

DESCRIPTION

- With SOT-223 packaging
- High surge capability
- Glass passivated junctions and center gate fire for greater parameter uniformity and stability
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Switching applications

| PIN | DESCRIPTION |
|-----|-------------|
| 1 | cathode |
| 2 | anode |
| 3 | gate |
| tab | anode |

ABSOLUTE MAXIMUM RATINGS($T_a=25^\circ\text{C}$)

| SYMBOL | PARAMETER | MIN | UNIT |
|---------------------|--------------------------------------|---------|------------------|
| V_{DRM} | Repetitive peak off-state voltage | 600 | V |
| V_{RRM} | Repetitive peak off-state voltage | 600 | V |
| $I_{\text{T(AV)}}$ | Average on-state current | 0.63 | A |
| $I_{\text{T(RMS)}}$ | RMS on-state current | 1 | A |
| $P_{\text{G(AV)}}$ | Average gate power | 0.1 | W |
| I_{TSM} | Non-repetitive peak on-state current | 8 | A |
| T_j | Operating junction temperature | -40~110 | $^\circ\text{C}$ |
| T_{stg} | Storage temperature | -40~150 | $^\circ\text{C}$ |

ELECTRICAL CHARACTERISTICS ($T_c=25^\circ\text{C}$ unless otherwise specified)

| SYMBOL | PARAMETER | CONDITIONS | MIN | MAX | UNIT |
|------------------|-----------------------------------|---|-----|-----|---------------|
| I_{RRM} | Repetitive peak off-state voltage | $V_{\text{RRM}}=600\text{V}$ | | 5 | μA |
| | Repetitive peak reverse voltage | $V_{\text{RRM}}=600\text{V}; T_j=110^\circ\text{C}$ | | 100 | |
| I_{DRM} | Repetitive peak reverse current | $V_{\text{RRM}}=600\text{V}$ | | 5 | μA |
| | Repetitive peak off-state current | $V_{\text{DRM}}=600\text{V}; T_j=110^\circ\text{C}$ | | 100 | |
| I_{GT} | Gate trigger current | $V_D=12\text{V}; I_T=10\text{mA}$ | | 120 | μA |
| V_{TM} | On-state voltage | $I_T=2\text{A}$ | | 1.5 | V |
| I_{H} | Holding current | $I_{\text{GT}}=0.5\text{mA}, V_D=12\text{V}$ | | 5 | mA |
| V_{GT} | Gate trigger voltage | $V_D=12\text{V}; I_T=10\text{mA}$ | | 0.8 | V |

FIG.1 Maximum on-state dissipation, P_{tot} , versus average on-state current, $I_{T(AV)}$, where $a =$ form factor $= I_{T(RMS)}/I_{T(AV)}$.

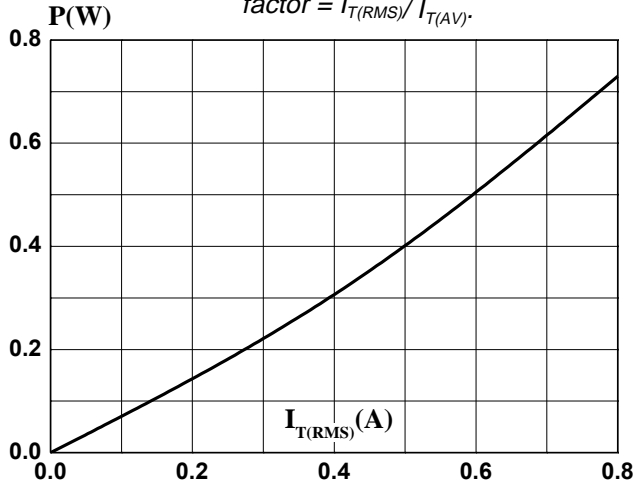


FIG.2: Maximum permissible rms current $I_{T(RMS)}$, versus solder point temperature T_{sp} .

