# DST1200

PHASE CONTROL THYRISTOR

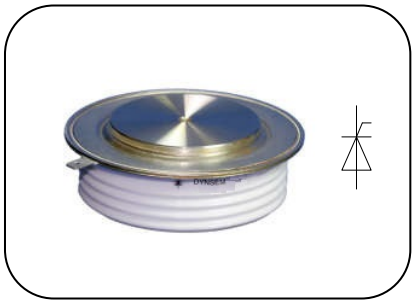
**Features：**

- 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

| | |
|---|---|
| $I_{T(AV)}$ | 1320A |
| $V_{DRM}/V_{RRM}$ | 1100~1800V |
| $I_{TSM}$ | 24 kA |
| $I^2t$ | 2880 $10^3A^2S$ |



| 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 | $T_C$=85°C | 125 | | | 1320 | A |
| $V_{DRM}$ $V_{RRM}$ | Repetitive peak off-state voltage Repetitive peak reverse voltage | tp=10ms | | 125 | 1100 | | 1800 | V |
| $I_{DRM}$ $I_{RRM}$ | Repetitive peak current | at $V_{DRM}$ at $V_{RRM}$ | | 125 | | | 80 | mA |
| $I_{TSM}$ | Surge on-state current | 10ms half sine wave $V_R$=0.6$V_{RRM}$ | | 125 | | | 24 | kA |
| $I^2t$ | $I^2t$ for fusing coordination | | | | | | 2880 | $A^2s*10^3$ |
| $V_{TO}$ | Threshold voltage | | | 125 | | | 0.87 | V |
| $r_T$ | On-state slope resistance | | | | | | 0.20 | mΩ |
| $V_{TM}$ | Peak on-state voltage | $I_{TM}$=2550A, F=24kN | | 125 | | | 1.38 | V |
| dv/dt | Critical rate of rise of off-state voltage | $V_{DM}$=0.67$V_{DRM}$ | | 125 | | | 1000 | V/μs |
| di/dt | Critical rate of rise of on-state current | $V_{DM}$= 67%$V_{DRM}$ to2000A, Gate pulse $t_r$ ≤0.5μs $I_{GM}$=1.5A | | 125 | | | 150 | A/μs |
| $Q_{rr}$ | Recovery charge | $I_{TM}$=2000A,tp=2000μs, di/dt=-20A/μs, $V_R$ =50V | | 125 | | 1500 | | 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 | | | | 20 | | 300 | 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 | At $180^0$ sine double side cooled Clamping force 24kN | | | | | 0.020 | °C /W |
| $R_{th(c-h)}$ | Thermal resistance case to heatsink | | | | | | 0.005 | |
| $F_m$ | Mounting force | | | | 19 | | 26 | kN |
| $T_{stg}$ | Stored temperature | | | | -40 | | 140 | °C |
| $W_t$ | Weight | | | | | 440 | | g |
| Outline | KT50cT | | | | | | | |

