

**Features :**

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

|                   |                               |
|-------------------|-------------------------------|
| $I_{T(AV)}$       | <b>1110A</b>                  |
| $V_{DRM}/V_{RRM}$ | <b>800~1200V</b>              |
| $t_q$             | <b>10~20<math>\mu</math>s</b> |
| $I_{TSM}$         | <b>11kA</b>                   |

**Typical Applications**

- Inductive heating
- Electronic welders
- Self-commutated inverters
- AC motor speed control
- General power switching applications

| SYMBOL                 | CHARACTERISTIC   | TEST CONDITIONS  | $T_j(^{\circ}C)$ | VALUE |      |       | UNIT              |
|------------------------|--|--|------------------|-------|------|-------|-------------------|
|                        |  |  |                  | Min   | Type | Max   |                   |
| $I_{T(AV)}$            | Mean on-state current  | 180° half sine wave 50Hz<br>Double side cooled,<br>$T_C=55^{\circ}C$           | 125              |       |      | 1110  | A                 |
| $V_{DRM}$<br>$V_{RRM}$ | Repetitive peak off-state voltage<br>Repetitive peak reverse voltage | $t_p=10ms$   | 125              | 800   |      | 1200  | V                 |
| $I_{DRM}$<br>$I_{RRM}$ | Repetitive peak off-state current<br>Repetitive peak reverse current | at $V_{DRM}$<br>at $V_{RRM}$   | 125              |       |      | 60    | mA                |
| $I_{T/f}$              | High frequency on-state current                                      | $F=10KHz, T_C=55^{\circ}C$   |                  |       |      | 500   | A                 |
| $I_{TSM}$              | Surge on-state current   | 10ms half sine wave<br>$V_R=0.6V_{RRM}$  | 125              |       |      | 11    | kA                |
| $I^2t$                 | $I^2t$ for fusing coordination                                       |  |                  |       |      | 605   | $A^2s \cdot 10^3$ |
| $V_{TO}$               | Threshold voltage  |  | 125              |       |      | 1.41  | V                 |
| $r_T$                  | On-state slope resistance  |  |                  |       |      | 0.45  | m $\Omega$        |
| $V_{TM}$               | Peak on-state voltage  | $I_{TM}=2400A, F=21kN$   | 125              |       |      | 2.49  | V                 |
| dv/dt                  | Critical rate of rise of off-state voltage                           | $V_{DM}=0.67V_{DRM}$   | 125              |       |      | 200   | V/ $\mu$ s        |
| di/dt                  | Critical rate of rise of on-state current                            | $V_{DM}=67\%V_{DRM}$ to 1800A,<br>Gate pulse $t_r \leq 0.5\mu s$ $I_{GM}=1.5A$ | 125              |       |      | 1500  | A/ $\mu$ s        |
| $Q_{rr}$               | Recovery charge  | $I_{TM}=1000A, t_p=2000\mu s,$<br>$di/dt=-60A/\mu s, V_R=50V$                  | 125              |       | 63   |       | $\mu C$           |
| $t_q$                  | Circuit commutated turn-off time                                     | $I_{TM}=1000A, t_p=2000\mu s, V_R=50V$<br>$dv/dt=30V/\mu s, di/dt=-60A/\mu s$  | 125              | 10    |      | 20    | $\mu s$           |
| $I_{GT}$               | Gate trigger current   |  |                  | 30    |      | 250   | mA                |
| $V_{GT}$               | Gate trigger voltage   | $V_A=12V, I_A=1A$  | 25               | 0.8   |      | 3.0   | V                 |
| $I_H$                  | Holding current  |  |                  | 20    |      | 400   | mA                |
| $V_{GD}$               | Non-trigger gate voltage   | $V_{DM}=67\%V_{DRM}$   | 125              | 0.3   |      |       | V                 |
| $R_{th(j-c)}$          | Thermal resistance<br>Junction to case                               | DC: double side cooled   |                  |       |      | 0.024 | $^{\circ}C/W$     |
| $R_{th(c-h)}$          | Thermal resistance<br>case to heat sink                              | Clamping force 21kN  |                  |       |      | 0.006 |                   |
| $F_m$                  | Mounting force   |  |                  | 18    |      | 25    | kN                |
| $T_{stg}$              | Stored temperature   |  |                  | -40   |      | 140   | $^{\circ}C$       |
| $W_t$                  | Weight   |  |                  |       | 380  |       | g                 |
| Outline                | P10  |  |                  |       |      |       |                   |

