

Features :

- Center amplifying gate
- Metal case with ceramic insulator
- Low on-state and switching losses

$I_{T(AV)}$ **4200A**
 V_{DRM}/V_{RRM} **7300 ~ 8500V**
 I_{TSM} **100 kA**
 I^2t **50000 10³A²s**

Typical Applications :

- AC controllers
- DC and AC motor control
- Controlled rectifiers

| 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 | 100 | | 4200 | A |
| V _{DRM} V _{RRM} | Repetitive peak off-state voltage Repetitive peak reverse voltage | tp=10ms | | 125 | 7300 | 8500 | V |
| I _{DRM} I _{RRM} | Repetitive peak current | at V _{DRM} at V _{RRM} | | 100 | | 800 | mA |
| | | @7000V, DC | | 25 | | 100 | μA |
| I _{TSM} | Surge on-state current | 10ms half sine wave | | | | 100 | kA |
| I ² t | I ² t for fusing coordination | V _R =0.6V _{RRM} | 100 | | | 50000 | 10 ³ A ² s |
| V _{TO} | Threshold voltage | | | | | 1.56 | V |
| r _T | On-state slope resistance | | 100 | | | 0.12 | mΩ |
| V _{TM} | Peak on-state voltage | I _{TM} =5000A, F=120kN | 25 | | | 2.40 | V |
| dv/dt | Critical rate of rise of off-state voltage | V _{DM} =0.67V _{DRM} | 100 | | | 2000 | V/μs |
| di/dt | Critical rate of rise of on-state current | V _{DM} = 67%V _{DRM} , Gate pulse t _r ≤ 0.5μs I _{GM} =1.5A | 100 | | | 600 | A/μs |
| Q _{rr} | Recovery charge | I _{TM} =3000A, tp=4000μs, di/dt=-5A/μs, V _R =100V | 100 | | 9200 | | μC |
| I _{GT} | Gate trigger current | V _A =12V, I _A =1A | 25 | | 40 | 300 | mA |
| V _{GT} | Gate trigger voltage | | | | 0.8 | 3.5 | V |
| I _H | Holding current | | | | 20 | 1000 | mA |
| I _L | Latching current | | | | | 1000 | mA |
| V _{GD} | Non-trigger gate voltage | | | V _{DM} =67%V _{DRM} | 100 | | 0.3 |
| R _{th(j-c)} | Thermal resistance Junction to case | D.C. double side cooled Clamping force 120kN | | | | 0.0020 | °C/W |
| R _{th(c-h)} | Thermal resistance case to heatsink | | | | | 0.0005 | |
| F _m | Mounting force | | | 165 | 175 | 190 | kN |
| T _{vj} | Junction temperature | | | -40 | | 100 | °C |
| T _{stg} | Stored temperature | | | -40 | | 140 | °C |
| W _t | Weight | | | | 4000 | | g |
| Outline | P72 | | | | | | |

