

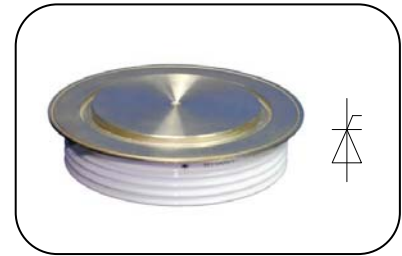
Features

- 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

$I_{T(AV)}$ **4040 A**
 V_{DRM}/V_{RRM} **1100-1800V**
 I_{TSM} **51 kA**
 I^2t **13005 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 | | | 4040 | A |
| | | | T _C =85°C | | | | 2760 | |
| 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 | 1100 | | 1800 | V |
| I _{DRM} I _{RRM} | Repetitive peak current | V _{DM} = V _{DRM} V _{RM} = V _{RRM} | | 125 | | | 200 | mA |
| I _{TSM} | Surge on-state current | 10ms half sine wave V _R =0.6V _{RRM} | | 125 | | | 51 | kA |
| I ² t | I ² T for fusing coordination | | | | | | 13005 | A ² s*10 ³ |
| V _{TO} | Threshold voltage | | | 125 | | | 0.84 | V |
| r _T | On-state slop resistance | | | | | | 0.09 | mΩ |
| V _{TM} | Peak on-state voltage | I _{TM} =5000A, F=40kN | | 125 | | | 1.29 | 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} to6000A, Gate pulse t _r ≤0.5μs I _{GM} =1.5A | | 125 | | | 250 | A/μs |
| Q _{rr} | Recovery charge | I _{TM} =2000A,tp=2000μs, di/dt=-20A/μs, V _R =50V | | 125 | | 2500 | | μC |
| I _{GT} | Gate trigger current | | | 25 | 40 | | 300 | mA |
| V _{GT} | Gate trigger voltage | V _A =12V, I _A =1A | | | 0.8 | | 3.0 | V |
| I _H | Holding current | | | | 20 | | 300 | 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 40.0kN | | | | | 0.010 | °C /W |
| R _{th(c-h)} | Thermal resistance case to heatsink | | | | | | 0.003 | |
| F _m | Mounting force | | | | 35 | | 47 | kN |
| T _{stg} | Stored temperature | | | | -40 | | 140 | °C |
| W _t | Weight | | | | | 1100 | | g |
| Outline | KT73cT | | | | | | | |

