

Feature

- Full diffusion process, capsule type ceramic package
- Amplifying gates
- Double sided cooling

Typical Application

- High power transmission
- DC and AC motor control, Controlled rectifier
- AC DC switch, phase-controlled rectifying
- Active and reactive invresion

| | |
|-------------------|-----------------|
| $I_{T(AV)}$ | 800A |
| V_{DRM}/V_{RRM} | 100-6500V |
| I_{TSM} | 10KA |
| I^2t | 605 $10^3 a^2s$ |

| SYMBOL | CHARACTERISTIC | TEST CONDITIONS | T_J (°C) | VALUE | | UNIT |
|------------------------|--|---|---------------|-------|-------|------------|
| | | | | Min | Max | |
| $I_{T(AV)}$ | Mean on-state current | 180° half sine wave 50Hz Double side cooled, THS=97°C | 125 | | 800 | A |
| $I_{T(AV)}$ | Mean on-state current | 180° half sine wave 50Hz Double side cooled, THS=55°C | 125 | | 1039 | A |
| 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 | 100 | 6500 | V |
| I_{DRM} I_{RRM} | Repetitive peak current | $V_{DM} = V_{DRM}$ $V_{RM} = V_{RRM}$ | 125 | | 50 | mA |
| I_{TSM} | Surge on-state current | 10ms half sine wave | 125 | | 10 | KA |
| I^2t | I^2t for fusing coordination | $V_R = 0.6V_{RRM}$ | | | 605 | A^2S^*10 |
| V_{TO} | Threshold voltage | | 125 | | 0.85 | V |
| r_T | On-state slop resistance | | | | 0.42 | mΩ |
| V_{TM} | Peak on-state voltage | $I_{TM} = 2400A, F = 15KN$ | 25 | | 2.2 | V |
| dv/dt | Critical rate of rise of-state voltage | $V_{DM} = 0.67V_{DRM}$ | 125 | | 1000 | V/us |
| di/dt | Critical rate of rise of on-state current | $V_{DM} = 67\% V_{DRM}$ TO 1000A, Gate pulse $t_r \leq 0.5us$ $I_{GM} = 1.5A$ | 125 | | 100 | A/us |
| I_{TM} | Reverse recovery current | $I_{TM} = 2400A, t_q = 1000us$ $Di/dt = -20A/us.$ $V_i = 50V$ | 125 | | 145 | A |
| t_{rr} | Reverse recovery time | | | | 15 | us |
| Q_{rr} | Recovery charge | | | | 1087 | uC |
| I_{GT} | Gate trigger current | $V_A = 12V, I_A = 1A$ | 25 | 40 | 300 | mA |
| V_{GT} | Gate trigger voltage | | | 0.8 | 3.0 | V |
| I_H | Holding current | | | 20 | 250 | mA |
| V_{GD} | Npn-trigger gate voltage | $V_{DM} = 0.67V_{DRM}$ | 125 | 0.3 | | V |
| $R_{th(j-h)}$ | Thermal resistance Junction to heat sink | At 180° sine double side cooled Clamping force 5.0kn | | | 0.032 | °C/W |
| F_M | Mounting force | | | 15 | 20 | KN |
| T_{stq} | Stored temperature | | | -40 | 140 | °C |
| W_t | Weight | | | | | g |
| Outline | | | | | | |

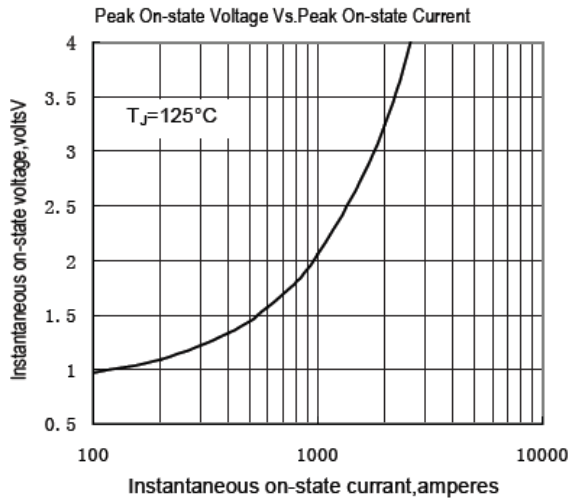


Fig.1

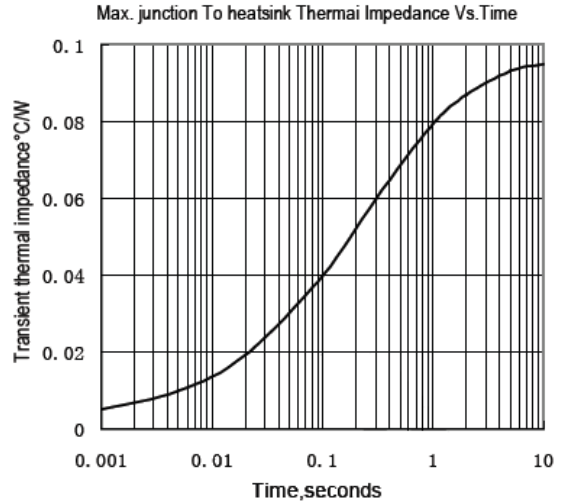


Fig.2

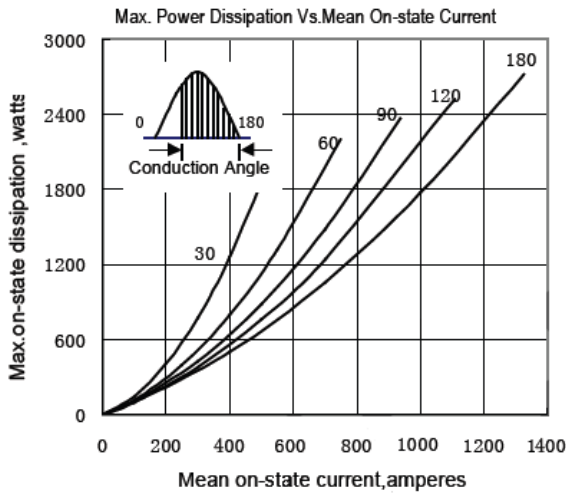


Fig.3

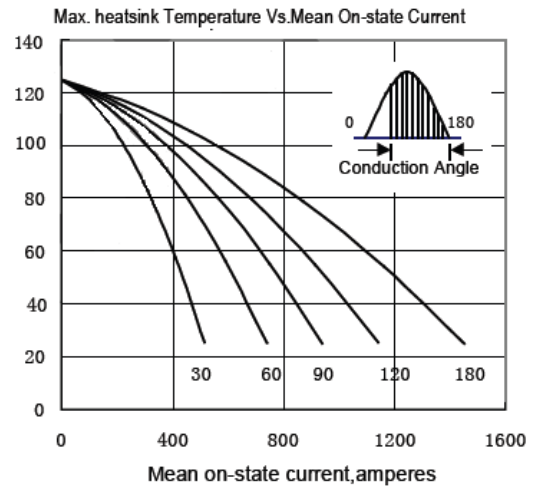


Fig.4

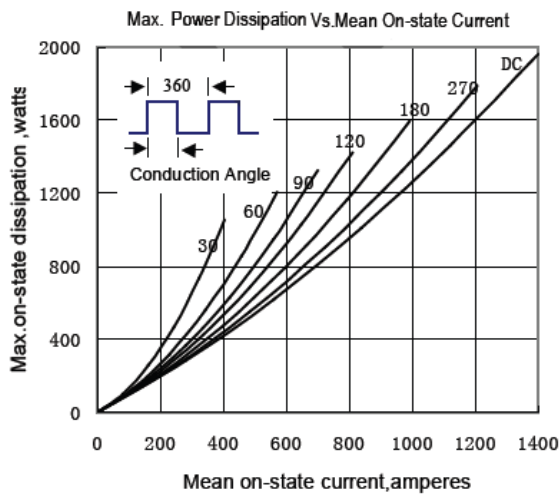


Fig.5

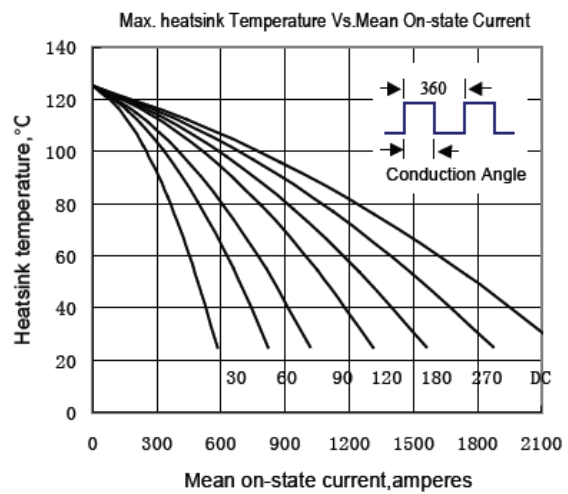


Fig.6

Surge Current Vs.Cycles

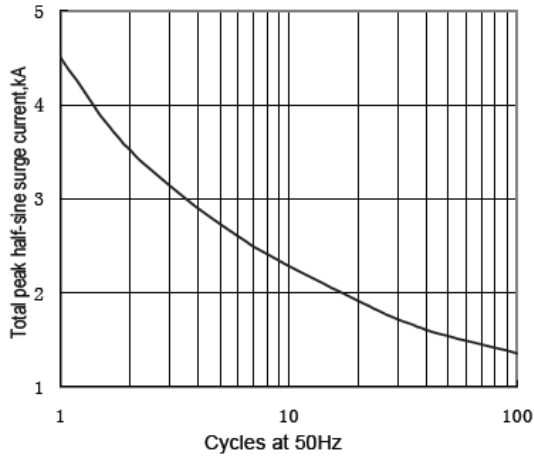


Fig.7

I^2t Vs.Time

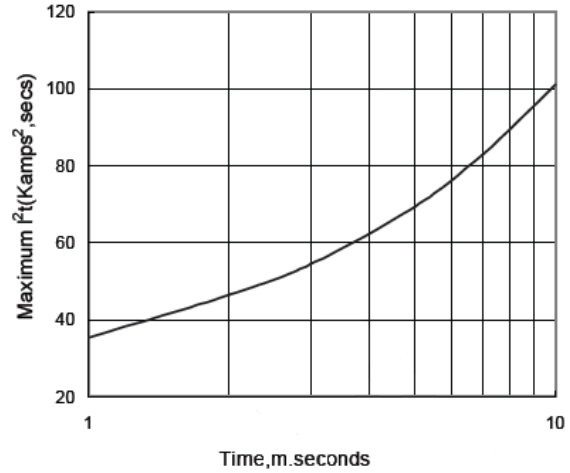


Fig.8

Gate characteristic at 25°C junction temperature

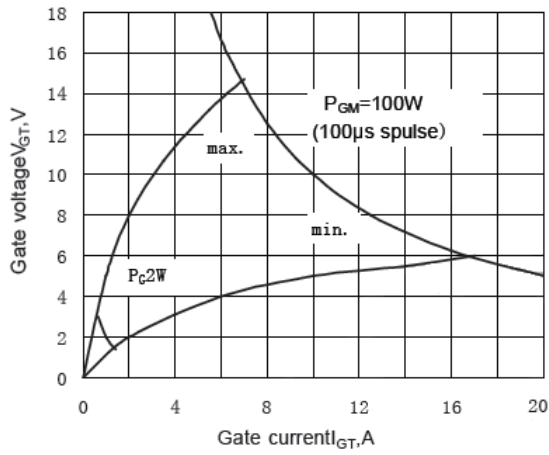


Fig.9

Gate Trigger Zone at varies temperature

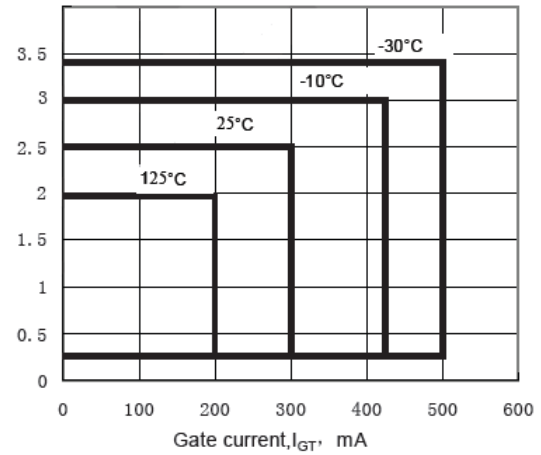
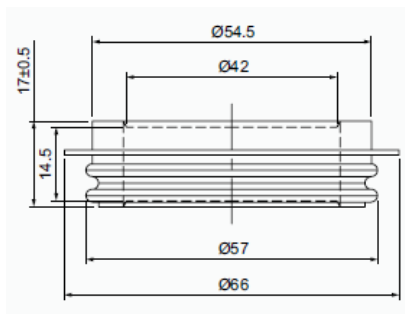
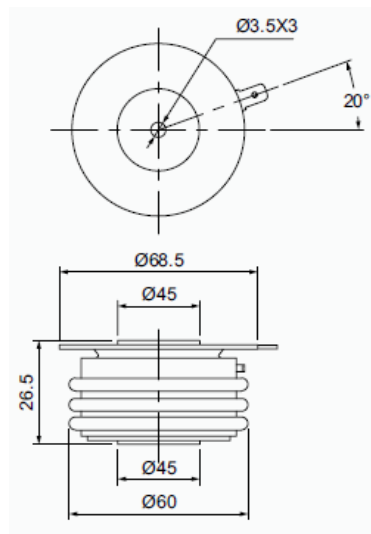


Fig.10

Outline:



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