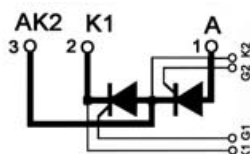


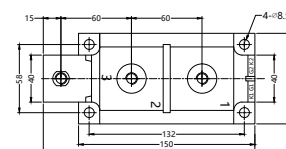
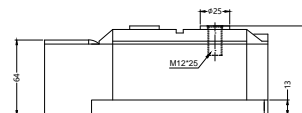
STT1000GK22PT

Thyristor-Thyristor Modules



| Type | V_{RSM} V_{DSM} V | V_{RRM} V_{DRM} V |
|---------------|-----------------------------|-----------------------------|
| STT1000GK08PT | 900 | 800 |
| STT1000GK12PT | 1300 | 1200 |
| STT1000GK14PT | 1500 | 1400 |
| STT1000GK16PT | 1700 | 1600 |
| STT1000GK18PT | 1900 | 1800 |
| STT1000GK20PT | 2100 | 2000 |
| STT1000GK22PT | 2300 | 2200 |
| STT1000GK24PT | 2500 | 2400 |
| STT1000GK26PT | 2700 | 2600 |
| STT1000GK28PT | 2900 | 2800 |
| STT1000GK30PT | 3100 | 3000 |

Tolerance: ± 0.5 mm
Dimensions in mm



| Symbol | Test Conditions | Maximum Ratings | Unit |
|------------------------------------|---|---------------------------------|-----------------------|
| I_{TAV} | $T_C=85^\circ\text{C}$; 180° half sine wave, 50Hz | 1000 | A |
| I_{TRMS} | $T_C=85^\circ\text{C}$; 180° Full cycle sine wave, 50Hz | 1570 | A |
| I_{TSM} | $T_{VJ}=T_{VJM}$ $T_C=25^\circ\text{C}$ 180° half sine wave, 50Hz single pulse; $V_R=0$; | 37.0 41.0 | KA |
| I^2t | $T_{VJ}=T_{VJM}$ $T_C=25^\circ\text{C}$ Gate pulse; 20V, 5W 1us rise time, 500us | 6600 6700 | KA^2s |
| V_{DRM} , V_{RRM} | $T_{VJ}=T_{VJM}$ 180° half sine wave, 50Hz ; Gate open | 800 ~ 1800 | V |
| V_{DSM} , V_{RSM} | $T_{VJ}=T_{VJM}$ 180° half sine wave, 50Hz ; single pulse, Gate open | 900~1900 | |
| $(di/dt)_{cr}$ | $T_{VJ}=T_{VJM}$ repetitive, $I_T=1000\text{A}$ $f=50\text{Hz}$, $t_p=200\mu\text{s}$ $V_D=2/3V_{DRM}$ $I_G=1\text{A}$ $di/dt=1\text{A}/\mu\text{s}$ | 100 | A/ μs |
| | non repetitive, $I_T=I_{TAVM}$ | 200 | |
| $(dv/dt)_{cr}$ | $T_{VJ}=T_{VJM}$; $V_{DR}=2/3V_{DRM}$ $R_{GK}=\infty$; method 1 (linear voltage rise) | 1000 | V/ μs |
| P_{GM} | $T_{VJ}=T_{VJM}$ | 100 | W |
| P_{GAV} | $T_{VJ}=T_{VJM}$ | 10 | W |
| V_{RGM} | $T_{VJ}=T_{VJM}$ | 8 | V |
| T_{VJ} T_{VJM} T_{stg} | | -40...+140 140 -40...+125 | $^\circ\text{C}$ |
| V_{ISOL} | 50/60Hz, RMS $t=1\text{min}$ $I_{ISOL}\leq 1\text{mA}$ $t=1\text{s}$ | 3000 3600 | V~ |
| M_d | Mounting torque (M6) Terminal connection torque (M8) | 4.5-7/40-60 11-13/97-115 | Nm/lb.in. |
| Weight | Typ. | 3300 | g |