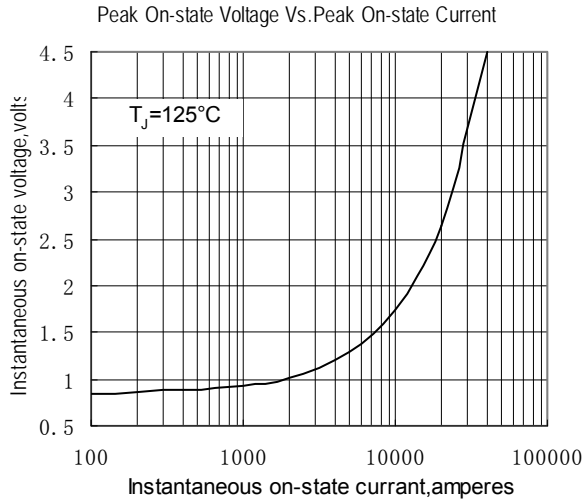


Fig.1

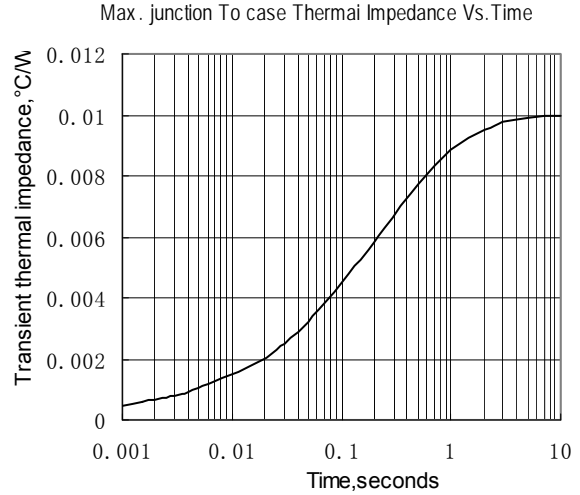


Fig.2

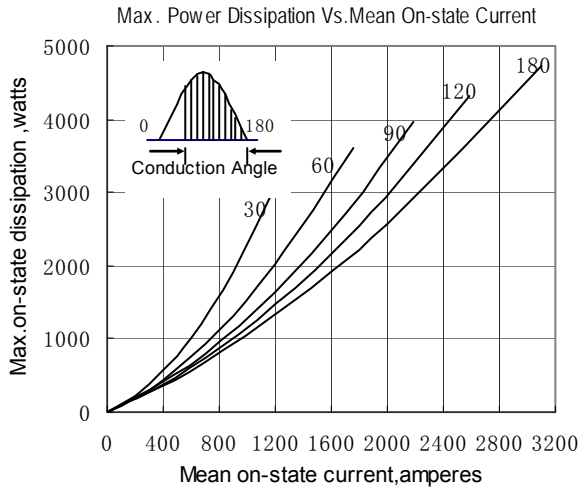


Fig.3

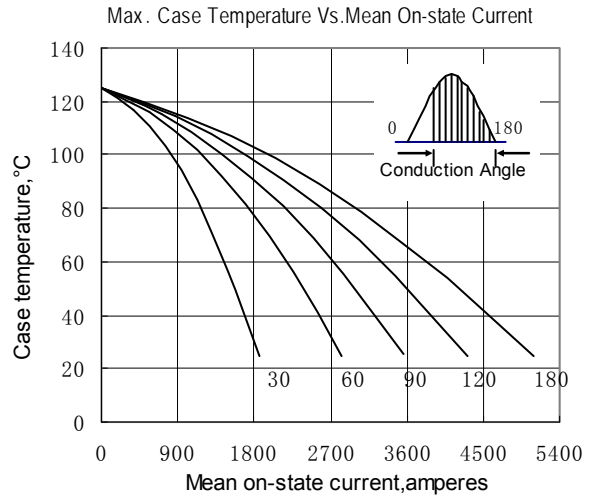


Fig.4

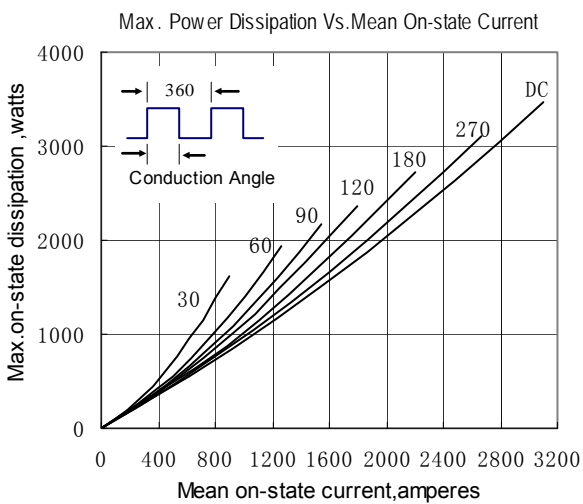


Fig.5