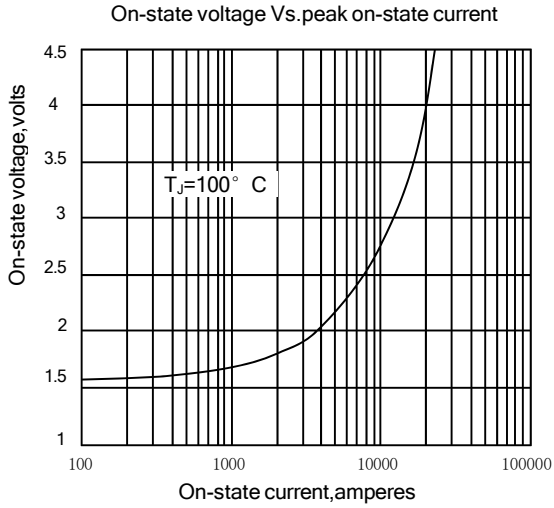


Fig1

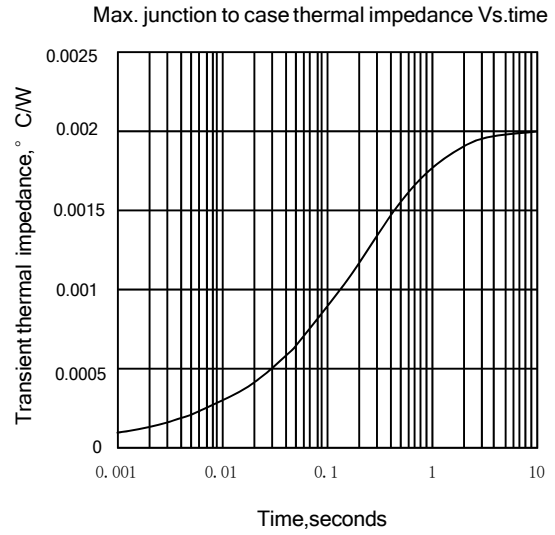


Fig2

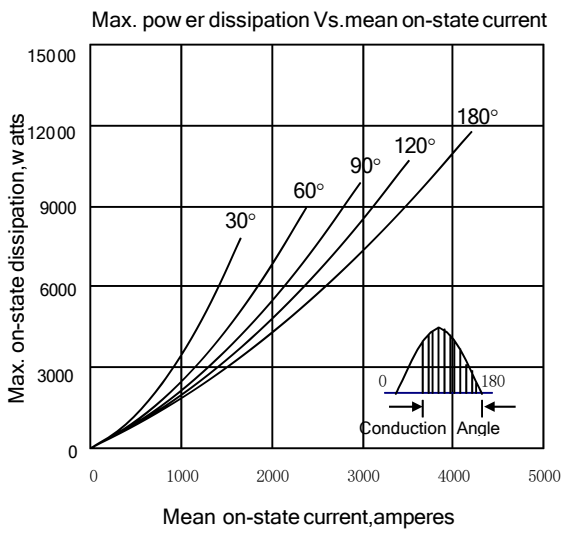


Fig3

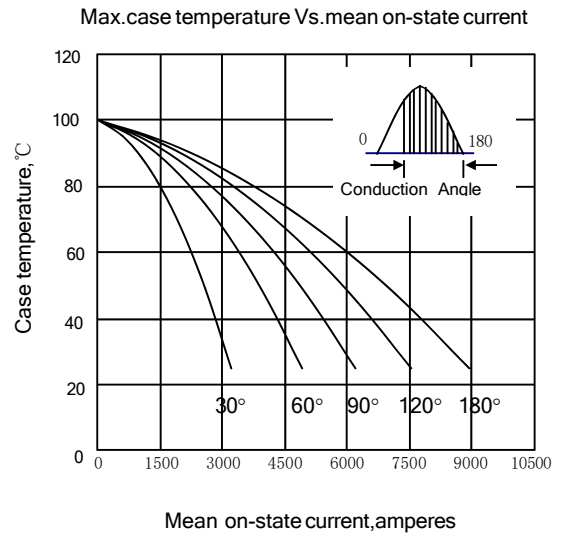


Fig4

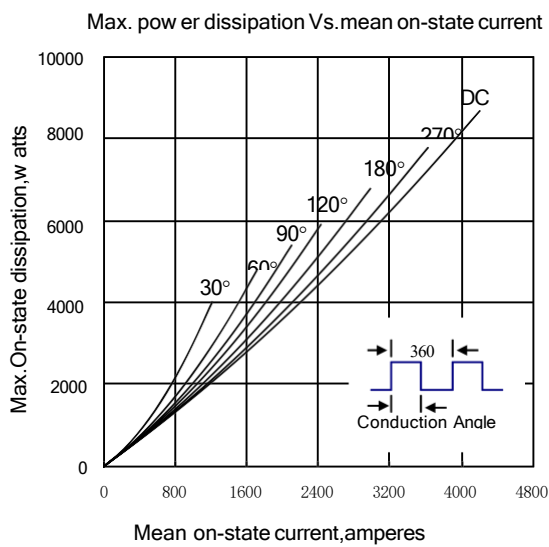


Fig5

