# KG200A600~900V
# T38KAB

## 国标型-高频晶闸管(平板式)

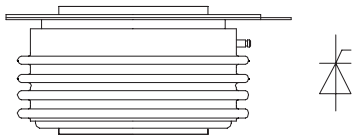
Chinese Type High Frequency Thyristors (Capsule Version)

Liujing rectifier co., Ltd.

## FEATURES

1). Interdigitated amplifying gates
2). Fast turn-on and high di/dt
3). Low switching losses
4). Short turn-off time
5). Hermetic metal cases with ceramic insulators

| | |
|---|---|
| $I_{T(AV)}$ | 746A |
| $V_{DRM}/V_{RRM}$ | 600~900V |
| $t_q$ | 10~15 μs |
| $I_{TSM}$ | 8.0KA |



## TYPICAL APPLICATIONS

1). Inductive heating
2). Electronic welders
3). Self-commutated inverters
4). AC motor speed control
5). General power switching applications

## THE MAIN PARAMETERS

| SYMBOL | CHARACTERISTIC | TEST CONDITIONS | $T_j$(℃) | VALUE | | | UNIT |
|---|---|---|---|---|---|---|---|
| | | | | Min | Type | Max | |
| $I_{T(AV)}$ | Mean forward current | 180° half sine wave 50Hz<br>Double side cooled, $T_{hs}$=55℃ | 125 | | | 746 | A |
| $V_{DRM}$<br>$V_{RRM}$ | Repetitive peak off-state voltage<br>Repetitive peak reverse voltage | $V_{DRM}$&$V_{RRM}$,tp=10ms<br>$V_{DSM}$&$V_{RSM}$= $V_{DRM}$&$V_{RRM}$+100V | 125 | 600 | | 900 | V |
| $I_{DRM}$<br>$I_{RRM}$ | Repetitive peak off-state current<br>Repetitive peak reverse current | $V_D$= $V_{DRM}$<br>$V_R$= $V_{RRM}$ | 125 | | | 40 | mA |
| $I_{TSM}$ | Surge on-state current | 10ms half sine wave<br>$V_R$=0.6$V_{RRM}$ | 125 | | | 8.0 | KA |
| $I^2t$ | $I^2T$ for fusing coordination | | | | | 320 | $A^2s*10^3$ |
| $V_{TO}$ | Threshold voltage | | 125 | | | 1.80 | V |
| $r_T$ | On-state slop resistance | | | | | 0.48 | mΩ |
| $V_{TM}$ | Peak on-state voltage | $I_{TM}$=1400A, F=15KN | 125 | | | 2.47 | V |
| dv/dt | Critical rate of rise of off-state voltage | $V_{DM}$=0.67$V_{DRM}$ | 125 | | | 200 | V/μs |
| di/dt | Critical rate of rise of on-state current | $V_{DM}$= 67%$V_{DRM}$ to1500A,<br>Gate pulse tr ≤0.5 μs $I_{GM}$=1.5A | 125 | | | 1500 | A/μs |
| $I_{rm}$ | Reverse recovery current | $I_{TM}$=800A,tp=1000 μs,<br>di/dt=-20A/ μs,<br>VR=50V | 125 | | 30 | | A |
| $t_{rr}$ | Reverse recovery time | | | | 2.2 | | μs |
| $Q_{rr}$ | Recovery charge | | | | 33 | 50 | μC |
| tq | Circuit commutated turn-off time | $I_{TM}$=800A,tp=1000 μs, $V_R$ =50V<br>dv/dt=30V/ μs ,di/dt=-20A/ μs | 125 | 10 | | 15 | μs |
| $I_{GT}$ | Gate trigger current | $V_A$=12V, $I_A$=1A | 25 | 30 | | 250 | mA |
| $V_{GT}$ | Gate trigger voltage | | | 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 |
| $R_{th(j-h)}$ | Thermal resistance<br>Junction to heatsink | At 180° sine, double side cooled<br>Clamping force 15KN | | | | 0.035 | ℃ /W |
| $F_m$ | Mounting force | | | 10 | | 20 | KN |
| $T_{stg}$ | Stored temperature | | | -40 | | 140 | ℃ |
| $W_t$ | Weight | | | | 270 | | g |
| Size | Package box size | 95 × 95 × 50 | | | | | mm |

