

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

$I_{T(AV)}$ 3500A
 V_{DRM}/V_{RRM} 3600 ~ 4200V
 I_{TSM} 52 kA
 I^2t 13520 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 =70°C | 125 | | | 3500 | A |
| | | | T _C =55°C | 125 | | | 4000 | A |
| V _{DRM} V _{RRM} | Repetitive peak off-state voltage Repetitive peak reverse voltage | tp=10ms | 125 | 3600 | | | 4200 | V |
| I _{DRM} I _{RRM} | Repetitive peak current | at V _{DRM} at V _{RRM} | 125 | | | | 400 | mA |
| I _{TSM} | Surge on-state current | 10ms half sine wave | 125 | | | | 52 | kA |
| I ² t | I ² t for fusing coordination | V _R =0.6V _{RRM} | | | | | 13520 | 10 ³ A ² s |
| V _{TO} | Threshold voltage | | 125 | | | | 0.95 | V |
| r _T | On-state slope resistance | | | | | | 0.18 | mΩ |
| V _{TM} | Peak on-state voltage | I _{TM} =3000A, F=70kN | 25 | | | | 1.56 | V |
| dv/dt | Critical rate of rise of off-state voltage | V _{DM} =0.67V _{DRM} | 125 | | | | 2000 | V/μs |
| di/dt | Critical rate of rise of on-state current | V _{DM} = 67%V _{DRM} Gate pulse tr ≤0.5μs I _{GM} =1.5A | 125 | | | | 200 | A/μs |
| Q _{rr} | Recovery charge | I _{TM} =2000A, tp=4000μs, di/dt=-5A/μs, V _R =100V | 125 | | 3000 | | | μC |
| 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 | | | 25 | | | 200 | mA |
| I _L | Latching current | | | | | | 1000 | 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 | D.C. double side cooled Clamping force 70.0kN | | | | | 0.0062 | °C/W |
| R _{th(c-h)} | Thermal resistance case to heatsink | | | | | | 0.0020 | |
| F _m | Mounting force | | | 63 | 70 | 84 | | kN |
| T _{vj} | Junction temperature | | | -40 | | | 125 | °C |
| T _{stg} | Stored temperature | | | -40 | | | 140 | °C |
| W _t | Weight | | | | | 1390 | | g |
| Outline | P19 | | | | | | | |