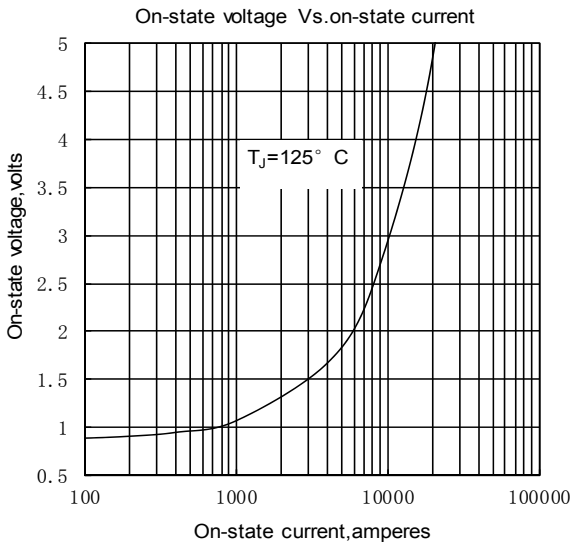



Fig.1

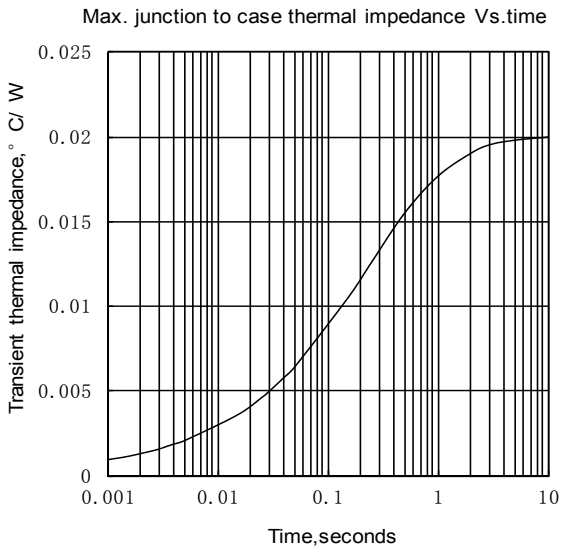



Fig.2

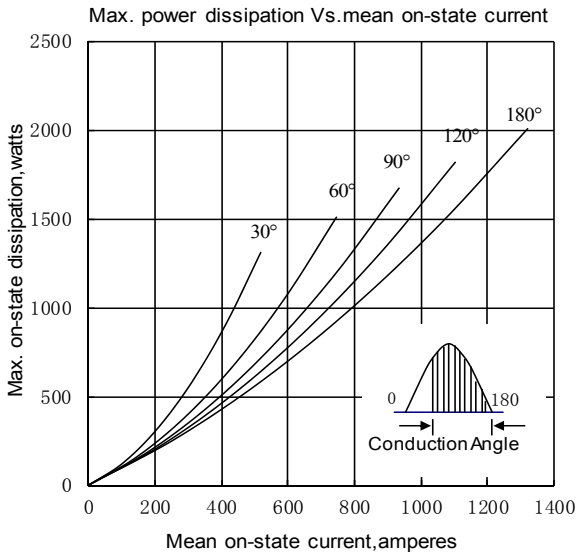



Fig.3

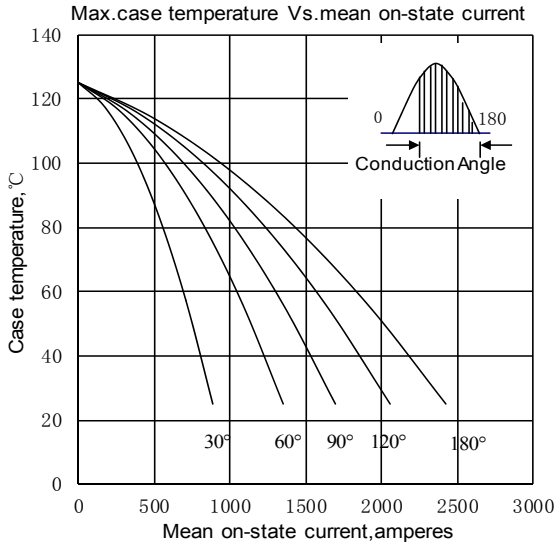



Fig.4

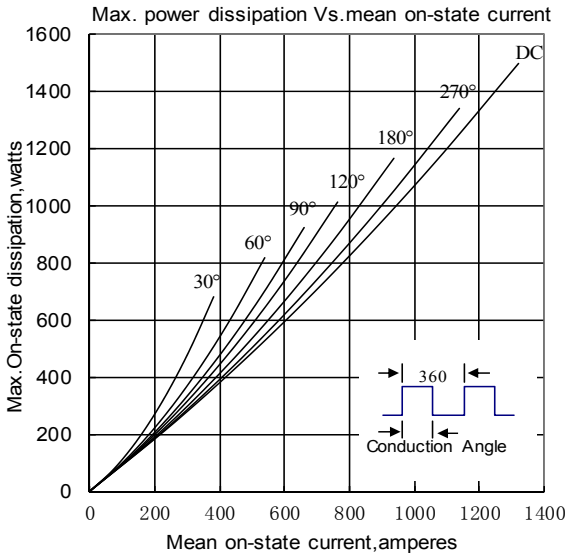



Fig.5

