

KP1000A-E

PHASE CONTROL THYRISTOR



Features

- Center amplifying gate
- Metal case with ceramic insulator
- Low on-state and switching losses

Application

- Large power converter
- DC and AC switches
- Active & Passive inverter

| | |
|-------------------|-----------------------|
| $I_{T(AV)}$ | 1000 A |
| V_{DRM}/V_{RRM} | 1100~1800 V |
| I_{TSM} | 13KA |
| I^2T | 845 KA ² S |

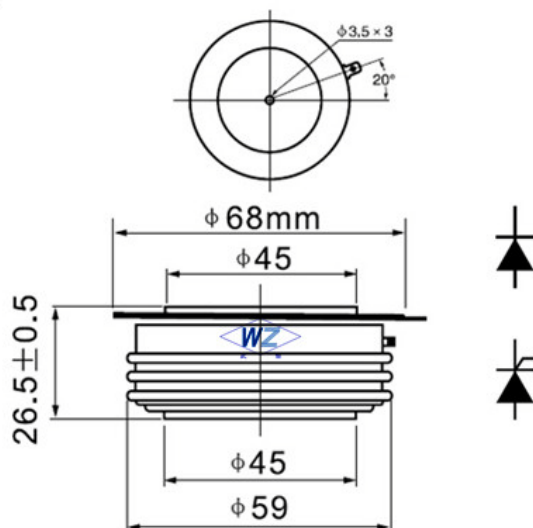
| Symb. | | parameter | Test Conditions | $T_J(^{\circ}C)$ | Value | Unit |
|--------------------|------------------------|----------------------------------------------------------------------|------------------------------------------------------------------------------------|------------------|----------------------|-------------------|
| Current Ratings | $I_{T(AV)}$ | Average on-state current | 180° half sine wave 50Hz Double side cooled $T_{hs}=75^{\circ}C$ | 125 | Max.1000 | A |
| | $I_{T(AV)}$ | Average on-state current | 180° half sine wave 50Hz Double side cooled $T_{hs}=55^{\circ}C$ | 125 | Max.1271 | A |
| | I_{TSM} | Surge on-state current | 10ms half sine wave $V_R=0.6V_{RRM}$ | 125 | Max.13 | KA |
| | I^2t | I ² T for fusing coordination | | 125 | Max.845 | KA ² S |
| Characteristics | V_{DRM} V_{RRM} | Repetitive peak off-state voltage Repetitive peak reverse voltage | V_{DRM} & V_{RRM} $t_p=10ms$ V_{DSM} & $V_{RSM}=V_{DRM}$ & $V_{RRM}+100V$ | 125 | Min.1100 Max.1800 | V |
| | I_{DRM} I_{RRM} | Repetitive peak current | $V_{DM}=V_{DRM}$ $V_{RM}=V_{RRM}$ | 125 | Max.60 | mA |
| | V_{TO} | Threshold voltage | | 125 | Max.0.93 | V |
| | V_{TM} | Threshold voltage | $I_{TM}=3000A, F=21KN$ | 25 | Max.2.20 | V |
| | r_T | On-state slop resistance | | 125 | Max.0.25 | mΩ |
| | I_H | Holding current | $V_A=12V, I_A=1A$ | 25 | Min.20 Max.250 | mA |
| Dynamic Parameters | dv/dt | Critical rate of rise of off-state voltage | $V_{DM}=67\%V_{DRM}$ | 125 | Max.300 | V/μs |
| | di/dt | Critical rate of rise of on-state current | $V_{DM}=67\%V_{DRM}$ to 600A, Gate pulse $t_r \leq 0.5\mu s$ $I_{GM}=1.5A$ | 125 | Max.150 | A/μs |
| | t_{rr} | Reverse recovery time | $I_{TM}=500A, t_p=1000\mu s, V_R=50V$ | 125 | 17.2 | μs |
| | Q_{rr} | Reverse Recovery charge | di/dt=-20A/μs | 125 | 1581 | μc |
| Gate Parameters | I_{GT} | Gate trigger current | $V_A=12V, I_A=1A$ | 25 | Min.40 Max.300 | mA |
| | V_{GT} | Gate trigger voltage | | 25 | Min.0.8 Max.3.0 | V |
| | V_{GD} | Non-trigger gate voltage | $V_{DM}=67\%V_{DRM}$ | 125 | Min.0.3 | V |