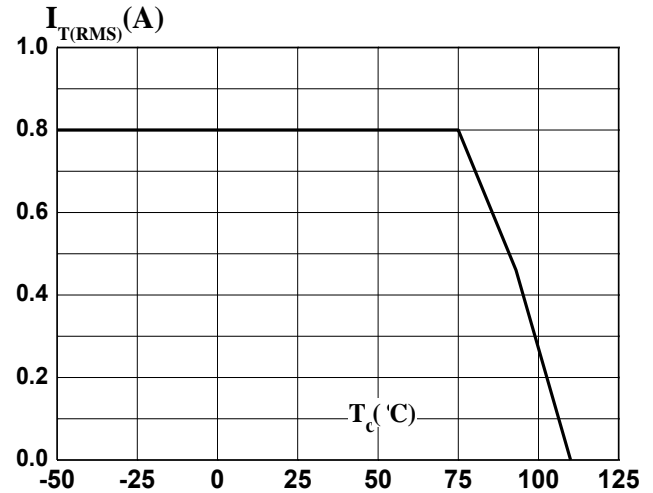


FIG.3: Maximum permissible non-repetitive peak on-state current I_{TSM} , versus number of cycles, for sinusoidal currents, $f = 50$ Hz.

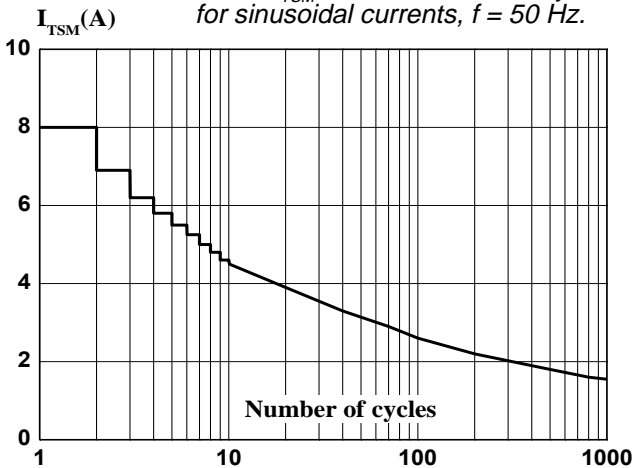


FIG.4: Typical and maximum on-state characteristic.

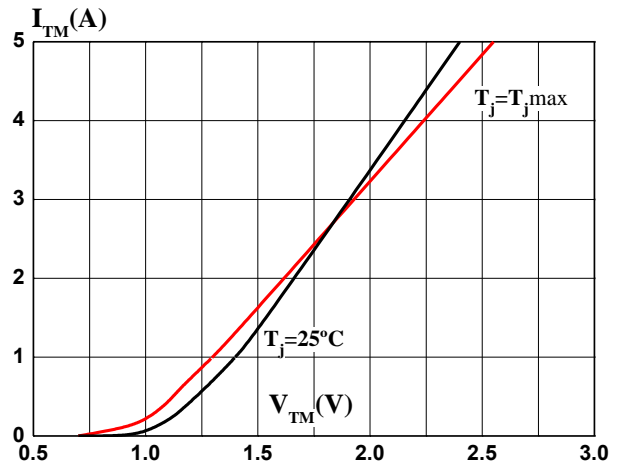


FIG.5: Maximum permissible non-repetitive peak on-state current I_{TSM} , versus pulse width t_p , for sinusoidal currents, $t_p \leq 10$ ms.