STT1000GK22PT

Thyristor-Thyristor Modules

| Symbol | Test Conditions | Characteristic Values | Unit |
|-------------------------|---|-----------------------|------------------|
| I_{RRM} | $T_{VJ}=T_{VJM}; V_R=V_{RRM}$ | 100 | mA |
| V_T | $I_T=3000A; T_{VJ}=25^{\circ}C$ | 1.85 | V |
| V_{To} | For power-loss calculations only ($T_{VJ}=T_{VJM}$) | 0.95 | V |
| r_T | | 0.30 | mΩ |
| V_{GT} | $V_D=12V; T_{VJ}=25^{\circ}C$ $T_{VJ}=-40^{\circ}C$ | 2.5 3.5 | V |
| I_{GT} | $V_D=12V; T_{VJ}=25^{\circ}C$ $T_{VJ}=-40^{\circ}C$ | 300 400 | mA |
| V_{GD} | $T_{VJ}=T_{VJM}; V_D=2/3V_{DRM}$ | 0.5 | V |
| I_{GD} | $T_{VJ}=T_{VJM}; V_D=2/3V_{DRM}$ | 10 | mA |
| I_L | $T_{VJ}=25^{\circ}C; t_p=30\mu s; V_D=12V$ $I_G=1A; di_G/dt=1A/\mu s$ | 1000 | mA |
| I_H | $T_{VJ}=25^{\circ}C; V_D=6V; R_{GK}=\infty$ | 500 | mA |
| t_{gd} | $T_{VJ}=25^{\circ}C; V_D=1/2V_{DRM}$ $I_G=1A; di_G/dt=1A/\mu s$ | 10 | us |
| t_q | $T_{VJ}=T_{VJM}; I_T=500A; t_p=200\mu s; -di/dt=10A/\mu s$ $V_R=100V; dv/dt=50V/\mu s; V_D=2/3V_{DRM}$ | 200 | us |
| R_{thJC} | DC current | 0.0300 | K/W |
| R_{thJK} | DC current | 0.008 | K/W |
| ds | Creeping distance on surface | 12.7 | mm |
| dA | Creepage distance in air | 9.6 | mm |
| a | Maximum allowable acceleration | 59.81 | m/s ² |

FEATURES

- * International standard package
- * Copper base plate
- * Pressure Contact Technology
- * Isolation voltage 3600 V~
- * RoHs compliant

APPLICATIONS

- * Motor control, softstarter
- * Power converter
- * Heat and temperature control for industrial furnaces and chemical processes
- * Lighting control
- * Solid state switches