Thermal & Mechanical Data

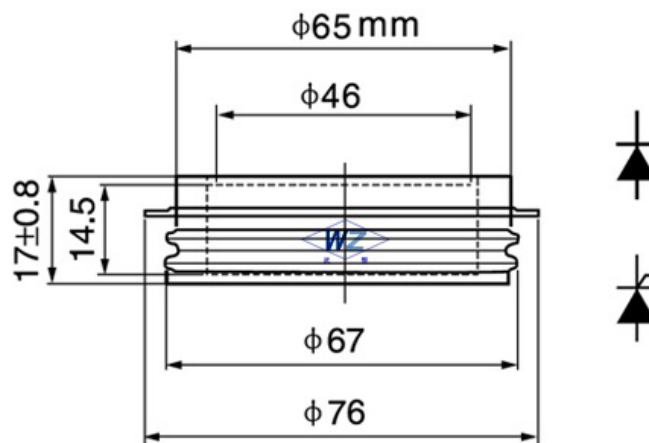
| Symb. | parameter | Test Conditions | $T_{J(°C)}$ | Value | Unit |
|---------------|------------------------------------------|-----------------------------------------------------------|-------------|--------------------|------|
| $R_{th(j-h)}$ | Thermal resistance Junction to heat sink | At 180° sine wave, double side cooled Clamping force 21KN | | Max.0.030 | °C/W |
| F_m | Mounting force | | | Min.18 Max.25 | KN |
| T_{stg} | Stored temperature | | | Min.-40 Max.140 | °C |
| W_t | Weight | | | 400 | g |

Dimensions:

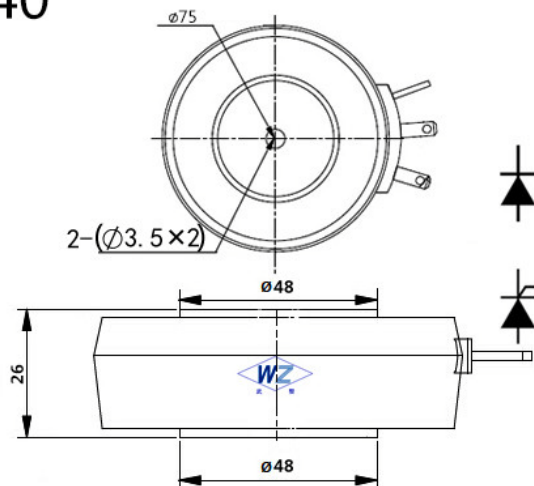
C19



C6



C40



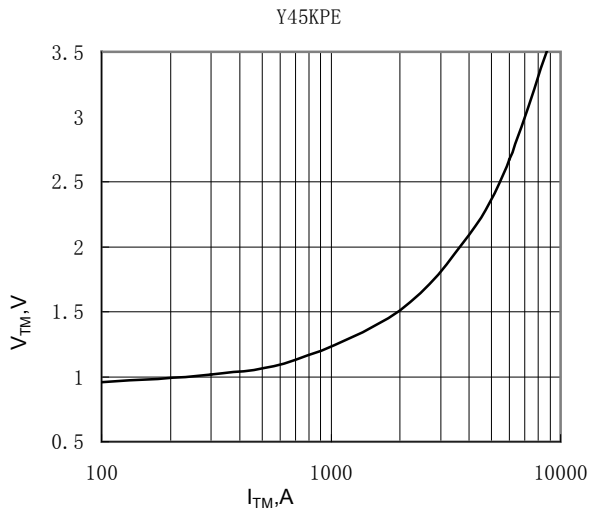


Fig.1

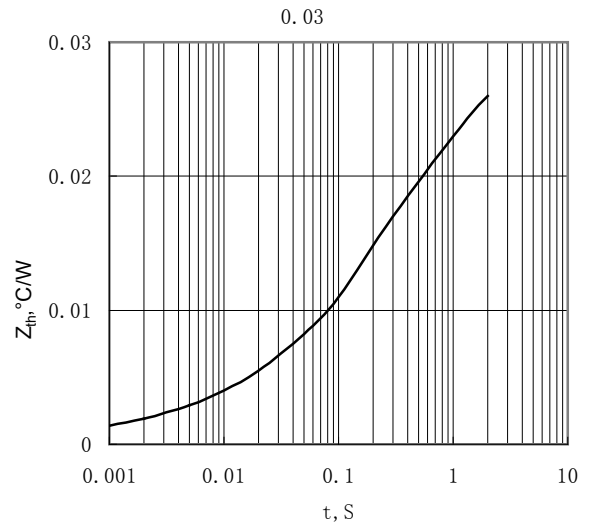


Fig.2

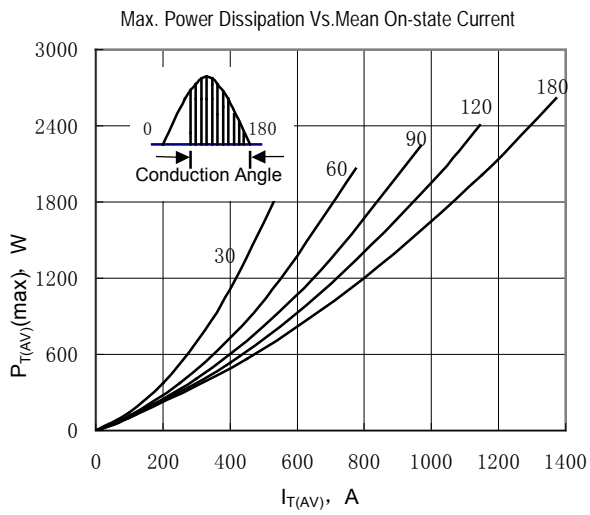


Fig.3

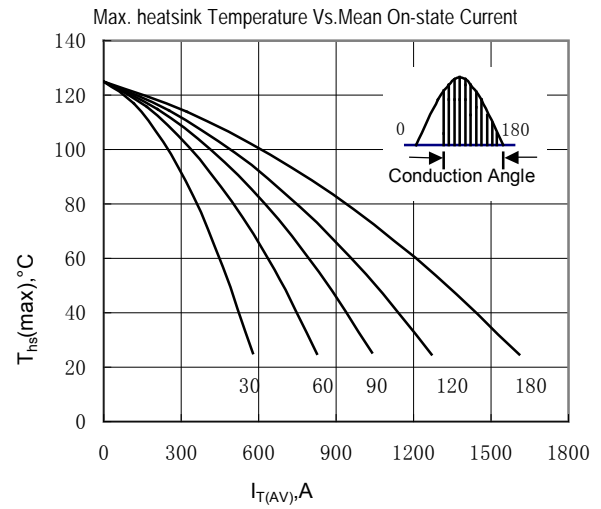


Fig.4

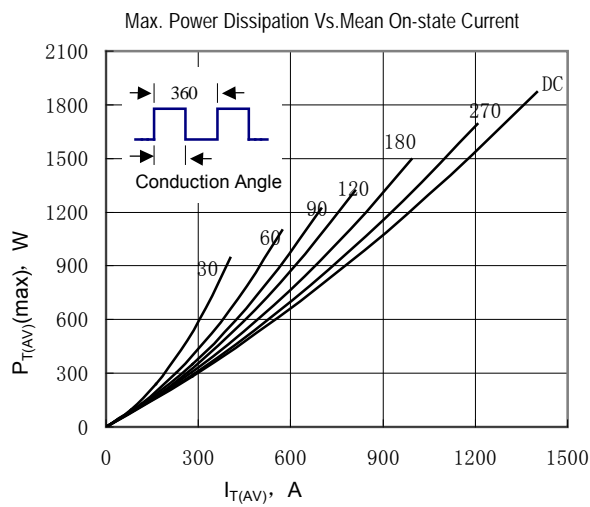


Fig.5

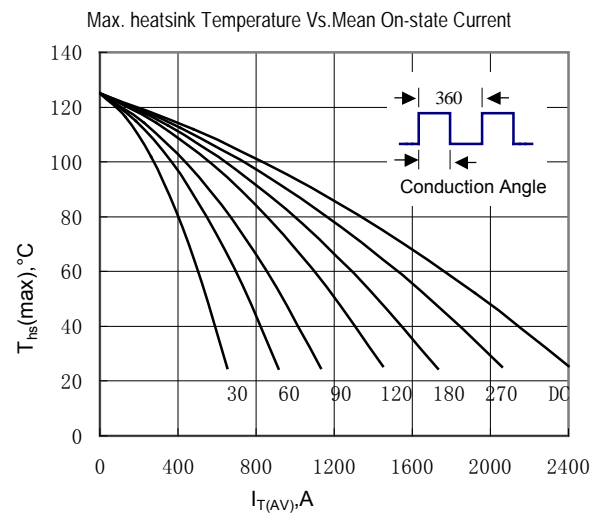


Fig.6

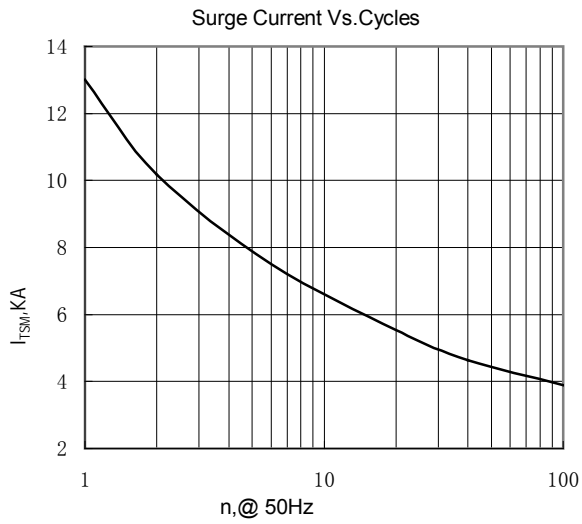