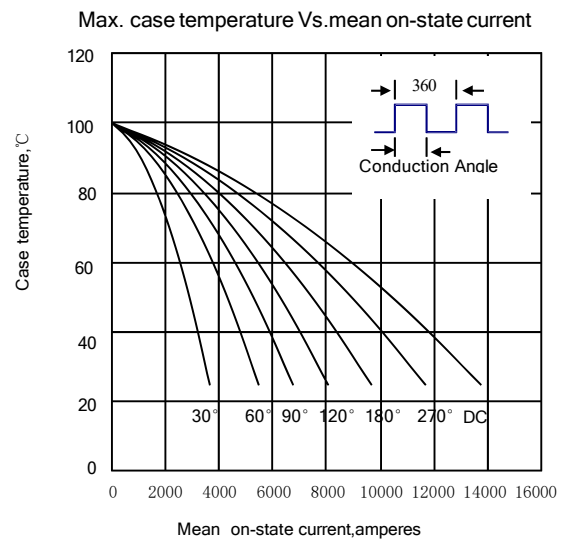


Fig6

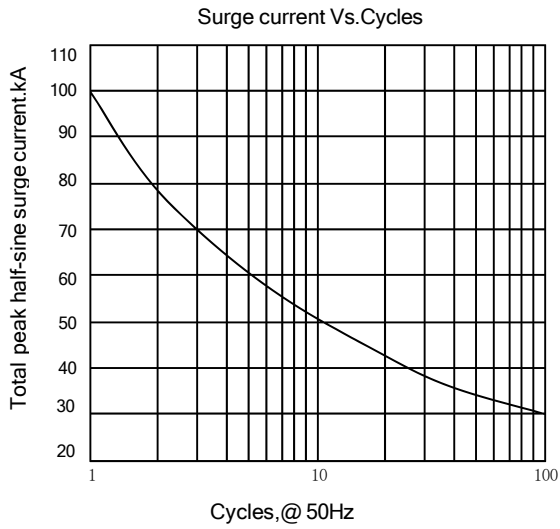


Fig7

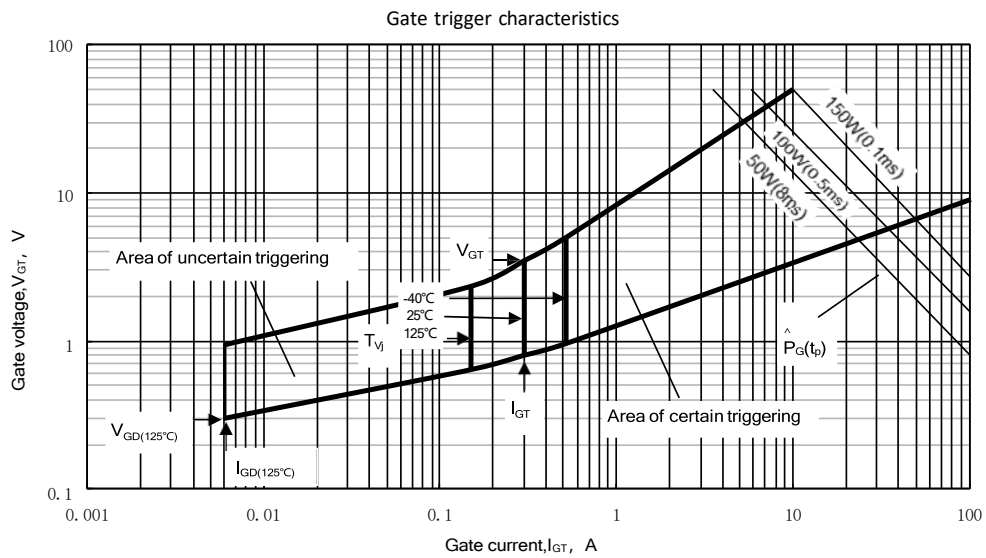
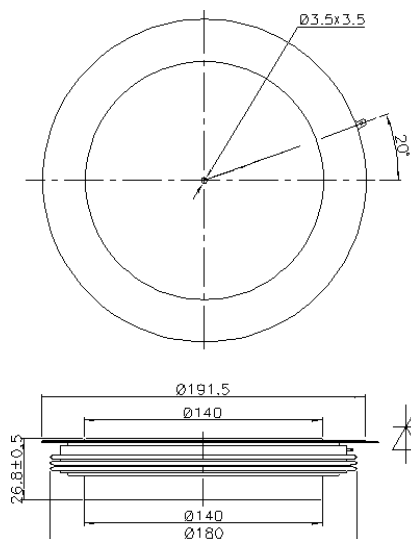


Fig. 8

Outline:



Nlps reserves the right to change specifications without notice.