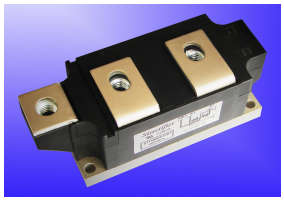
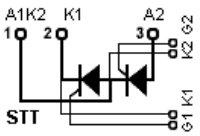
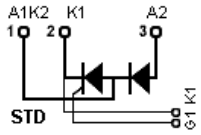
STT570GKxxBT / STD570GKXXBT

Thyristor-Thyristor Modules / Thyristor-Diode Modules

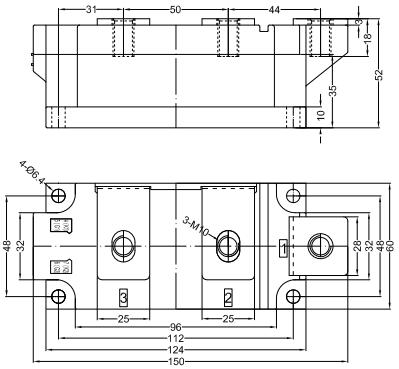


Type	VRSM VDSM	VRRM VDRM
	V	V
STT(D)570GK08BT	900	800
STT(D)570GK12BT	1300	1200
STT(D)570GK14BT	1500	1400
STT(D)570GK16BT	1700	1600
STT(D)570GK18BT	1900	1800





Dimensions in mm (1mm=0.0394")



Symbol	Test Conditions		Maximum Ratings	Unit
I_{TRMS}, I_{FRMS} I_{TAVM}, I_{FAVM}	$T_{VJ}=T_{VJM}$ $T_C=85^oC$; 180° sine		895 570	A
I_{TSM}, I_{FSM}	$T_{VJ}=45^oC$ $V_R=0$	t=10ms (50Hz), sine t=8.3ms (60Hz), sine	17000 20500	A
	$T_{VJ}=T_{VJM}$ $V_R=0$	t=10ms(50Hz), sine t=8.3ms(60Hz), sine	14200 17000	
$\int^2dt$	$T_{VJ}=45^oC$ $V_R=0$	t=10ms (50Hz), sine t=8.3ms (60Hz), sine	1450000 990000	A^2s
	$T_{VJ}=T_{VJM}$ $V_R=0$	t=10ms(50Hz), sine t=8.3ms(60Hz), sine	1210000 825000	
$(di/dt)_{cr}$	$T_{VJ}=T_{VJM}$ f=50Hz, t_p=200us $V_D=2/3V_{DRM}$ I_G=1A di_G/dt=1A/us	repetitive non repetitive	200 500	A/us
$(dv/dt)_{cr}$	$T_{VJ}=T_{VJM}$; $R_{GK}=\infty$; method 1 (linear voltage rise)	$V_{DR}=2/3V_{DRM}$	1000	V/us
P_{GM}	$T_{VJ}=T_{VJM}$ $I_T=I_{TAVM}$	t_p=30us t_p=500us	120 60	W
P_{GAV}			20	W
V_{RGM}			10	V
T_{VJ} T_{VJM} T_{stg}			-40...+130 130 -40...+125	°C
V_{ISOL}	50/60Hz, RMS $I_{ISOL}\leq$1mA	t=1min t=1s	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	Typical		1300	g

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Thyristor-Thyristor Modules / Thyristor-Diode Modules