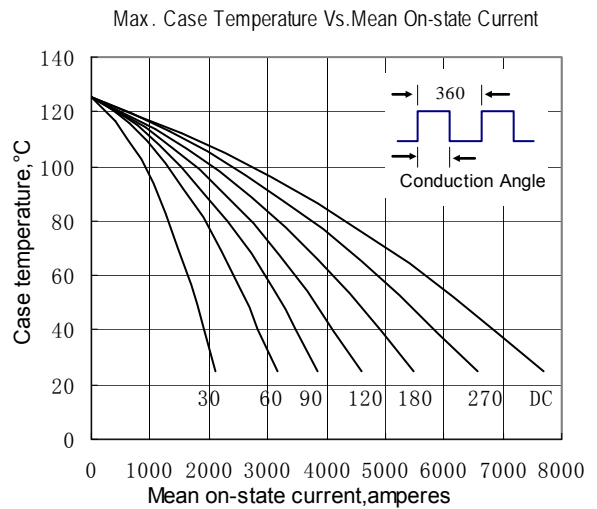


Fig.6

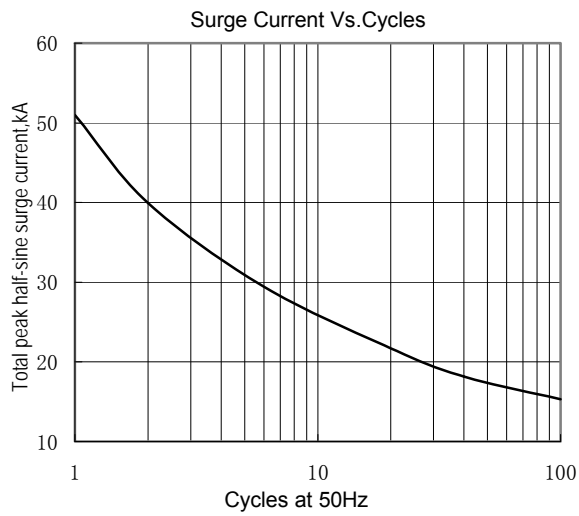


Fig.7

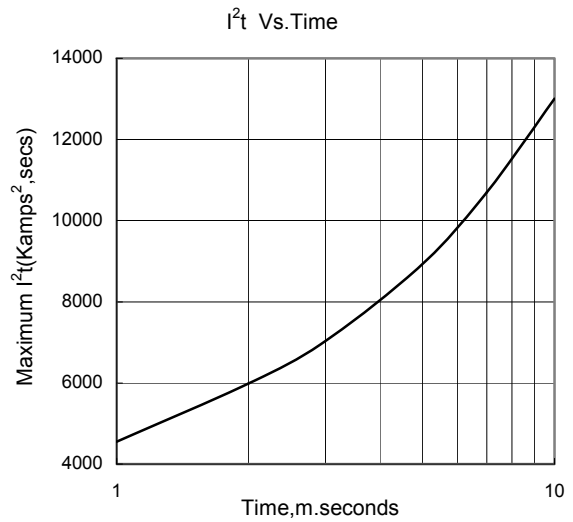


Fig.8

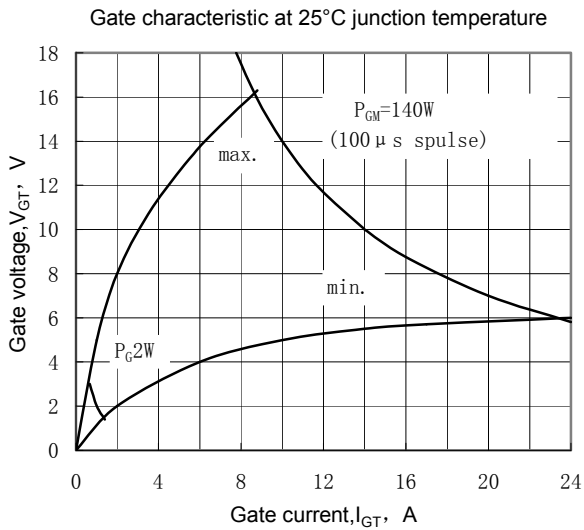


Fig.9

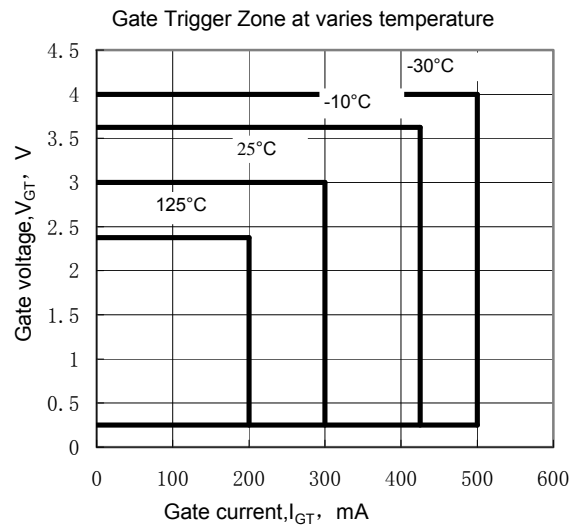


Fig.10

Outline:

