

Features :

- Interdigitated amplifying gates
- Fast turn-on and high di/dt
- Low switching losses
- Short turn-off time
- Hermetic metal cases with ceramic insulators

$I_{T(AV)}$ **870A**
 V_{DRM}/V_{RRM} **800~1200V**
 t_q **10~20 μ s**
 I_{TSM} **9kA**

**Typical Applications**

- Inductive heating
- Electronic welders
- Self-commutated inverters
- AC motor speed control
- General power switching applications

| SYMBOL | CHARACTERISTIC | TEST CONDITIONS | $T_j(^{\circ}C)$ | VALUE | | | UNIT |
|------------------------|--|---|------------------|-------|------|-------|---------------|
| | | | | Min | Type | Max | |
| $I_{T(AV)}$ | Mean on-state current | 180° half sine wave 50Hz Double side cooled, $T_c=55^{\circ}C$ | 125 | | | 870 | A |
| V_{DRM} V_{RRM} | Repetitive peak off-state voltage Repetitive peak reverse voltage | $t_p=10ms$ | 125 | 800 | | 1200 | V |
| I_{DRM} I_{RRM} | Repetitive peak off-state current Repetitive peak reverse current | at V_{DRM} at V_{RRM} | 125 | | | 40 | mA |
| $I_{T/f}$ | High frequency on-state current | $F=10KHz, T_c=55^{\circ}C$ | | | | 500 | A |
| I_{TSM} | Surge on-state current | 10ms half sine wave | 125 | | | 9 | kA |
| I^2t | I^2t for fusing coordination | $V_R=0.6V_{RRM}$ | | | | | 405 |
| V_{TO} | Threshold voltage | | 125 | | | 1.55 | V |
| r_T | On-state slope resistance | | | | | | 0.35 |
| V_{TM} | Peak on-state voltage | $I_{TM}=1200A, F=15kN$ | 125 | | | 1.97 | V |
| dv/dt | Critical rate of rise of off-state voltage | $V_{DM}=0.67V_{DRM}$ | 125 | | | 200 | V/ μ s |
| di/dt | Critical rate of rise of on-state current | $V_{DM}=67\%V_{DRM}$, to 1400A Gate pulse $t_r \leq 0.5\mu s$ $I_{GM}=1.5A$ | 125 | | | 1500 | A/ μ s |
| Q_{rr} | Recovery charge | $I_{TM}=1000A, t_p=2000\mu s$, $di/dt=-60A/\mu s, V_R=50V$ | 125 | | 33 | | μC |
| t_q | Circuit commutated turn-off time | $I_{TM}=1000A, t_p=2000\mu s, V_R=50V$ $dv/dt=30V/\mu s, di/dt=-60A/\mu s$ | 125 | 10 | | 20 | μs |
| I_{GT} | Gate trigger current | | 25 | 30 | | 250 | mA |
| V_{GT} | Gate trigger voltage | $V_A=12V, I_A=1A$ | | 0.8 | | 3.0 | V |
| I_H | Holding current | | | 20 | | 400 | mA |
| V_{GD} | Non-trigger gate voltage | $V_{DM}=67\%V_{DRM}$ | 125 | 0.3 | | | V |
| $R_{th(j-c)}$ | Thermal resistance Junction to case | DC: double side cooled Clamping force 15kN | | | | 0.035 | $^{\circ}C/W$ |
| $R_{th(c-h)}$ | Thermal resistance case to heat sink | | | | | 0.008 | |
| F_m | Mounting force | | | 10 | | 20 | kN |
| T_{stg} | Stored temperature | | | -40 | | 140 | $^{\circ}C$ |
| W_t | Weight | | | | 240 | | g |
| Outline | P08 | | | | | | |

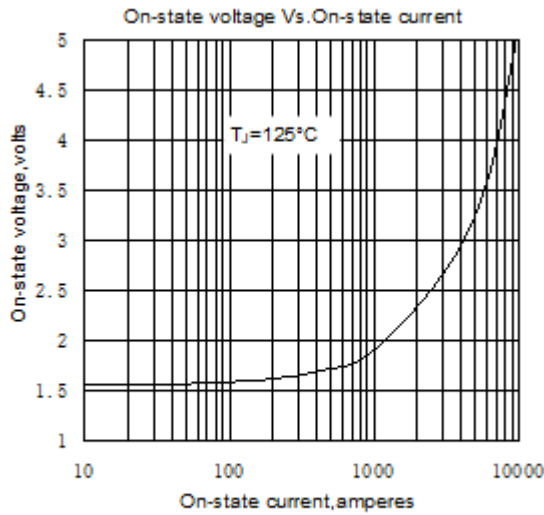


Fig. 1

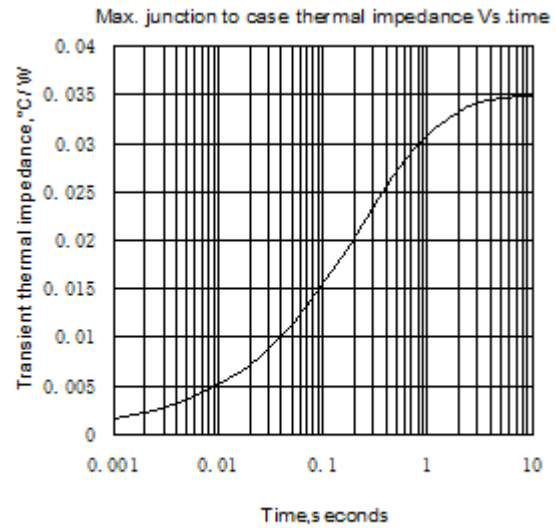


Fig. 2

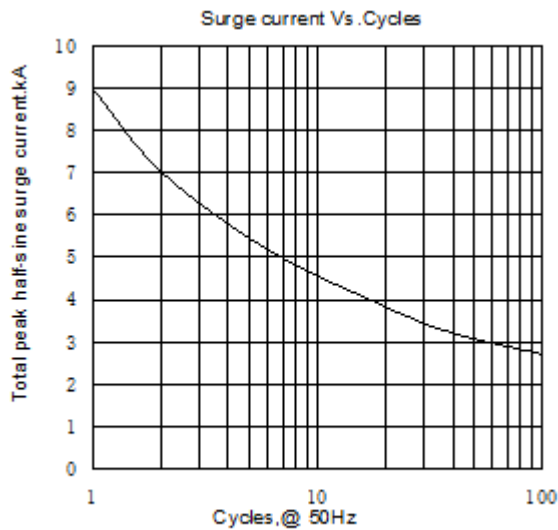


Fig. 3

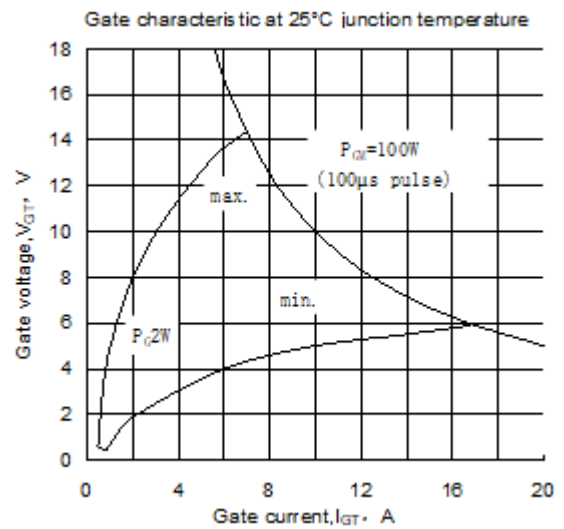


Fig. 4

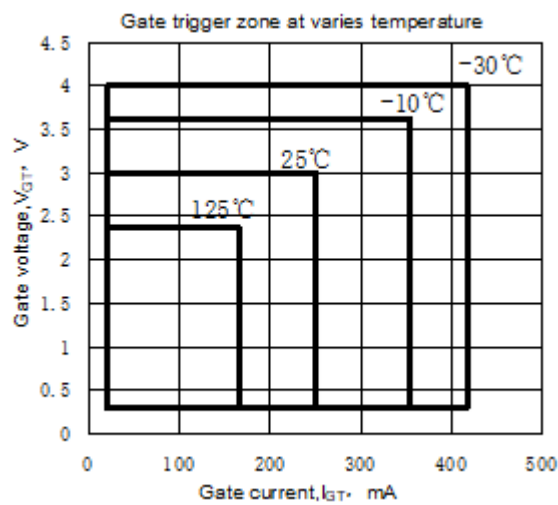
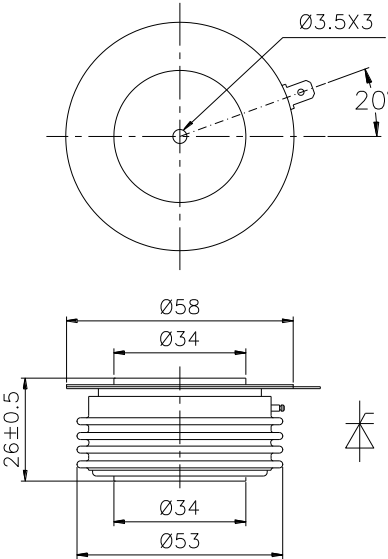


Fig. 5



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