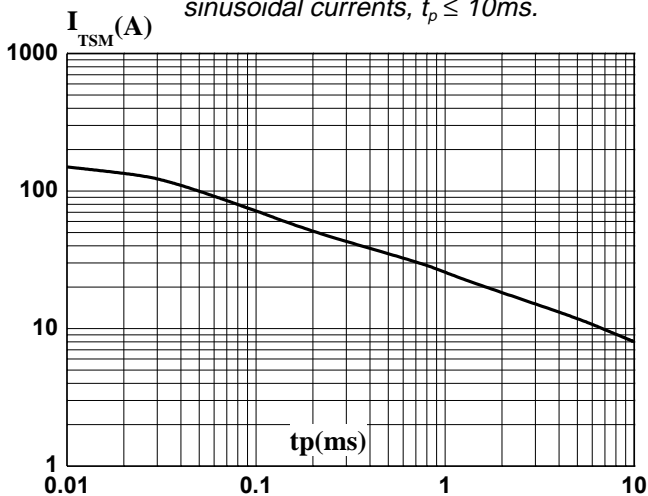
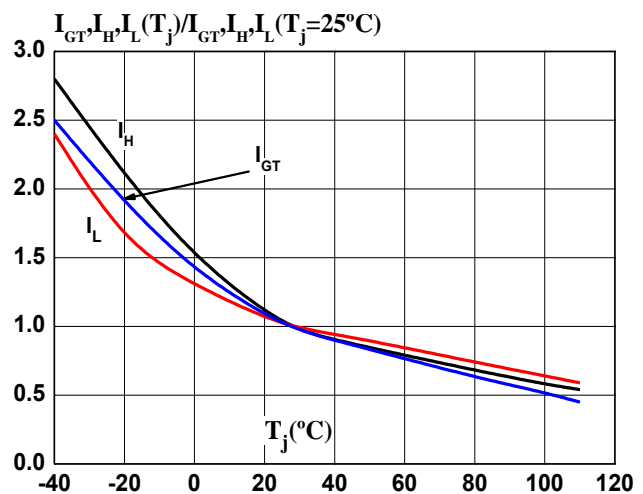


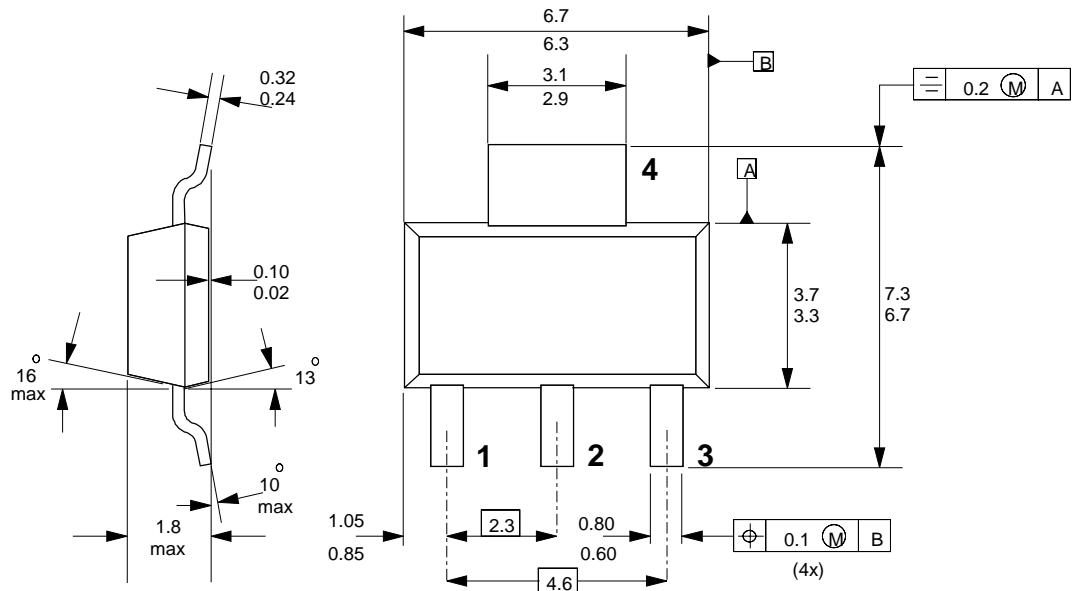
FIG.6 Normalised gate trigger current, holding current, latching current, versus junction temperature



MECHANICAL DATA

Dimensions in mm

Net Mass: 0.11 g



SOT223 surface mounting package.

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