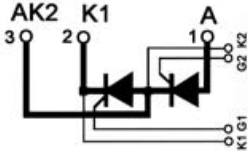


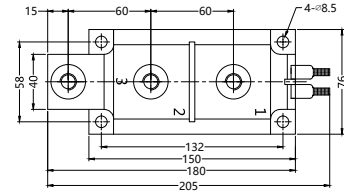
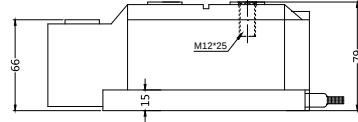
STT1000GKxxPTWC

Thyristor-Thyristor Modules



Type	V_{RSM} V_{DSM} V	V_{RRM} V_{DRM} V
STT1000GK08PTWC	900	800
STT1000GK12PTWC	1300	1200
STT1000GK14PTWC	1500	1400
STT1000GK16PTWC	1700	1600
STT1000GK18PTWC	1900	1800
STT1000GK20PTWC	2100	2000
STT1000GK22PTWC	2300	2200
STT1000GK24PTWC	2500	2400

Tolerance: +/- 0.5mm
Dimensions in mm (1mm=0.0394")



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 ² s
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	
$(di/dt)_{cr}$	$T_{VJ}=T_{VJM}$ $f=50\text{Hz}$, $t_p=200\mu\text{s}$ $V_D=2/3V_{DRM}$ $I_G=1\text{A}$ $di_G/dt=1\text{A}/\mu\text{s}$ repetitive, $I_T=1000\text{A}$		100	A/us
	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/us
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

STT1000GKxxPTWC

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	μs
t_q	$T_{VJ}=T_{VJM}; I_T=500A; t_p=200\mu s; -di/dt=10A/\mu s$ $V_R=100V; dv/dt=50V/\mu s; V_D=2/3V_{DRM}$ typ.	200	μs
R_{thJC}	DC current	0.0300	K/W
R_{thJK}	DC current	0.008	K/W
ds	Creeping distance on surface	12.7	mm
d_A	Creepage distance in air	9.6	mm
a	Maximum allowable acceleration	59.81	m/s ²

FEATURES

- * International standard package
- * Pressure contact technology
- * Water cooling construction
- * 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



STT1000GKxxPTWC

Thyristor-Thyristor Modules