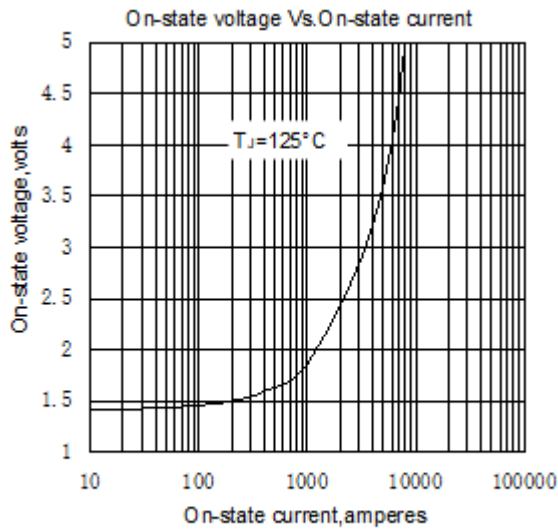


Fig. 1

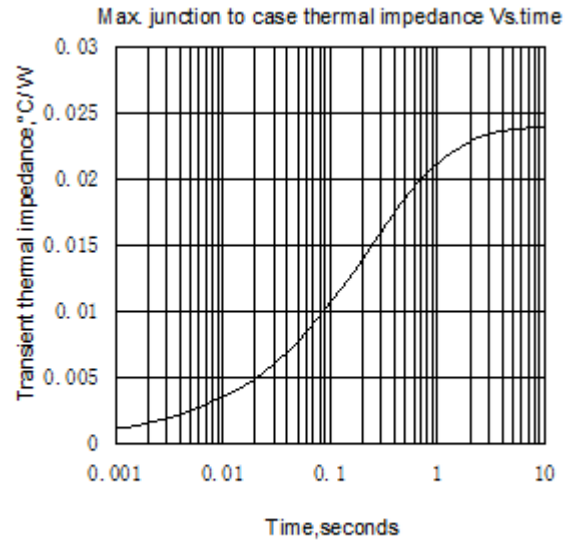


Fig. 2

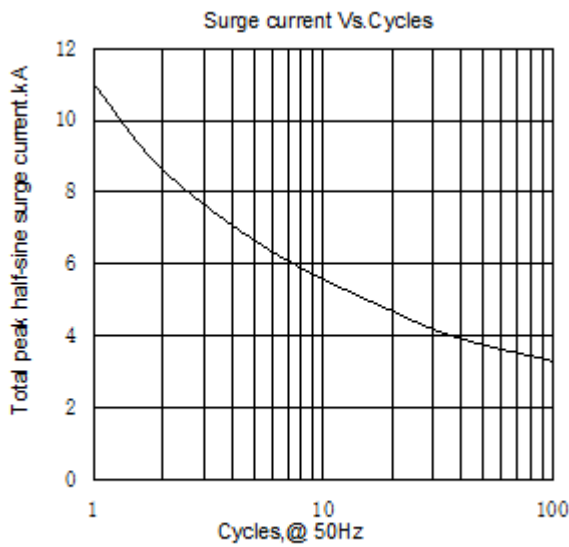


Fig. 3

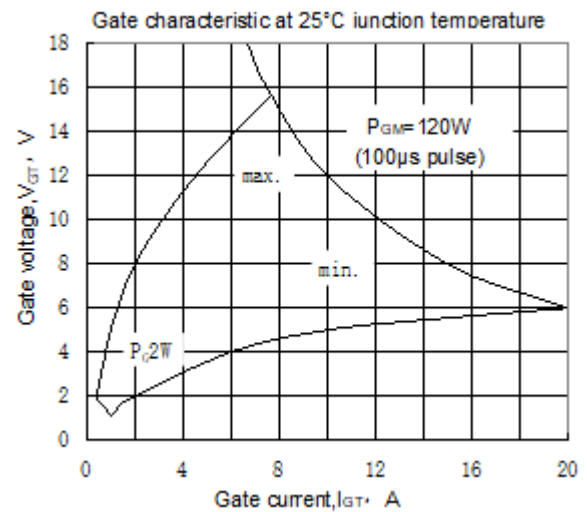


Fig. 4

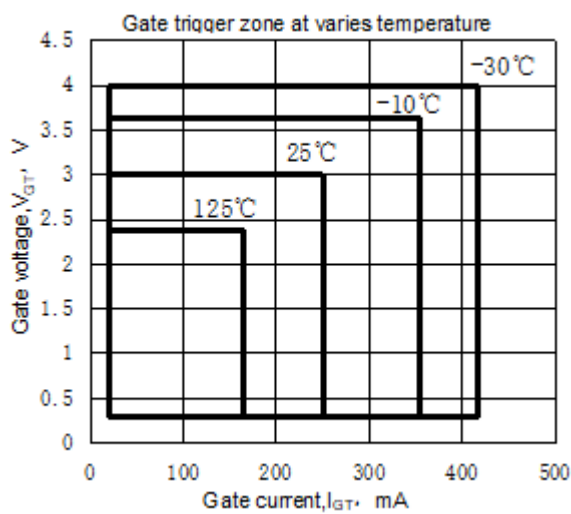
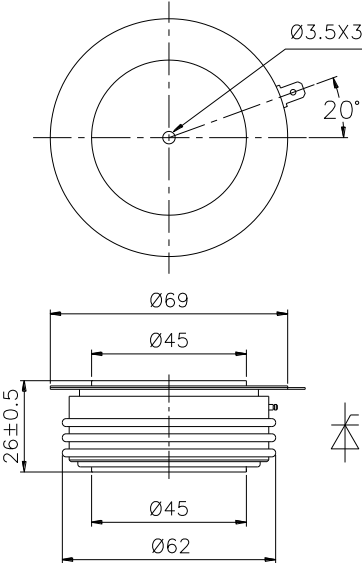


Fig. 5



Nlps reserves the right to change specifications without notice.