

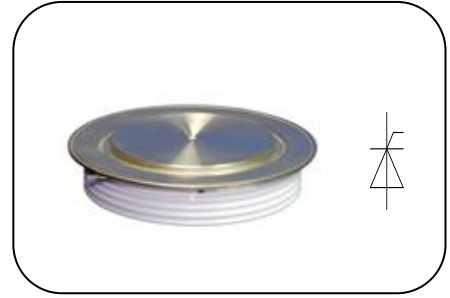
Features

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

Typical Applications

- Inductive heating
- Electronic welders
- Self-commutated inverters

| | |
|-------------------|--|
| $I_{T(AV)}$ | 4100A |
| V_{DRM}/V_{RRM} | 3100~4000V |
| t_q | 60~150μs |
| I_{TSM} | 44 kA |
| I^2t | 9680 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 | | | 4100 | A |
| V_{DRM} V_{RRM} | Repetitive peak off-state voltage Repetitive peak reverse voltage | tp=10ms | | 125 | 3100 | | 4000 | V |
| I_{DRM} I_{RRM} | Repetitive peak current | at V_{DRM} at V_{RRM} | | 125 | | | 250 | mA |
| I_{TSM} | Surge on-state current | 10ms half sine wave | | 125 | | | 44 | kA |
| I^2t | I^2t for fusing coordination | $V_R=0.6V_{RRM}$ | | | | | 9680 | A ² s*10 ³ |
| V_{TO} | Threshold voltage | | | 125 | | | 1.40 | V |
| r_T | On-state slope resistance | | | | | | 0.20 | mΩ |
| V_{TM} | Peak on-state voltage | $I_{TM}=4000A, F=90kN$ | | 125 | | | 2.20 | V |
| dv/dt | Critical rate of rise of off-state voltage | $V_{DM}=0.67V_{DRM}$ | | 125 | | | 500 | V/ μ s |
| di/dt | Critical rate of rise of on-state current | $V_{DM}=67\%V_{DRM}$ to 4000A Gate pulse $t_r \leq 0.5\mu s$ $I_{GM}=1.5A$ | | 125 | | | 1200 | A/ μ s |
| Q_{rr} | Recovery charge | $I_{TM}=2000A, tp=2000\mu s,$ $di/dt=-60A/\mu s, V_R=50V$ | | 125 | | 2000 | | μC |
| t _q | Circuit commutated turn-off time | $I_{TM}=2000A, tp=2000\mu s, V_R=50V$ $dv/dt=30V/\mu s, di/dt=-60A/\mu s$ | | 125 | 60 | | 150 | μs |
| I_{GT} | Gate trigger current | $V_A=12V, I_A=1A$ | | 25 | 40 | | 450 | mA |
| V_{GT} | Gate trigger voltage | | | | 0.9 | | 4.5 | V |
| I_H | Holding current | | | | 20 | | 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 | DC double side cooled Clamping force 90 kN | | | | | 0.0050 | °C/W |
| $R_{th(c-h)}$ | Thermal resistance case to heat sink | | | | | | 0.0015 | |
| F_m | Mounting force | | | | 81 | | 108 | kN |
| T _{stg} | Stored temperature | | | | -40 | | 140 | °C |
| W_t | Weight | | | | | 2000 | | g |
| Outline | P21 | | | | | | | |

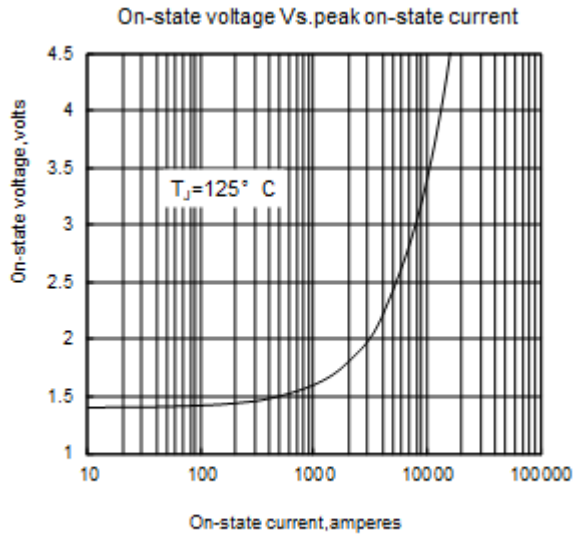


Fig1

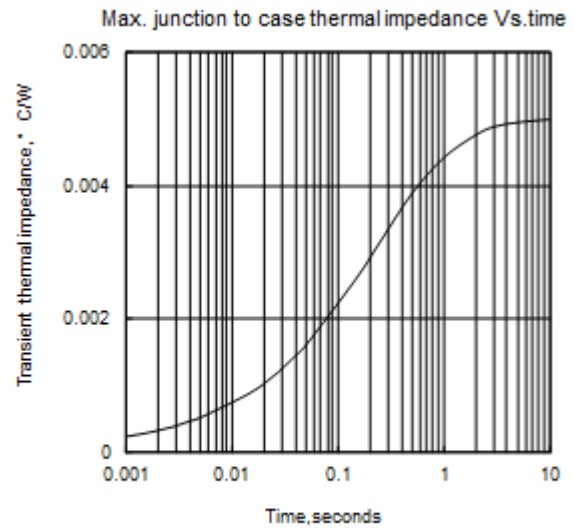


Fig2

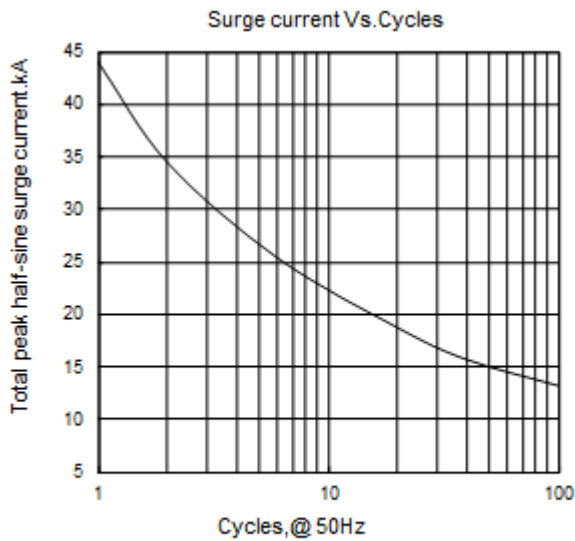


Fig3

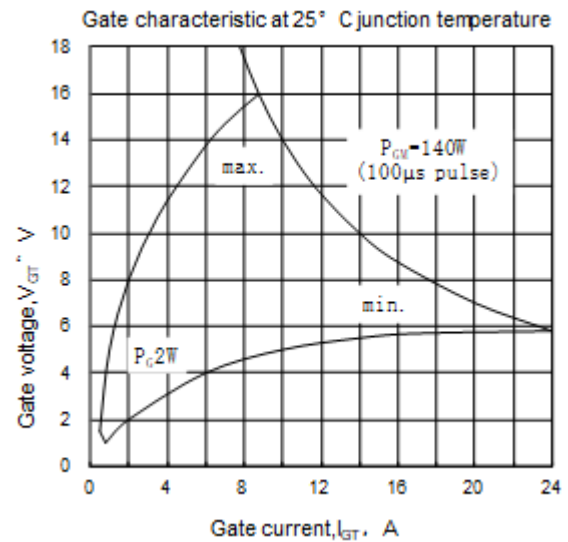


Fig4

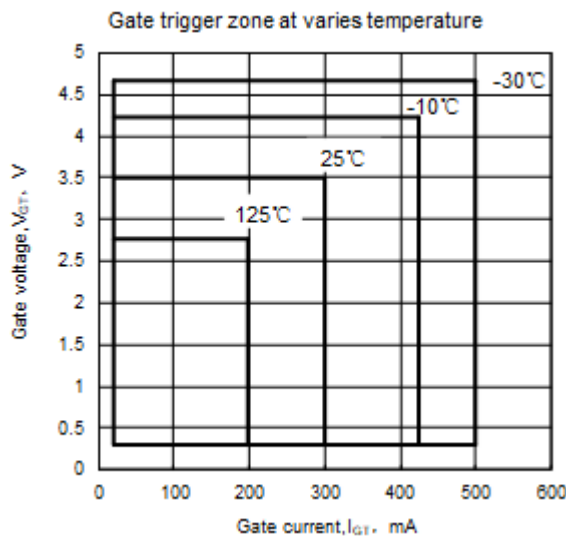
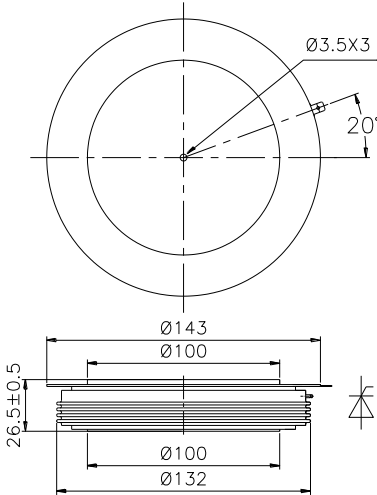


Fig5



Nlps reserves the right to change specifications without notice.