Symbol	Test Conditions	Characteristic Values	Unit
I_{RRM}	$T_{VJ}=T_{VJM}$; $V_R=V_{RRM}$	30	mA
V_{TM}	I_{TM}=1790A; T_{VJ}=25℃	1.65	V
V_{TO}	For power-loss calculations only ($T_{VJ}=T_{VJM}$)	0.8	V
r_T		0.38	mΩ
V_{GT}	V_D=6V; T_{VJ}=25°C T_{VJ}=-40°C	2 3	V
I_{GT}	V_D=6V; T_{VJ}=25°C T_{VJ}=-40°C	300 400	mA
V_{GD}	$T_{VJ}=T_{VJM}$; $V_D=2/3V_{DRM}$	0.25	V
I_{GD}	$T_{VJ}=T_{VJM}$; $V_D=2/3V_{DRM}$	10	mA
I_L	T_{VJ}=25°C; t_p=30us; V_D=6V I_G=1A; di_G/dt=1A/us	400	mA
I_H	T_{VJ}=25°C; V_D=6V; R_{GK}=∞	300	mA
t_{gd}	T_{VJ}=25°C; $V_D=1/2V_{DRM}$ I_G=1A; di_G/dt=1A/us	2	us
t_q	$T_{VJ}=T_{VJM}$; I_T=500A; t_p=200us; -di/dt=10A/us typ. V_R=100V; dv/dt=50V/us; $V_D=2/3V_{DRM}$	350	us
R_{thJC}	DC current	0.072	K/W
R_{thJK}	DC current	0.096	K/W
d_S	Creeping distance on surface	12.7	mm
d_A	Creepage distance in air	9.6	mm
a	Maximum allowable acceleration	50	m/s^2

FEATURES

* International standard package
* Copper base plate
* Pressure Contact Technology
* BusBar Terminal
* 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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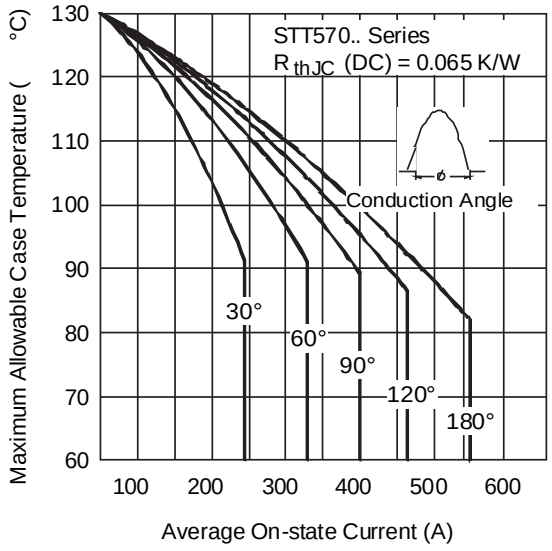