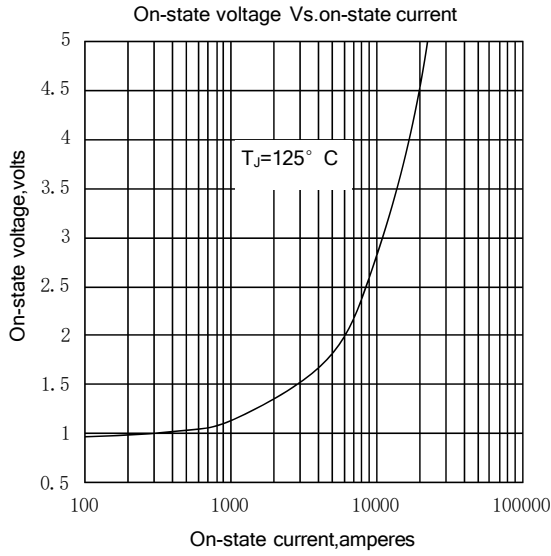


Fig.1

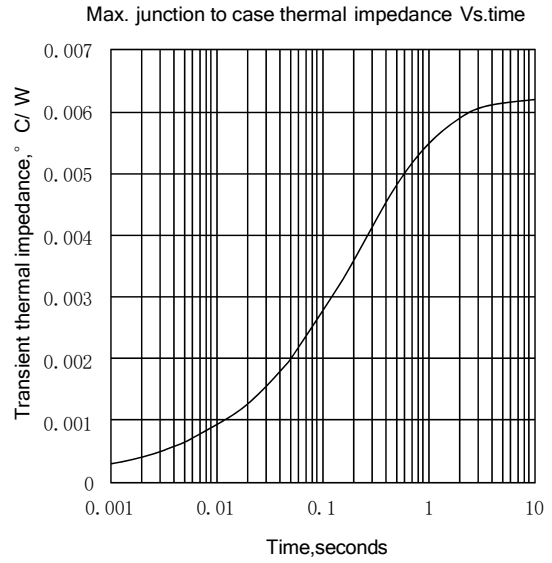


Fig.2

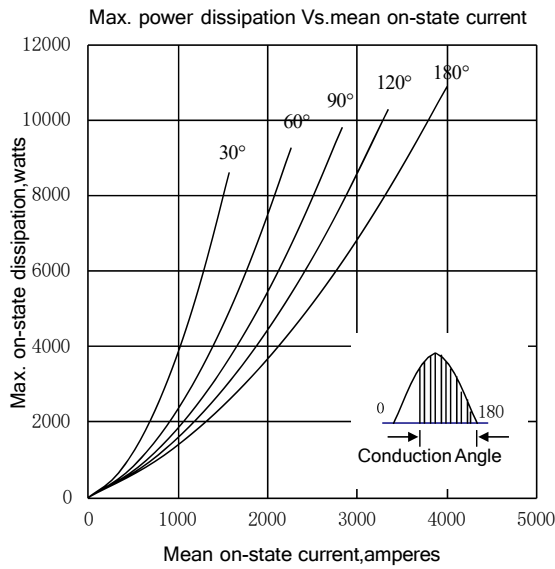


Fig.3

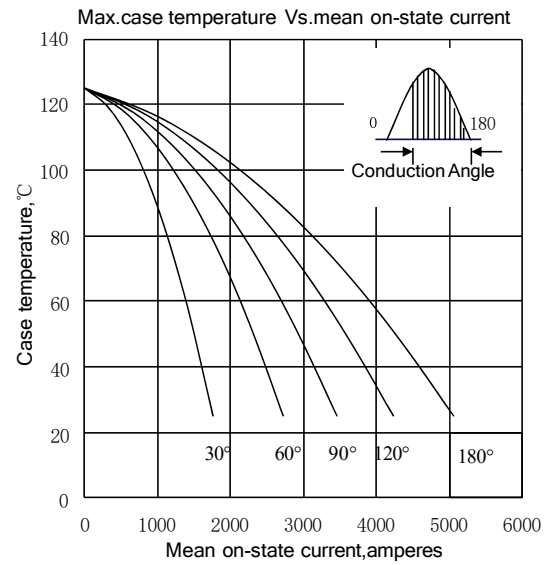


Fig.4

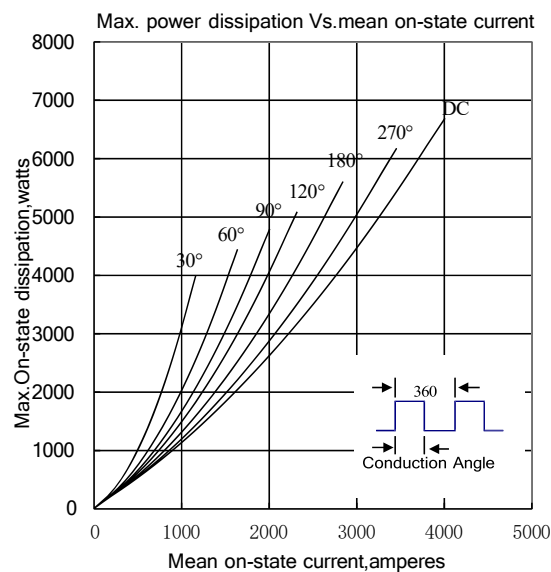


Fig.5

