

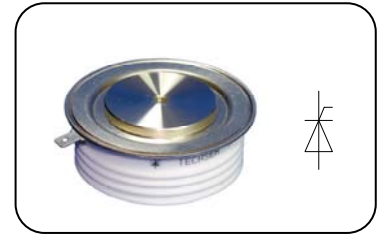
Features

- Center amplifying gate
- Metal case with ceramic insulator
- Low on-state and switching losses

Typical Applications

- AC controllers
- DC and AC motor control
- Controlled rectifiers

| | |
|-------------------|-----------------------------------|
| $I_{T(AV)}$ | 1040A |
| V_{DRM}/V_{RRM} | 1100~1800V |
| I_{TSM} | 11 kA |
| I^2t | 605 $10^3 A^2S$ |



| SYMBOL | CHARACTERISTIC | TEST CONDITIONS | $T_j(°C)$ | VALUE | | | UNIT |
|------------------------|--|---|-----------|-------|------|-------|-------------------|
| | | | | Min | Type | Max | |
| $I_{T(AV)}$ | Mean on-state current | 180° half sine wave 50Hz Double side cooled | 125 | | | 1040 | A |
| | | | | | | 760 | |
| V_{DRM} V_{RRM} | Repetitive peak off-state voltage Repetitive peak reverse voltage | $V_{DRM} \& V_{RRM} t_p = 10ms$ $V_{DSM} \& V_{RSM} = V_{DRM} \& V_{RRM} + 100V$ | 125 | 1100 | | 1800 | V |
| I_{DRM} I_{RRM} | Repetitive peak current | $V_{DM} = V_{DRM}$ $V_{RM} = V_{RRM}$ | 125 | | | 40 | mA |
| I_{TSM} | Surge on-state current | 10ms half sine wave | 125 | | | 11 | kA |
| I^2t | I^2T for fusing coordination | $V_R = 0.6V_{RRM}$ | | | | 605 | $A^2s \cdot 10^3$ |
| V_{TO} | Threshold voltage | | 125 | | | 0.85 | V |
| r_T | On-state slop resistance | | | | | 0.42 | mΩ |
| V_{TM} | Peak on-state voltage | $I_{TM} = 1700A, F = 15kN$ | 125 | | | 1.56 | V |
| dv/dt | Critical rate of rise of off-state voltage | $V_{DM} = 0.67V_{DRM}$ | 125 | | | 1000 | V/μs |
| di/dt | Critical rate of rise of on-state current | $V_{DM} = 67\%V_{DRM}$ to 1300A, Gate pulse $t_r \leq 0.5\mu s$ $I_{GM} = 1.5A$ | 125 | | | 100 | A/μs |
| Q_{rr} | Recovery charge | $I_{TM} = 1000A, t_p = 2000\mu s, di/dt = -20A/\mu s,$ $V_R = 50V$ | 125 | | 1100 | | μC |
| I_{GT} | Gate trigger current | $V_A = 12V, I_A = 1A$ | 25 | 35 | | 300 | mA |
| V_{GT} | Gate trigger voltage | | | 0.8 | | 2.5 | V |
| I_H | Holding current | | | 20 | | 250 | mA |
| V_{GD} | Non-trigger gate voltage | $V_{DM} = 0.67V_{DRM}$ | 125 | 0.3 | | | V |
| $R_{th(j-c)}$ | Thermal resistance Junction to case | At 180° sine double side cooled Clamping force 15kN | | | | 0.032 | °C /W |
| $R_{th(c-h)}$ | Thermal resistance case to heatsink | | | | | 0.008 | |
| F_m | Mounting force | | | 10 | | 20 | kN |
| T_{stg} | Stored temperature | | | -40 | | 140 | °C |
| W_t | Weight | | | | 250 | | g |
| Outline | KT33cT | | | | | | |