Fig. 1 - Current Ratings Characteristics

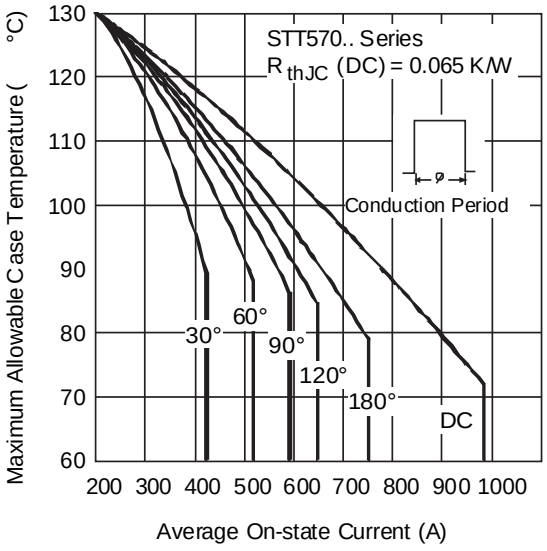


Fig. 2 - Current Ratings Characteristics

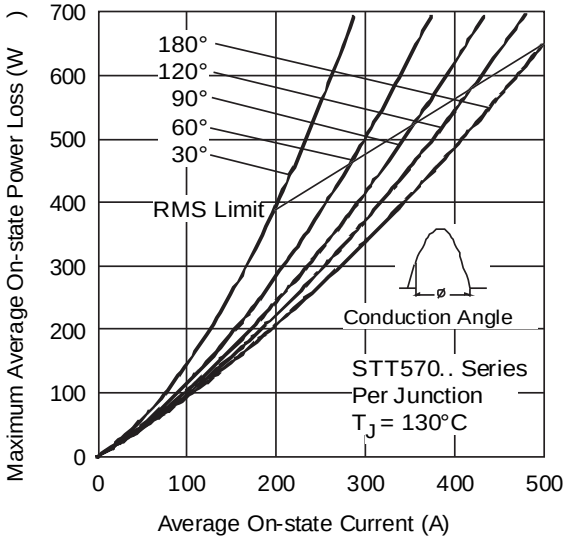


Fig. 3 - On-state Power Loss Characteristics

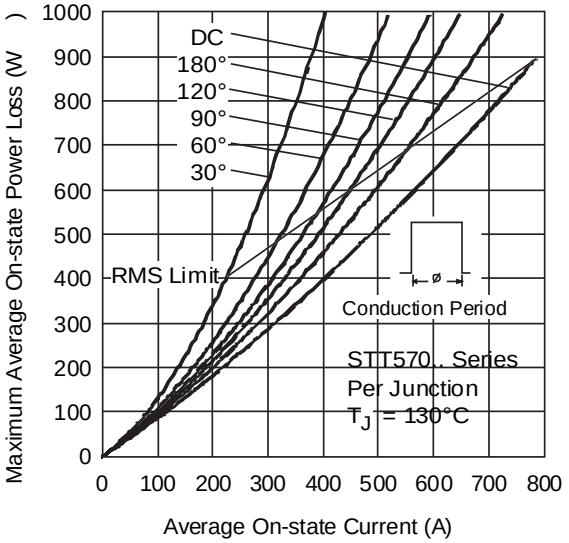


Fig. 4 - On-state Power Loss Characteristics

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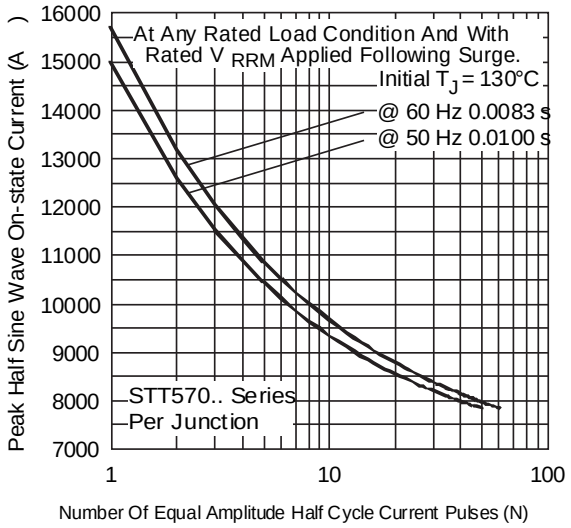


