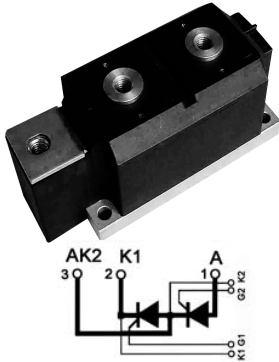


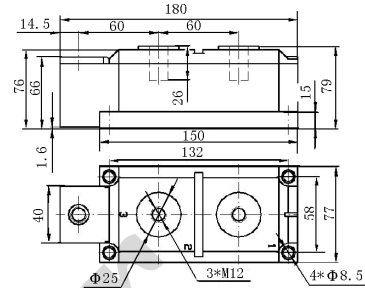
STT800GKXXPT

Thyristor-Thyristor Modules



Type	V _{RSM} V _{DSM} V	V _{RRM} V _{DRM} V
STT800GK08PT	900	800
STT800GK12PT	1300	1200
STT800GK14PT	1500	1400
STT800GK16PT	1700	1600
STT800GK18PT	1900	1800

Colerance:±0.5mm
Dimensions in mm (1mm=0.0394")



Symbol	Test Conditions	Maximum Ratings	Unit
I _{TAV}	T _C =85°C; 180° half sine wave,50HZ	800	A
I _{TRMS}	T _C =85°C; 180° Full cycle sine wave,50HZ	1256	A
I _{TSM}	T _{VJ} =T _{VJM} T _C =25°C	180° half sine wave,50HZ single pulse; V _R =0;	A
I ² t	T _{VJ} =T _{VJM} T _C =25°C	Gate pulse;20V,5W 1us rise time,500us	
V _{DRM} , V _{RRM}	T _{VJ} =T _{VJM} 180° half sine wave,50HZ ;Gate open	1000/1800	A ² s
V _{DSM} , V _{RSM}	T _{VJ} =T _{VJM} 180° half sine wave,50HZ ;single pulse, Gate open	1100/1900	
(di/dt) _{cr}	T _{VJ} =T _{VJM} f=50HZ, t _p =200us V _D =2/3V _{DRM} I _G =1A di _G /dt=1A/us	repetitive, I _T =960A	100
		non repetitive, I _T =I _{TAVM}	200
(dv/dt) _{cr}	T _{VJ} =T _{VJM} ; R _{GK} =∞; method 1 (linear voltage rise)	V _{DR} =2/3V _{DRM}	1000
P _{GM}	T _{VJ} =T _{VJM}		40
P _{GAV}	T _{VJ} =T _{VJM}		6
V _{RGM}	T _{VJ} =T _{VJM}		5
T _{VJ}			-40...+140
T _{VJM}			140
T _{stg}			-40...+125
V _{ISOL}	50/60Hz, RMS I _{ISOL} ≤1mA	t=1min	3000
		t=1s	3600
M _d	Mounting torque (M6)		4.5-7/40-60
	Terminal connection torque (M8)		11-13/97-115
Weight	Typ.		3249
			g

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STT800GKXXPT

Thyristor-Thyristor Modules

Symbol	Test Conditions	Characteristic Values	Unit
I_{RRM}	$T_{VJ}=T_{VJM}; V_R=V_{RRM}$	70	mA
V_T	$I_T=1200A; T_{VJ}=25^{\circ}C$	1.55	V
V_{TO}	For power-loss calculations only ($T_{VJ}=T_{VJM}$)	0.9	V
r_T		0.21	$m\Omega$
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	$T_{VJ}=T_{VJM}; I_T=500A; t_p=200\mu s; -di/dt=10A/\mu s$ $V_R=100V; dv/dt=50V/\mu s; V_D=2/3V_{DRM}$	200	μs
R_{thJC}	DC current	0.0405	K/W
R_{thJK}	DC current	0.01	K/W
d_s	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
- * Copper base plate
- * Isolation voltage 3600 V~
- * UL file NO.310749
- * 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

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Thyristor-Thyristor Modules

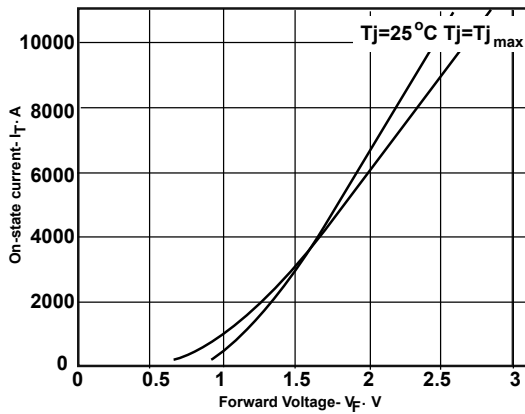


Fig 1 On-state characteristics

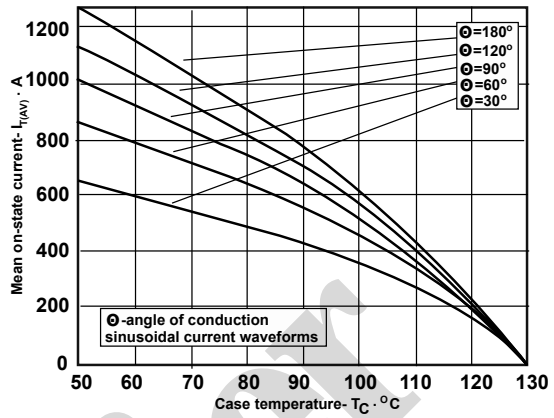


Fig 2 Mean on-state I_{TAV} vs. Case temperature T_C for sinusoidal current waveforms at different conduction angles, $f=50Hz$

