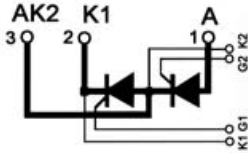


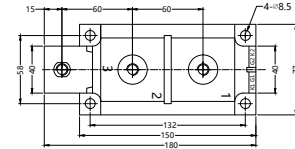
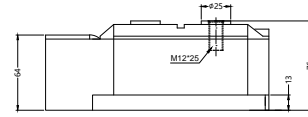
# STT1000GK22PT

## 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:  $\pm 0.5$ mm  
Dimensions in mm



Symbol	Test Conditions	Maximum Ratings	Unit
$I_{TAV}$	$T_C=85^\circ\text{C}$ ; $180^\circ$ half sine wave, 50Hz	1000	A
$I_{TRMS}$	$T_C=85^\circ\text{C}$ ; $180^\circ$ Full cycle sine wave, 50Hz	1570	A
$I_{TSM}$	$T_{VJ}=T_{VJM}$ $T_C=25^\circ\text{C}$ $180^\circ$ 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	$\text{KA}^2\text{s}$
$V_{DRM}$ , $V_{RRM}$	$T_{VJ}=T_{VJM}$ $180^\circ$ half sine wave, 50Hz ; Gate open	800 ~ 1800	V
$V_{DSM}$ , $V_{RSM}$	$T_{VJ}=T_{VJM}$ $180^\circ$ half sine wave, 50Hz ; single pulse, Gate open	900~1900	
$(di/dt)_{cr}$	$T_{VJ}=T_{VJM}$ $f=50\text{Hz}$ , $t_p=200\mu\text{s}$ $V_D=2/3V_{DRM}$ $I_G=1\text{A}$ $di/dt=1\text{A}/\mu\text{s}$ repetitive, $I_T=1000\text{A}$	100	A/ $\mu\text{s}$
	non repetitive, $I_T=I_{TAVM}$	200	
$(dv/dt)_{cr}$	$T_{VJ}=T_{VJM}$ ; $R_{GK}=\infty$ ; method 1 (linear voltage rise) $V_{DR}=2/3V_{DRM}$	1000	V/ $\mu\text{s}$
$P_{GM}$	$T_{VJ}=T_{VJM}$	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 $I_{ISOL} \leq 1\text{mA}$ $t=1\text{min}$ $t=1\text{s}$	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