Fig.7

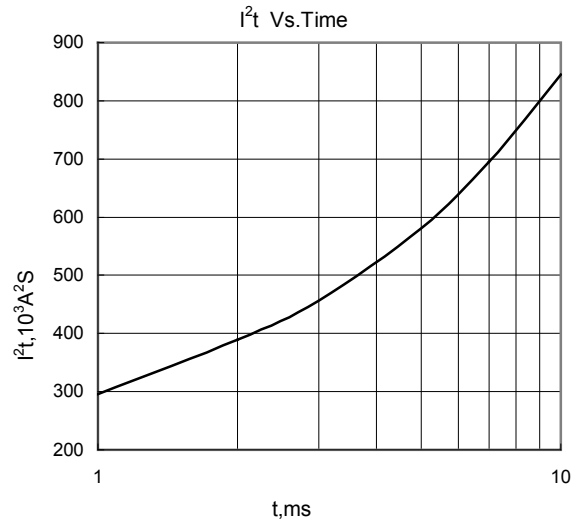


Fig.8

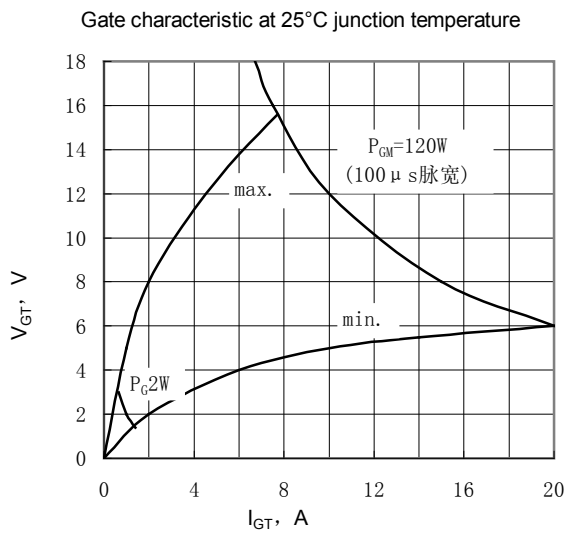


Fig.9

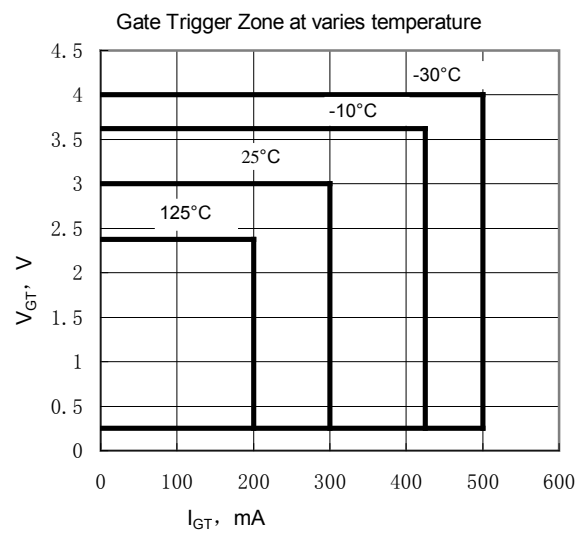


Fig.10

Wuhan Wuzheng Rectifier Co., Ltd

Add: NO. 73 Gaoxin Five Road, East Lake New Technology Development Zone, Wuhan City, Hubei province.

Tel : 86-27-87001995

Fax: 86-27-87180920

Email: info@techele.com

Web: www.techele.com/en

cntechele.en.alibaba.com