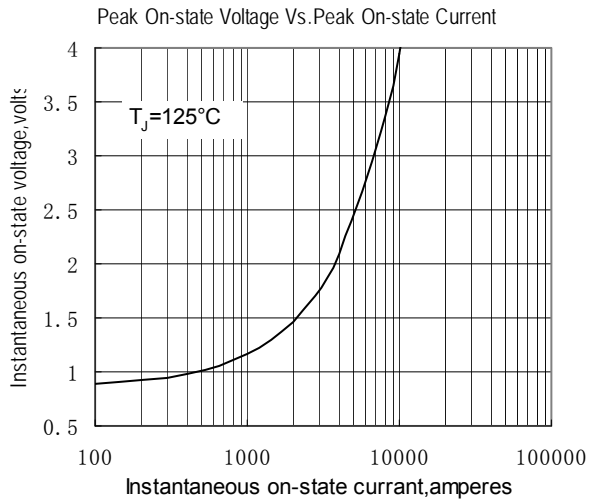


Fig.1

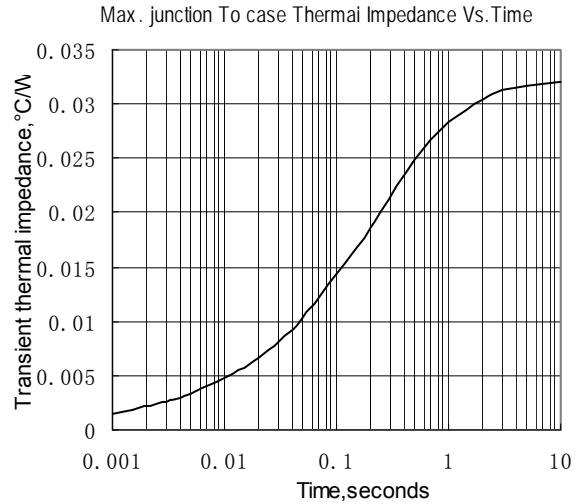


Fig.2

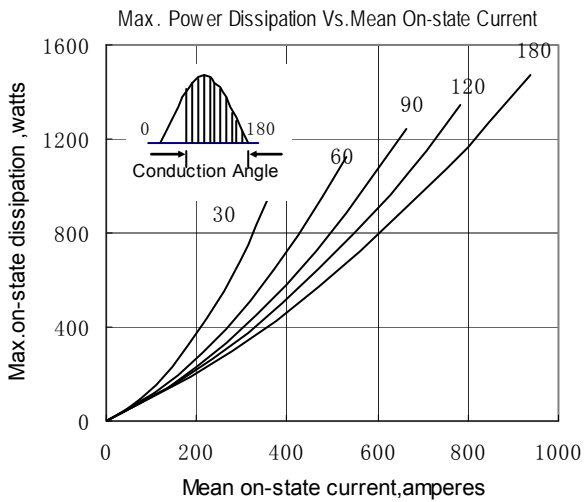


Fig.3

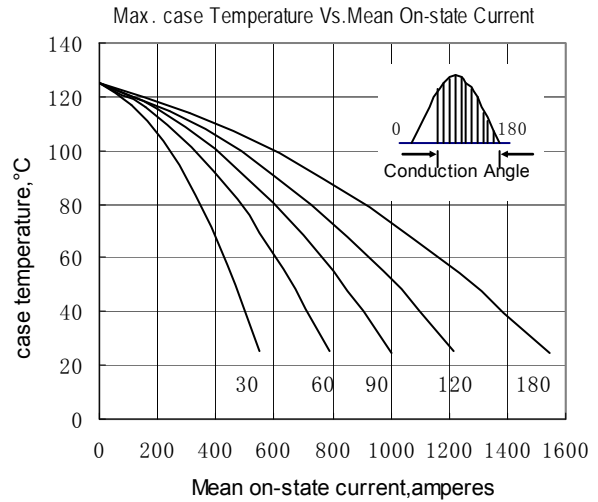


Fig.4

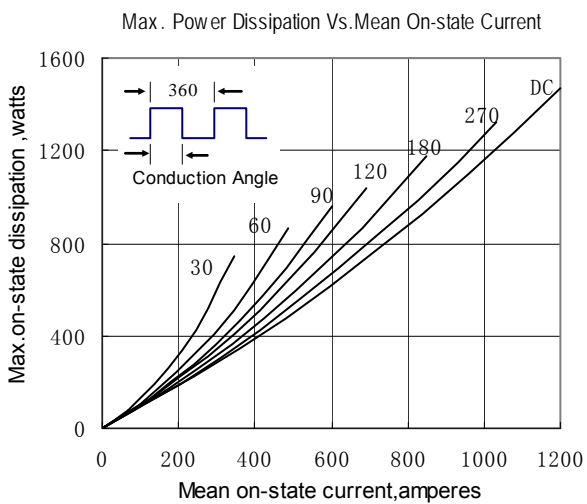


Fig.5

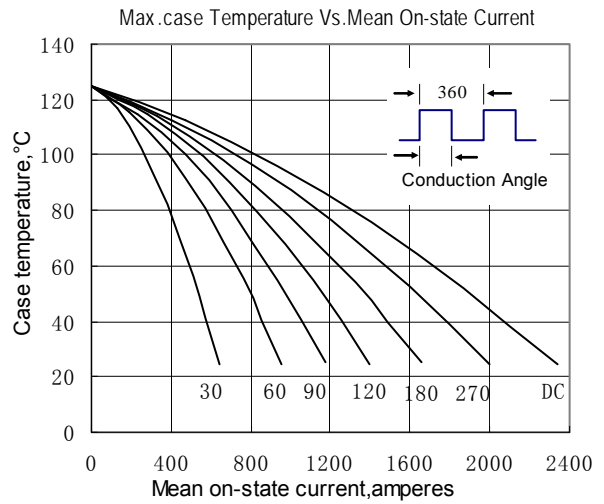


Fig.6

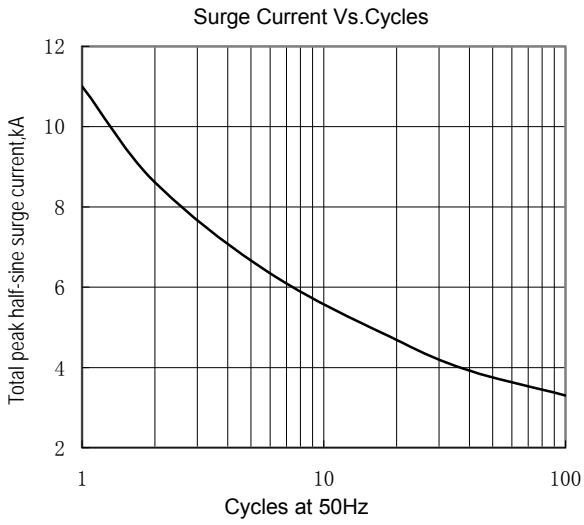


Fig.7

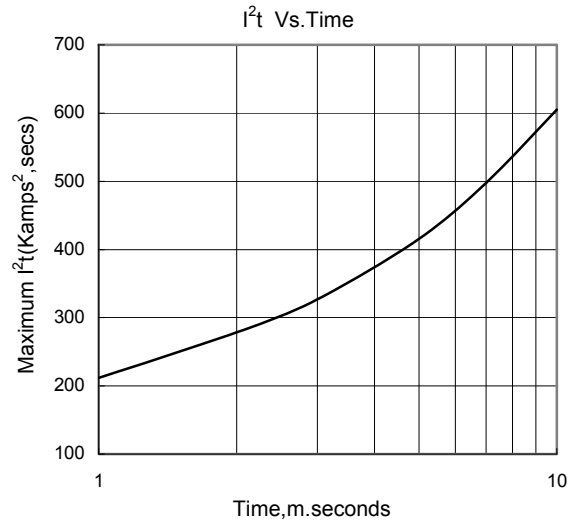


Fig.8

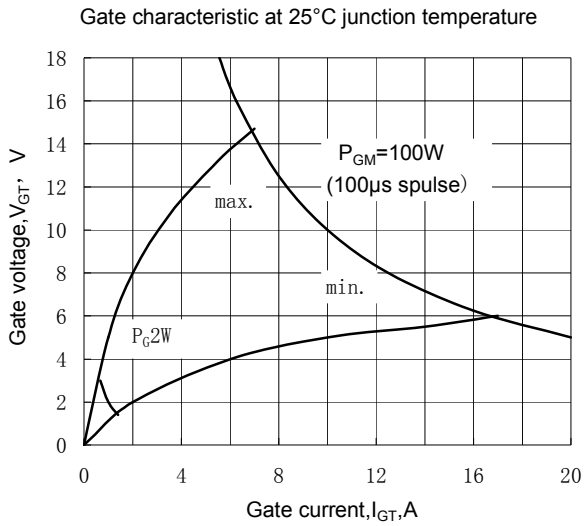


Fig.9

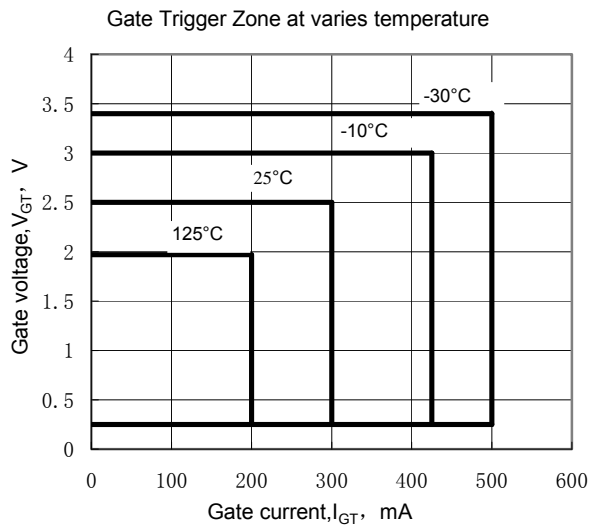


Fig.10

Outline:

