

Features

- Interdigitated amplifying gates
- Fast turn-on and high di/dt
- Low switching losses

Typical Applications

- Inductive heating
- Electronic welders
- Self-commutated inverters

| | |
|-------------------|--|
| $I_{T(AV)}$ | 500A |
| V_{DRM}/V_{RRM} | 800~1600V |
| t_q | 18~50μs |
| I_{TSM} | 4.3 kA |
| I^2t | 92 10³A²S |



| 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, | T _C =55°C | 125 | | | 500 | A |
| V_{DRM} V_{RRM} | Repetitive peak off-state voltage Repetitive peak reverse voltage | tp=10ms | | 125 | 800 | | 1600 | V |
| I_{DRM} I_{RRM} | Repetitive peak current | at V _{DRM} at V _{RRM} | | 125 | | | 30 | mA |
| I_{TSM} | Surge on-state current | 10ms half sine wave | | 125 | | | 4.3 | kA |
| I^2t | I ² t for fusing coordination | V _R =0.6V _{RRM} | | | | | 92 | A ² s*10 ³ |
| V_{TO} | Threshold voltage | | | 125 | | | 1.50 | V |
| r_T | On-state slope resistance | | | | | | 1.32 | mΩ |
| V_{TM} | Peak on-state voltage | I _{TM} =1000A, F=7.0kN | | 125 | | | 2.82 | V |
| dv/dt | Critical rate of rise of off-state voltage | V _{DM} =0.67V _{DRM} | | 125 | | | 500 | V/μs |
| di/dt | Critical rate of rise of on-state current | V _{DM} = 67%V _{DRM} to 800A, Gate pulse t _r ≤0.5μs I _{GM} =1.5A f=1Hz | | 125 | | | 1200 | A/μs |
| Q _{rr} | Recovery charge | I _{TM} =500A, tp=2000μs, di/dt=-60A/μs, V _R =50V | | 125 | | 350 | | μC |
| t _q | Circuit commutated turn-off time | I _{TM} =500A, tp=2000μs, V _R =50V dv/dt=30V/μs, di/dt=-60A/μs | | 125 | 18 | | 50 | μs |
| I_{GT} | Gate trigger current | | | 25 | 40 | | 250 | mA |
| V_{GT} | Gate trigger voltage | V _A =12V, I _A =1A | | | 0.9 | | 2.5 | 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 | 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 | | | | | | | | |

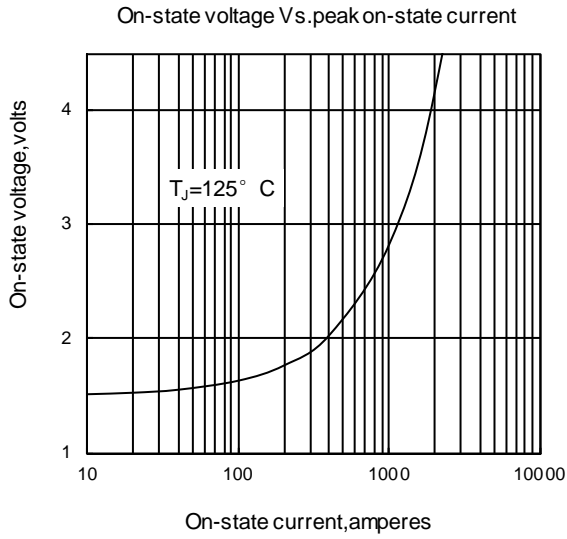


Fig1

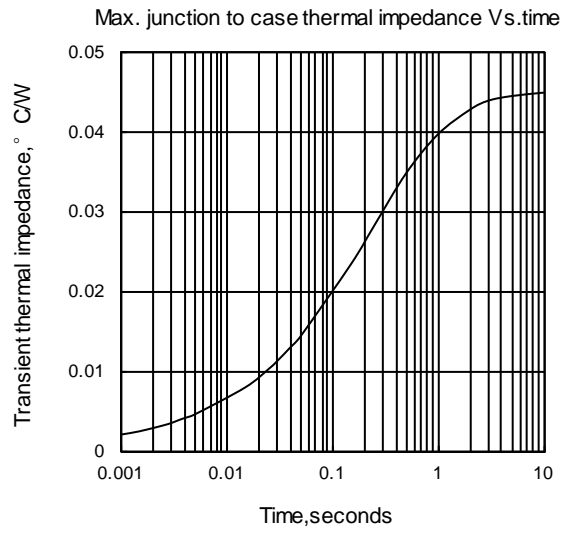


Fig2

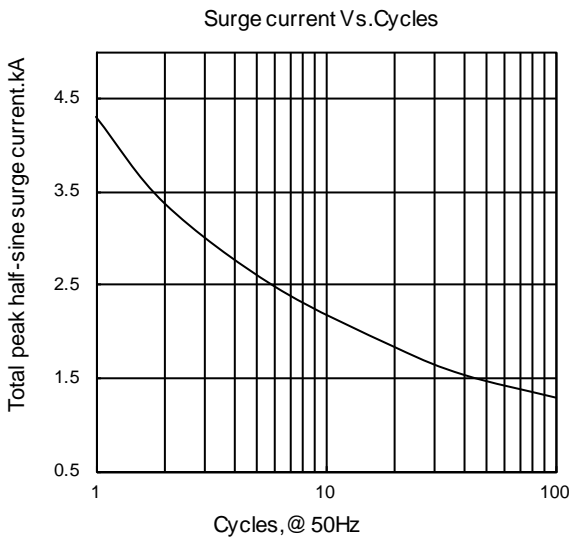


Fig3

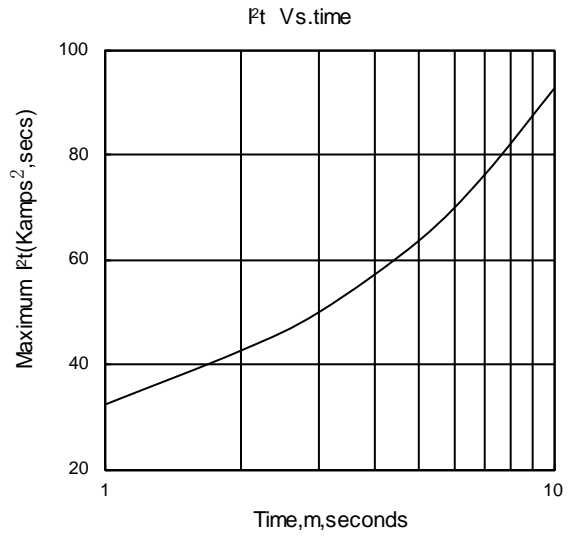


Fig4

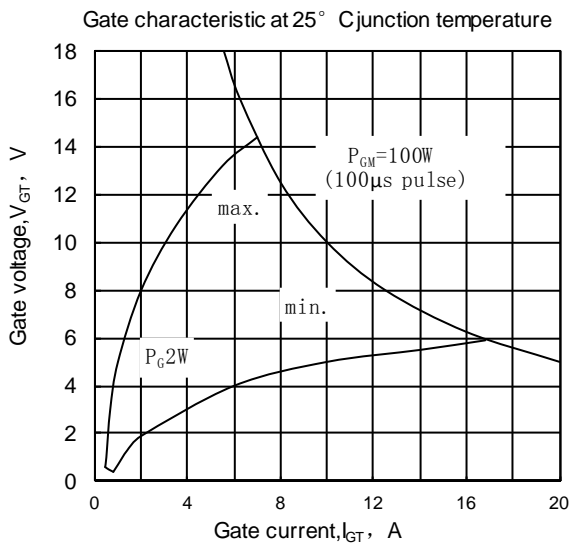


Fig5

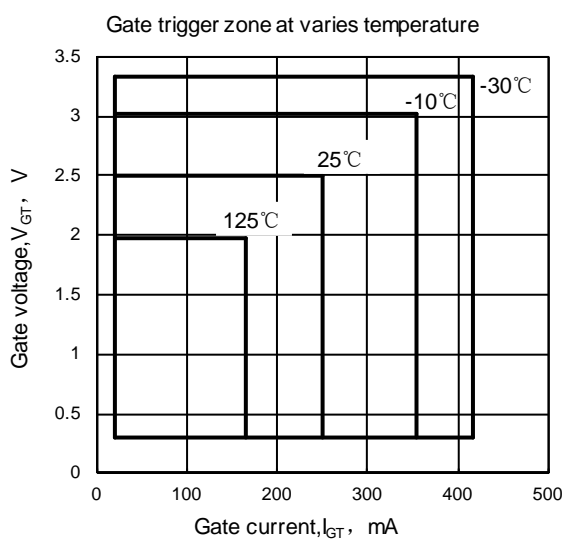


Fig6

