

Features:

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

Typical Applications

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

$I_{T(AV)}$ **480A**
 V_{DRM}/V_{RRM} **800~1400V**
 t_q **12~24μs**
 I_{TSM} **5.8kA**



| 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 | | | 480 | A |
| | | | | | | 330 | |
| V _{DRM} V _{RRM} | Repetitive peak off-state voltage Repetitive peak reverse voltage | V _{DRM} &V _{RRM} ,tp=10ms V _{DSM} &V _{RSM} = V _{DRM} &V _{RRM} +100V | 125 | 800 | | 1400 | V |
| I _{DRM} I _{RRM} | Repetitive peak off-state current Repetitive peak reverse current | V _D = V _{DRM} V _R = V _{RRM} | 125 | | | 30 | mA |
| I _{TSM} | Surge on-state current | 10ms half sine wave | 125 | | | 5.8 | kA |
| I ² t | I ² T for fusing coordination | V _R =0.6V _{RRM} | | | | 168 | A ² s*10 ³ |
| V _{TO} | Threshold voltage | | 125 | | | 1.67 | V |
| r _T | On-state slop resistance | | | | | 1.32 | mΩ |
| V _{TM} | Peak on-state voltage | I _{TM} =600A, F=7.0kN | 125 | | | 2.46 | V |
| dv/dt | Critical rate of rise of off-state voltage | V _{DM} =0.67V _{DRM} | 125 | | | 200 | V/μs |
| di/dt | Critical rate of rise of on-state current | V _{DM} = 67%V _{DRM} to800A Gate pulse t _r ≤0.5μs I _{GM} =1.5A | 125 | | | 1500 | A/μs |
| Q _{rr} | Recovery charge | I _{TM} =1000A, tp=1000μs, di/dt=-20A/μs, V _R =50V | 125 | | 38 | 50 | μC |
| t _q | Circuit commutated turn-off time | I _{TM} =400A, tp=1000μs, V _R =50V dv/dt=30V/μs , di/dt=-20A/μs | 125 | 12 | | 24 | μs |
| I _{GT} | Gate trigger current | V _A =12V, I _A =1A | 25 | 30 | | 200 | 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} =67%V _{DRM} | 125 | 0.3 | | | V |
| R _{th(j-c)} | Thermal resistance Junction to case | At 180° sine double side cooled Clamping force 7.0kN | | | | 0.045 | °C /W |
| R _{th(c-h)} | Thermal resistance case to heat sink | | | | | 0.010 | |
| F _m | Mounting force | | | 5.3 | | 10 | kN |
| T _{stg} | Stored temperature | | | -40 | | 140 | °C |
| W _t | Weight | | | | 80 | | g |
| Outline | KT25aT | | | | | | |

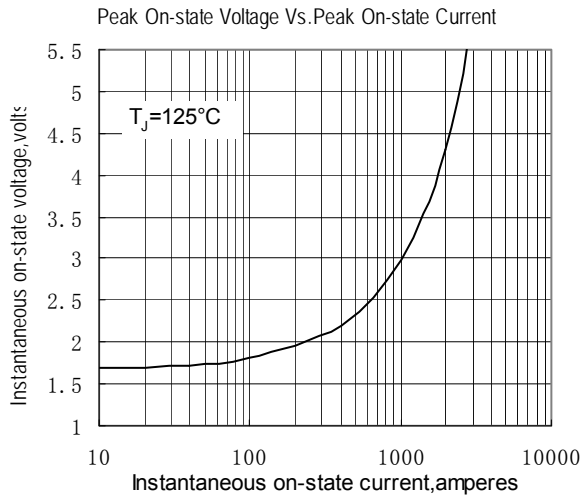


Fig.1

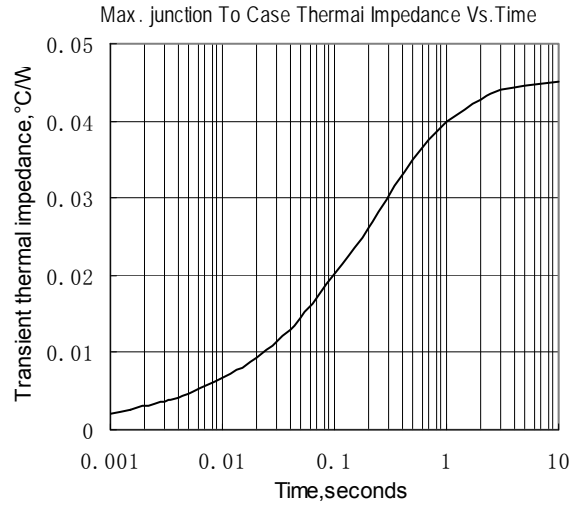


Fig.2

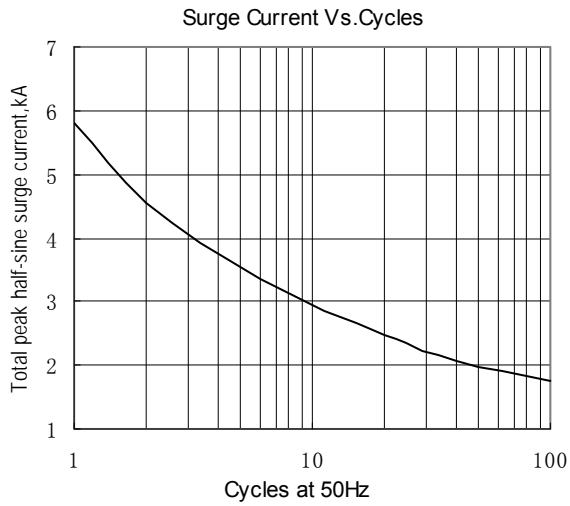


Fig.3

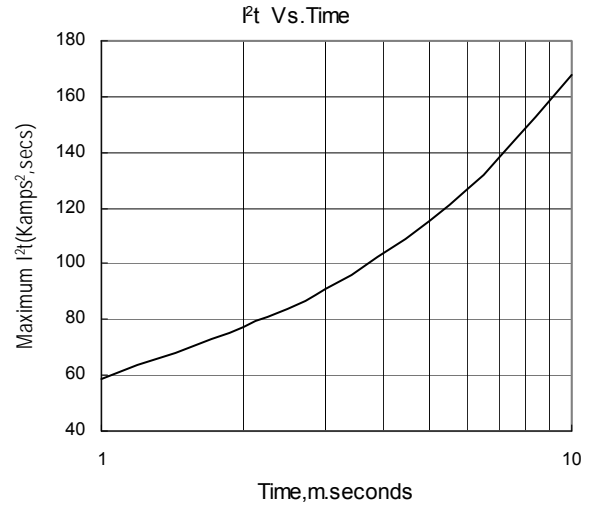


Fig.4

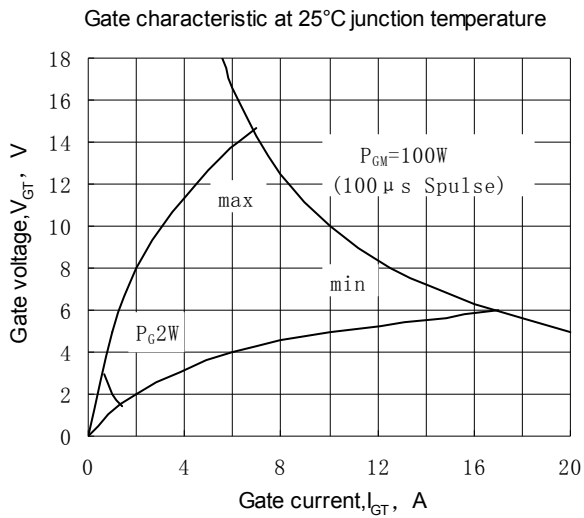


Fig.5

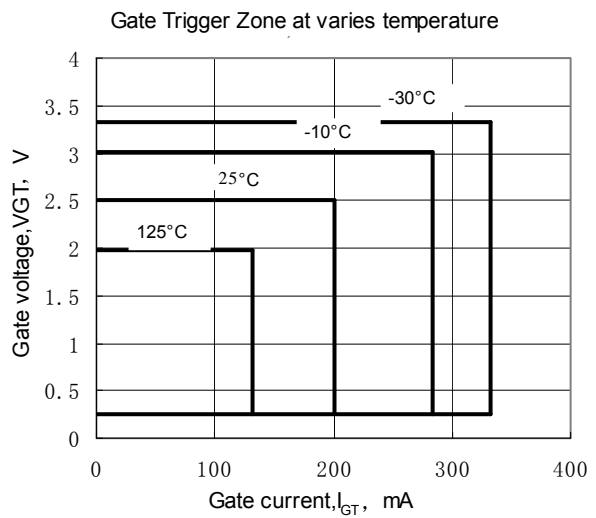


Fig.6

Outline:

