

Features :

- Interdigitated amplifying gates
- Fast turn-on and high di/dt
- Low switching losses
- Short turn-off time
- Hermetic metal cases with ceramic insulators

Typical Applications

- Inductive heating
- Electronic welders
- Self-commutated inverters
- AC motor speed control

| | |
|-------------------|---------------------|
| $I_{T(AV)}$ | 480A |
| V_{DRM}/V_{RRM} | 1100 ~ 1400V |
| t_q | 10 ~ 24μs |
| I_{TSM} | 5.8 kA |

| 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 | | 480 | A |
| V_{DRM} V_{RRM} | Repetitive peak off-state voltage Repetitive peak reverse voltage | $t_p=10ms$ | 125 | 1100 | | 1400 | V |
| I_{DRM} I_{RRM} | Repetitive peak off-state current Repetitive peak reverse current | at V_{DRM} at V_{RRM} | 125 | | | 30 | mA |
| I_{TSM} | Surge on-state current | 10ms half sine wave | 125 | | | 5.8 | kA |
| I^2t | I^2t for fusing coordination | $V_R=0.6V_{RRM}$ | | | | 168 | $A^2s \cdot 10^3$ |
| V_{TO} | Threshold voltage | | 125 | | | 1.67 | V |
| r_T | On-state slope resistance | | | | | 1.32 | mΩ |
| V_{TM} | Peak on-state voltage | $I_{TM}=600A, F=7.0kN$ | 25 | | | 3.20 | 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 | $V_{DM}=67\%V_{DRM}$ to 800A Gate pulse $t_r \leq 0.5\mu s$ $I_{GM}=1.5A$ | 125 | | | 1500 | A/μs |
| Q_{rr} | Recovery charge | $I_{TM}=1000A, t_p=4000\mu s,$ $di/dt=-20A/\mu s, V_R=100V$ | 125 | | 38 | 50 | μC |
| t_q | Circuit commutated turn-off time | $I_{TM}=1000A, t_p=4000\mu s, V_R=100V$ $dv/dt=30V/\mu s, di/dt=-20A/\mu s$ | 125 | 10 | | 24 | μs |
| I_{GT} | Gate trigger current | $V_A=12V, I_A=1A$ | 25 | | 30 | 200 | mA |
| V_{GT} | Gate trigger voltage | | | | 0.8 | 2.5 | V |
| I_H | Holding current | | | | 20 | 250 | mA |
| I_L | Latching current | | | | | 500 | mA |
| V_{GD} | Non-trigger gate voltage | $V_{DM}=67\%V_{DRM}$ | 125 | | | 0.3 | V |
| $R_{th(f-c)}$ | Thermal resistance Junction to case | D.C. 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_{vj} | Junction temperature | | | -40 | | 125 | °C |
| T_{stg} | Stored temperature | | | -40 | | 140 | °C |
| W_t | Weight | | | | 80 | | g |
| Outline | P02 | | | | | | |

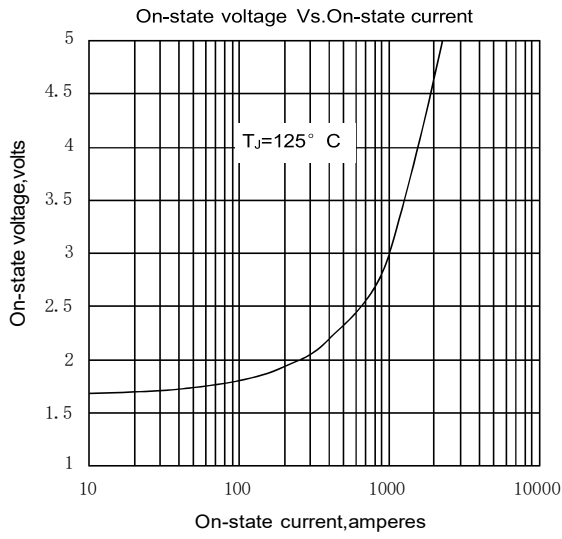


Fig. 1

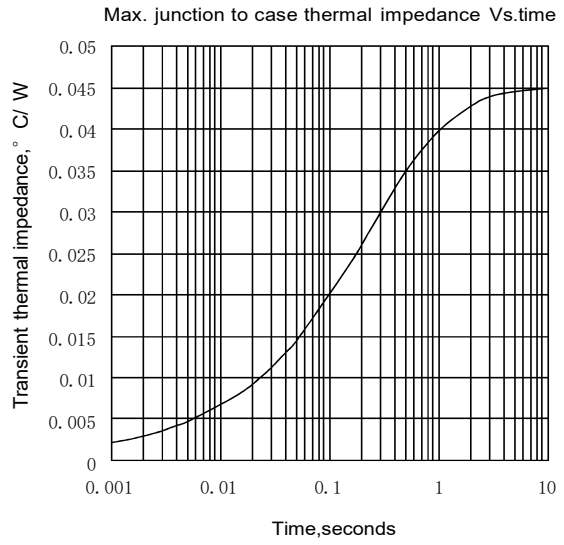


Fig. 2

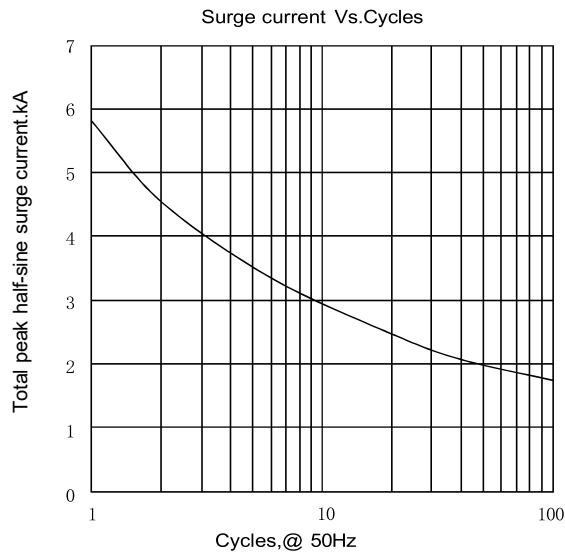


Fig. 3

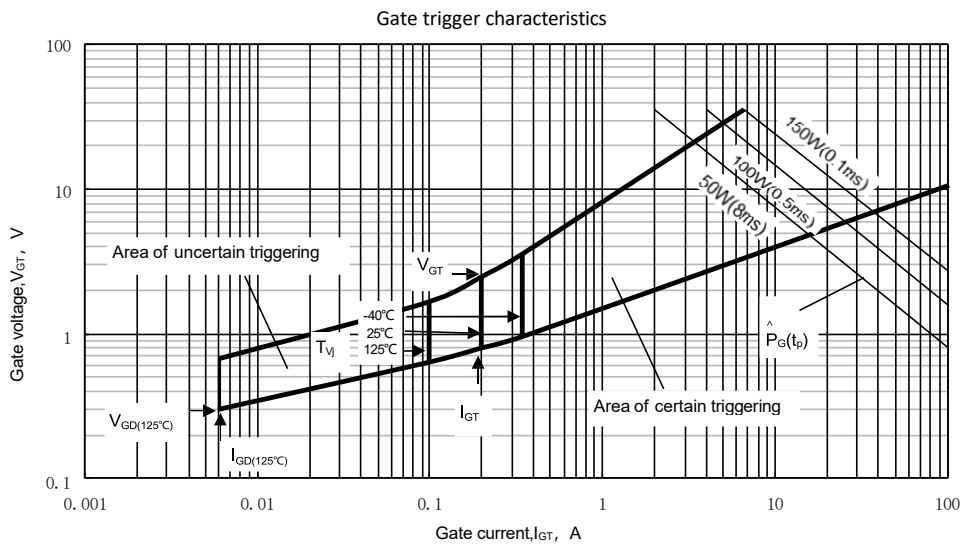
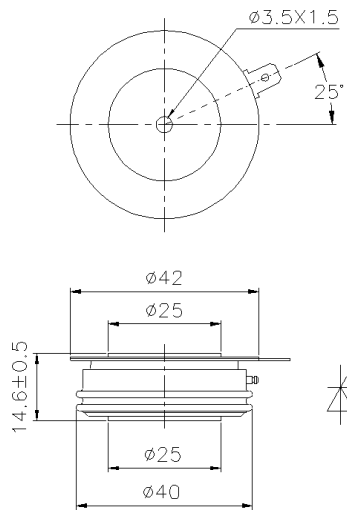


Fig. 4

Outline:



Nlps reserves the right to change specifications without notice.