ADVANTAGES

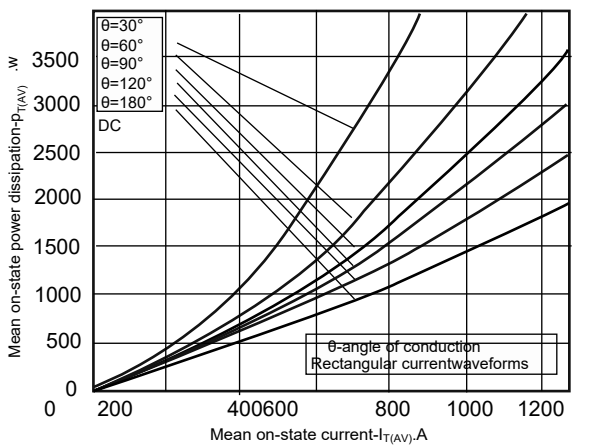
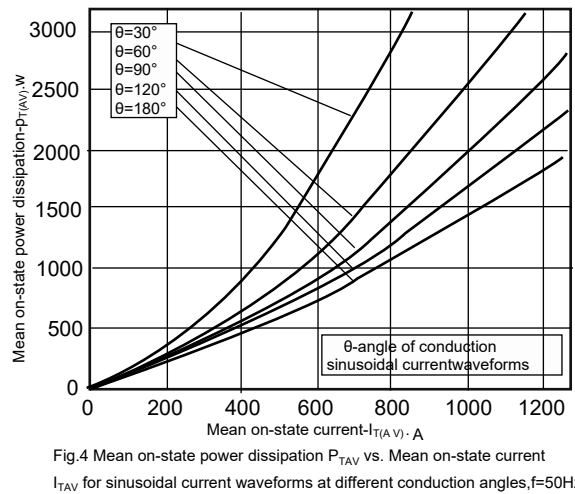
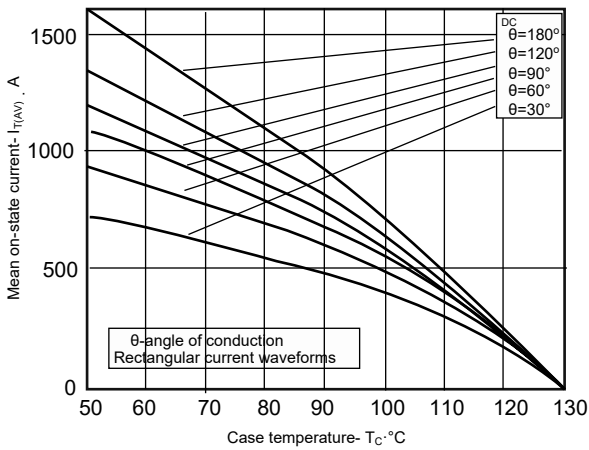
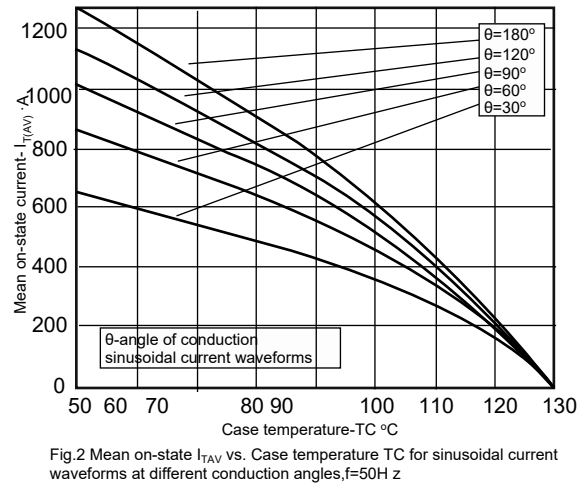
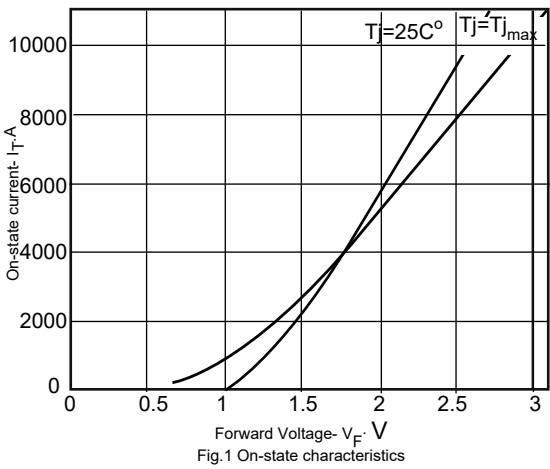
- * Simple mounting
- * Improved temperature and power cycling
- * Reduced protection circuits



Sirectifier®

STT1000GK16PT

Thyristor-Thyristor Modules



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Thyristor-Thyristor Modules

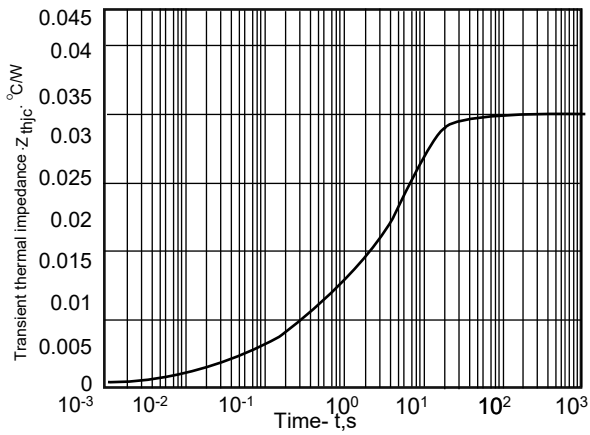


Fig.6 Transient thermal impedance junction to case Z_{thjc} per arm for DC

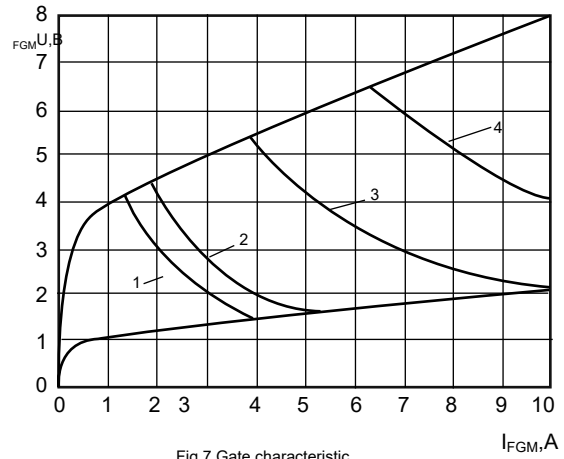


Fig.7 Gate characteristic