## PERFORMANCE CURVES FIGURE

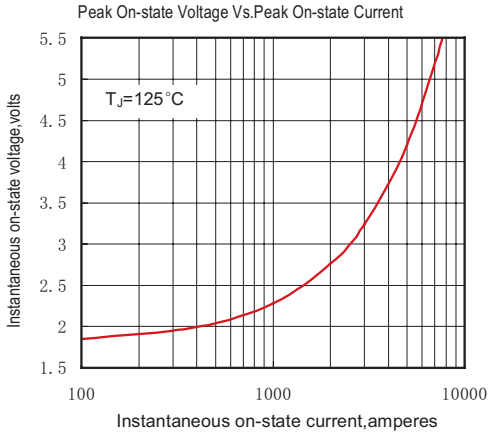



Fig.1

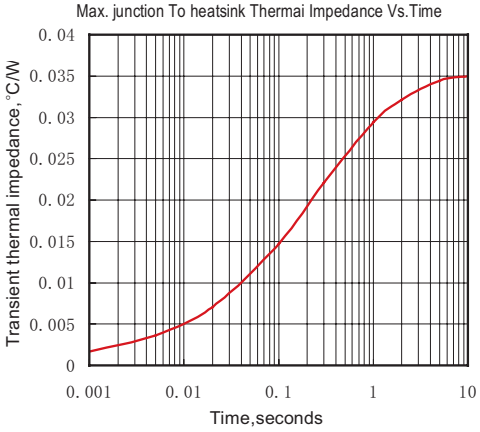



Fig.2

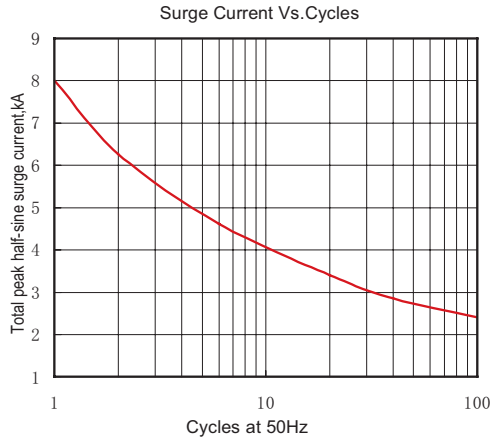



Fig.3

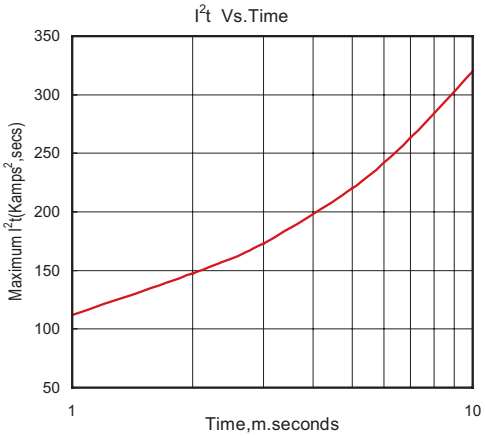



Fig.4

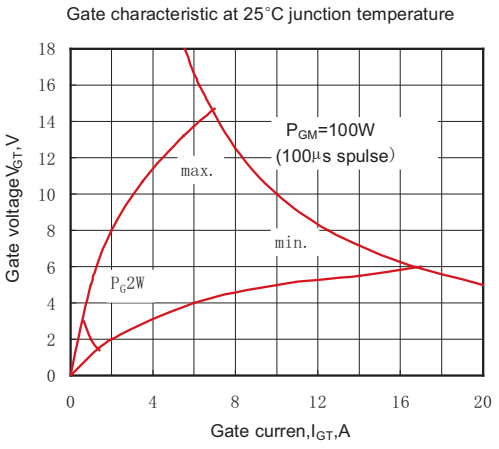



Fig.5

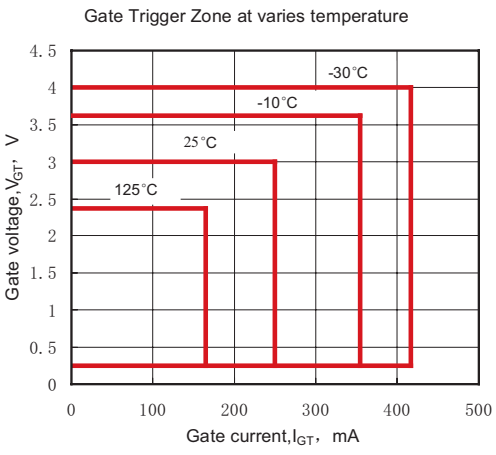
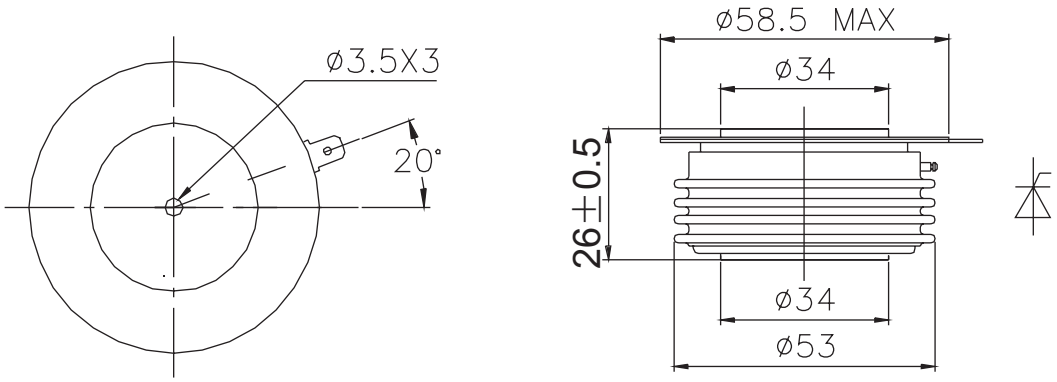



Fig.6

## OUTLINE




E-mail: rectifier@163.com thyristors@yahoo.cn

**YUEQING LIUJING RECTIFIER CO., LTD**
Sale Departmant: Liujing Building, Yueqing City, Zhejiang Province
Add: Wanao Industrial Zone, Yueqing city, Zhejiang Province
Tel: 0086-577-62519692 0089-577-62519693
Fax: 0086-577-62518692
International Export: 0086-577-62571902
Technical Support: 0086-15868768965
After Service: 400-6606-086
http://www.china-liujing.com
http://www.liujingdianqi.cn
http://www.cnrectifier.com
http://www.cnthyristor.com.cn
MSN: thristors@hotmail.com

**打造最具竞争力的电力半导体产品**

To be the most competitive Power Semiconductor Devices manufactory.