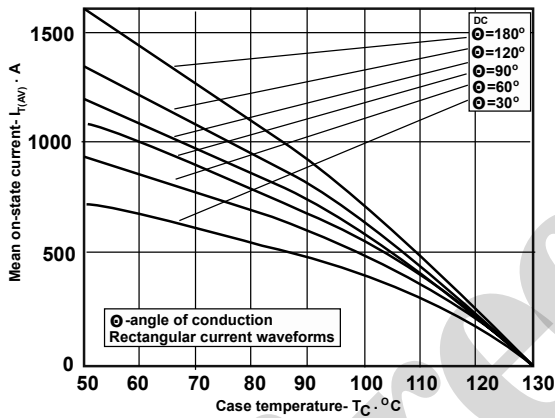


Fig 3 Mean on-state I_{TAV} vs. Case temperature T_C for rectangular current waveforms at different conduction angles and for DC, $f=50Hz$

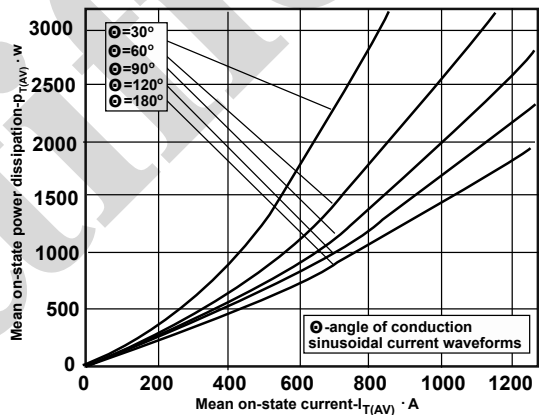


Fig 4 Mean on-state power dissipation P_{TAV} vs. Mean on-state current I_{TAV} for sinusoidal current waveforms at different conduction angles, $f=50Hz$

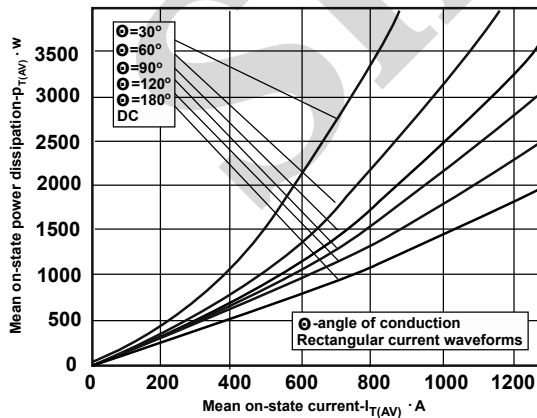


Fig 5 Mean on-state power dissipation P_{TAV} vs. Mean on-state current I_{TAV} for rectangular current waveforms at different conduction angles and for DC, $f=50Hz$



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Thyristor-Thyristor Modules

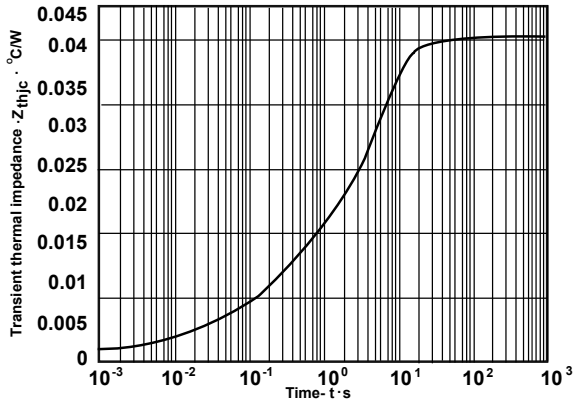


Fig 6 Transient thermal impedance junction to case Z_{thjc} per arm for DC

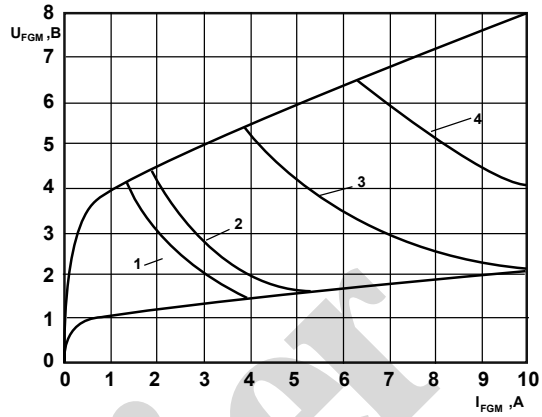


Fig 7 Gate characteristic