**Sirectifier**<sup>®</sup>

# STT1000GK22PT

## Thyristor-Thyristor Modules

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

### 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

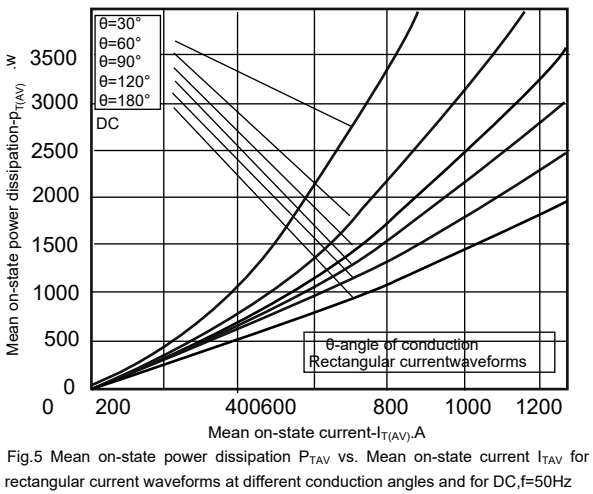
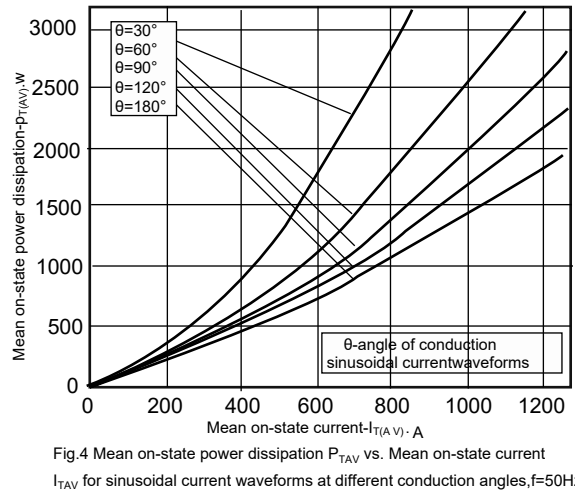
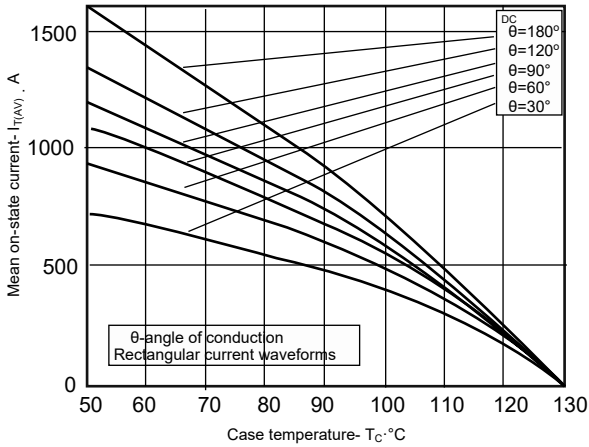
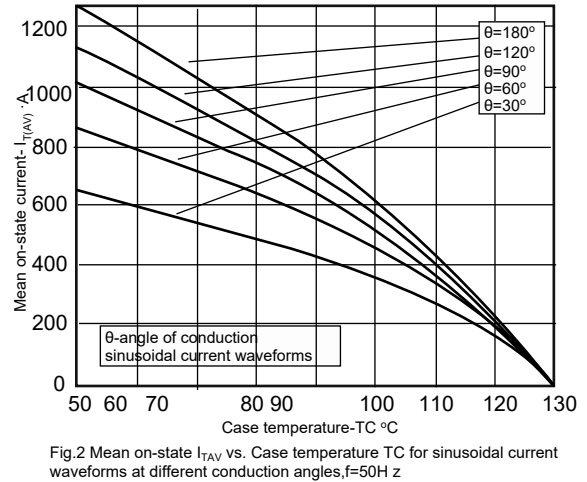
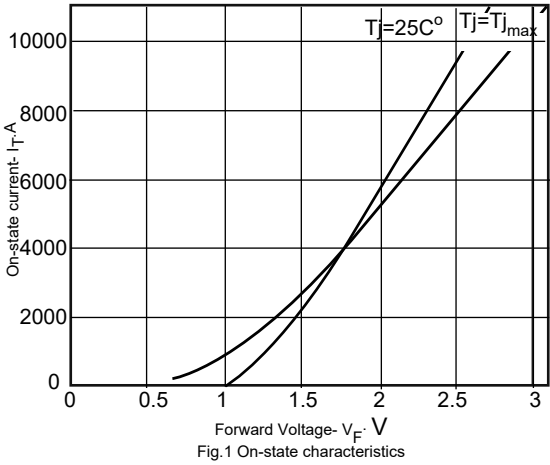
- \* Simple mounting
- \* Improved temperature and power cycling
- \* Reduced protection circuits



**Sirectifier®**

# STT1000GK16PT

## Thyristor-Thyristor Modules



# STT1000GK16PT

## Thyristor-Thyristor Modules

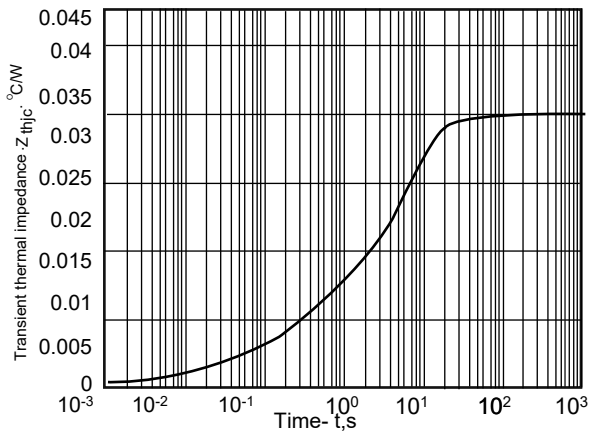


Fig.6 Transient thermal impedance junction to case  $Z_{thjc}$  per arm for DC

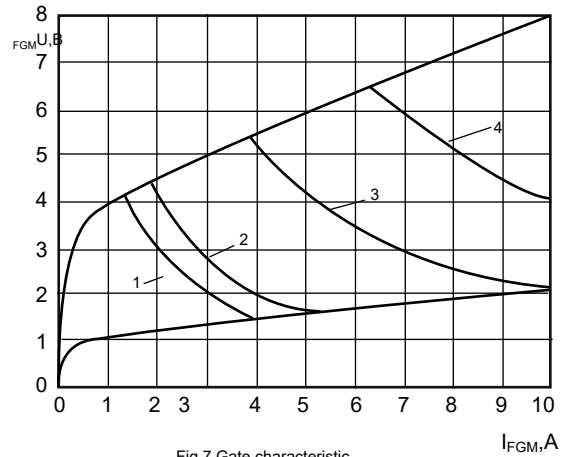


Fig.7 Gate characteristic