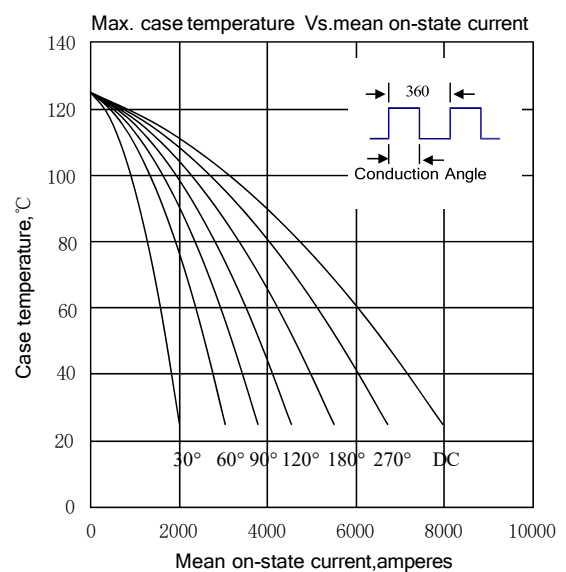


Fig.6

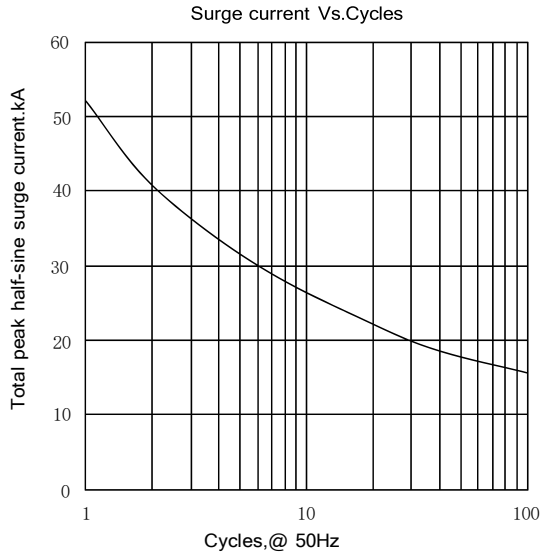


Fig.7

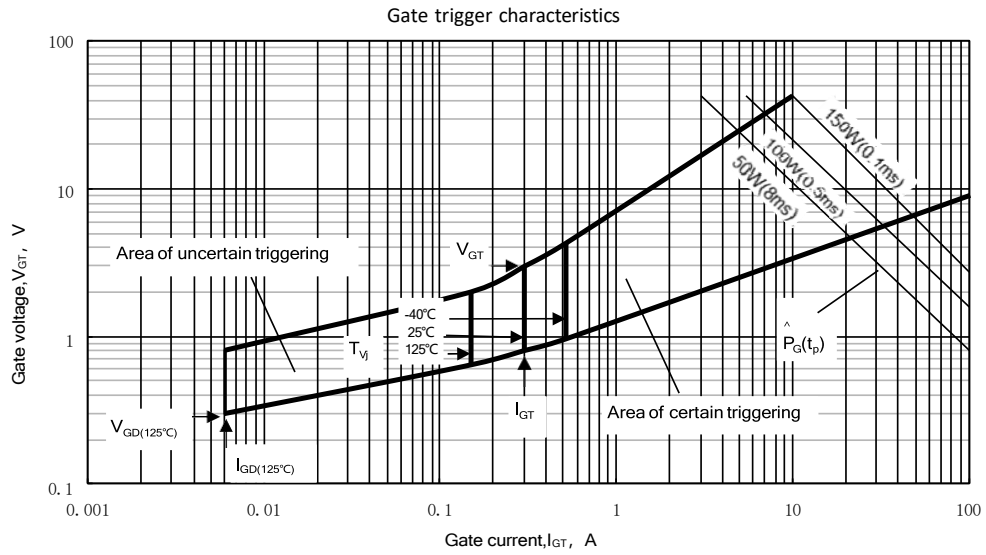
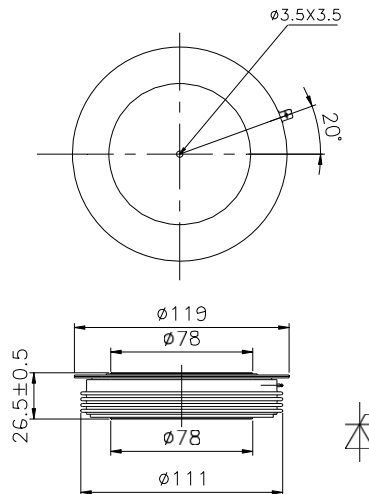


Fig.8

Outline:



Nlps reserves the right to change specifications without notice.