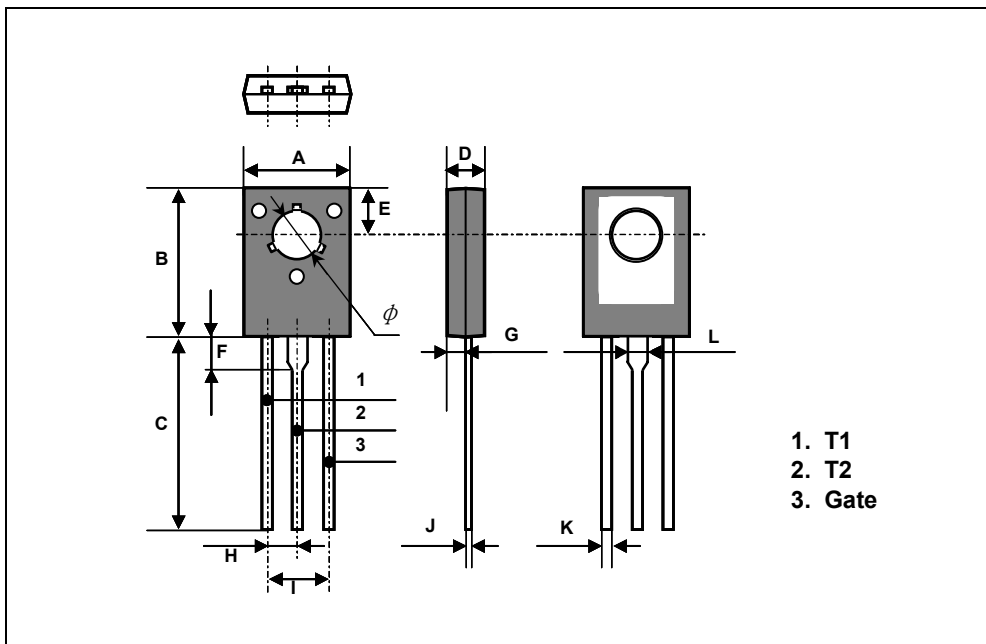


Fig 8. Transient Thermal Impedance



TO-126 Package Dimension

| Dim. | mm | | | Inch | | |
|--------|------|------|------|-------|-------|-------|
| | Min. | Typ. | Max. | Min. | Typ. | Max. |
| A | 7.5 | | 7.9 | 0.295 | | 0.311 |
| B | 10.8 | | 11.2 | 0.425 | | 0.441 |
| C | 14.2 | | 14.7 | 0.559 | | 0.579 |
| D | 2.7 | | 2.9 | 0.106 | | 0.114 |
| E | | 3.8 | | | 0.150 | |
| F | | 2.5 | | | 0.098 | |
| G | 1.2 | | 1.5 | 0.047 | | 0.059 |
| H | | 2.3 | | | 0.091 | |
| I | | 4.6 | | | 0.181 | |
| J | 0.48 | | 0.62 | 0.019 | | 0.024 |
| K | 0.7 | | 0.86 | 0.028 | | 0.034 |
| L | | 1.4 | | | 0.055 | |
| ϕ | | 3.2 | | | 0.126 | |





TO-126 Package Dimension, Forming

| Dim. | mm | | | Inch | | |
|--------|------|------|------|-------|-------|-------|
| | Min. | Typ. | Max. | Min. | Typ. | Max. |
| A | 7.5 | | 7.9 | 0.295 | | 0.311 |
| B | 10.8 | | 11.2 | 0.425 | | 0.441 |
| C | 14.2 | | 14.7 | 0.559 | | 0.579 |
| D | 2.7 | | 2.9 | 0.106 | | 0.114 |
| E | | 3.8 | | | 0.150 | |
| F | | 2.5 | | | 0.098 | |
| G | 1.2 | | 1.5 | 0.047 | | 0.059 |
| H | | 2.3 | | | 0.091 | |
| I | | 4.6 | | | 0.181 | |
| J | 0.48 | | 0.62 | 0.019 | | 0.024 |
| K | 0.7 | | 0.86 | 0.028 | | 0.034 |
| L | | 1.4 | | | 0.055 | |
| M | | 5.0 | | | 0.197 | |
| ϕ | | 3.2 | | | 0.126 | |