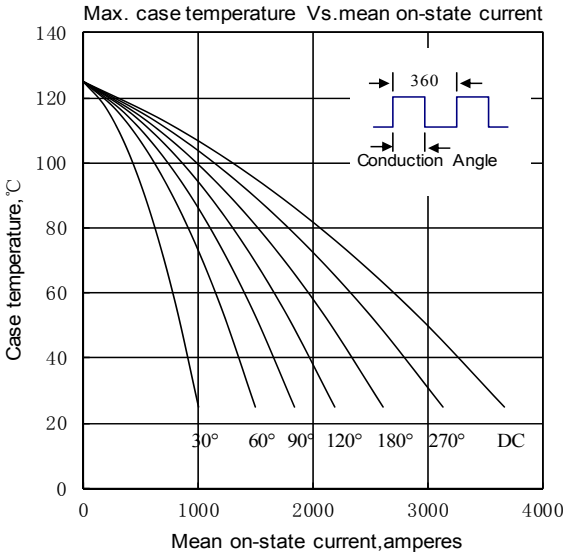



Fig.6

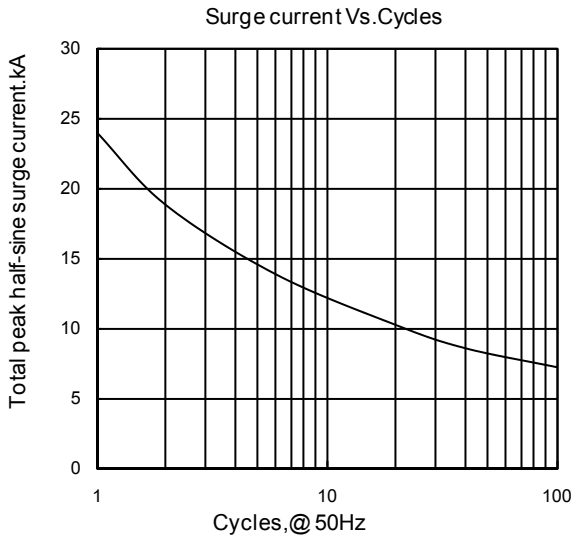



Fig7

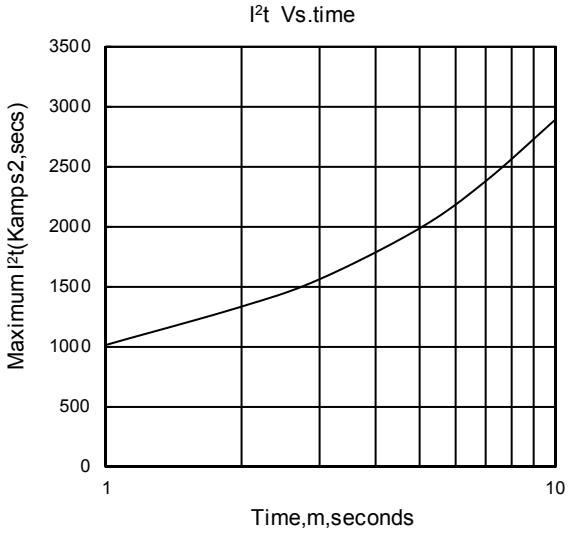



Fig8

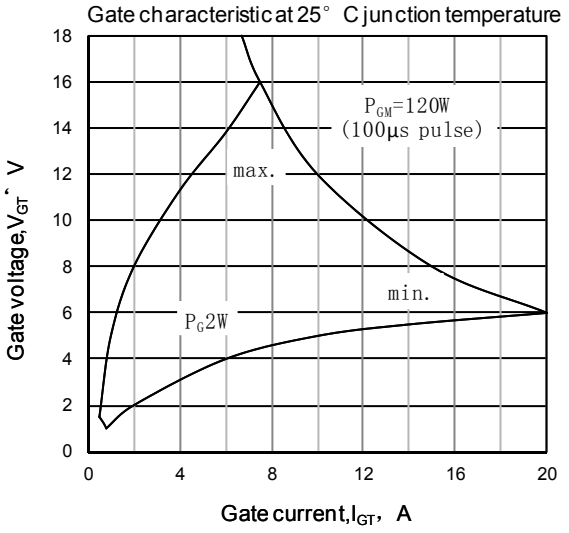



Fig9

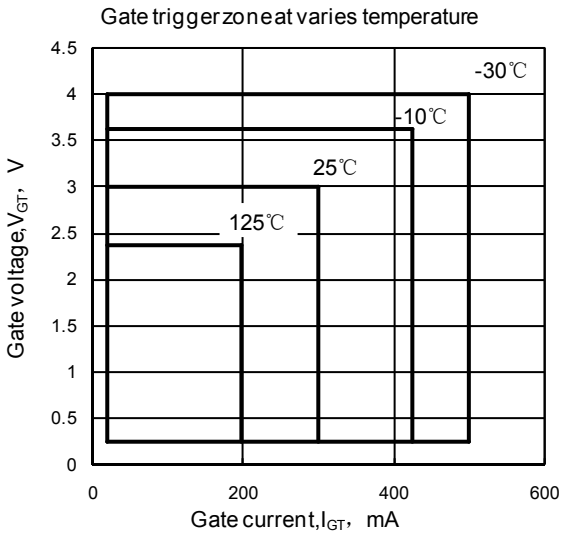



Fig10

**Outline:**