Fig. 5 - Maximum Non-Repetitive Surge Current

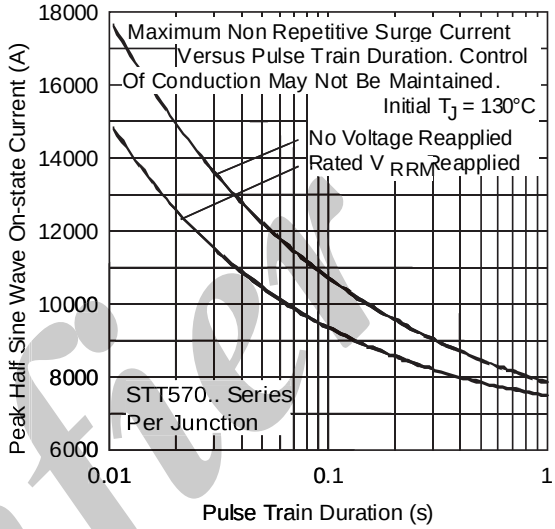


Fig. 6 - Maximum Non-Repetitive Surge Current

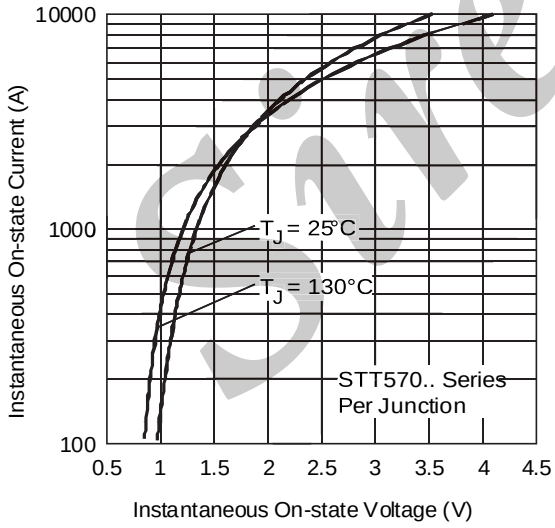


Fig. 7 - On-state Voltage Drop Characteristics

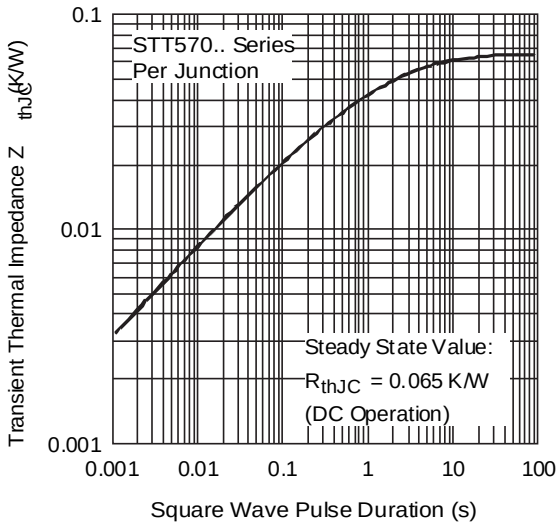


Fig. 8 - Thermal Impedance Z_{thJC} Characteristics

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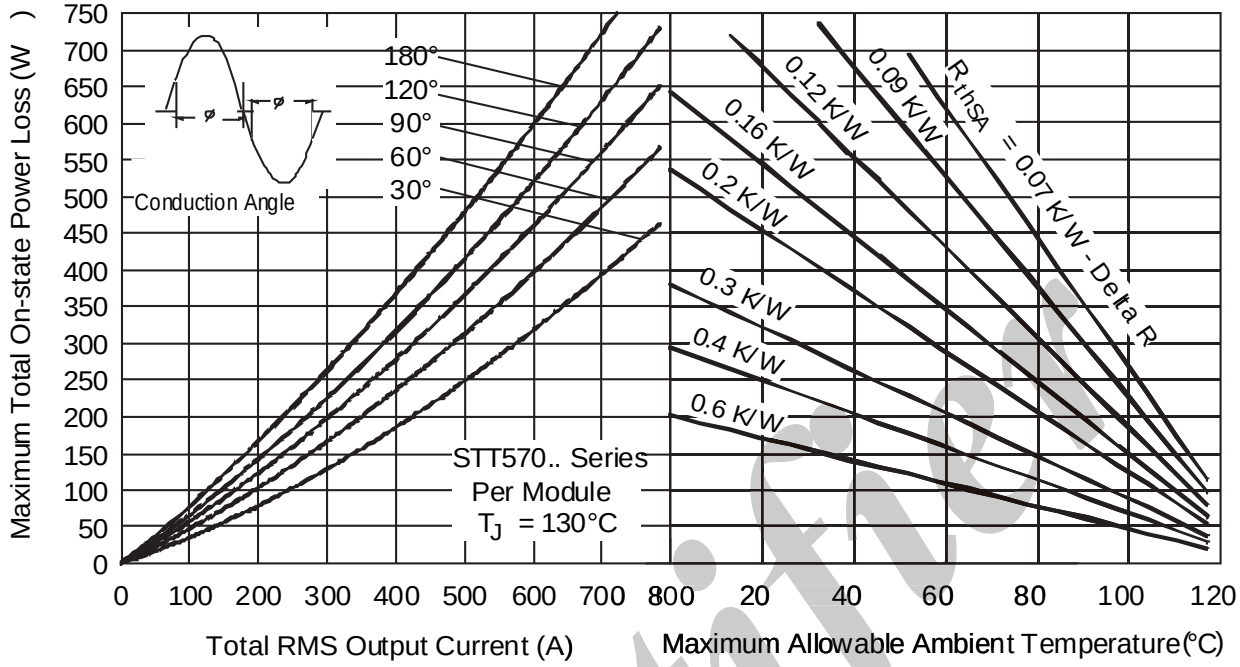


Fig. 9 - On-state Power Loss Characteristics

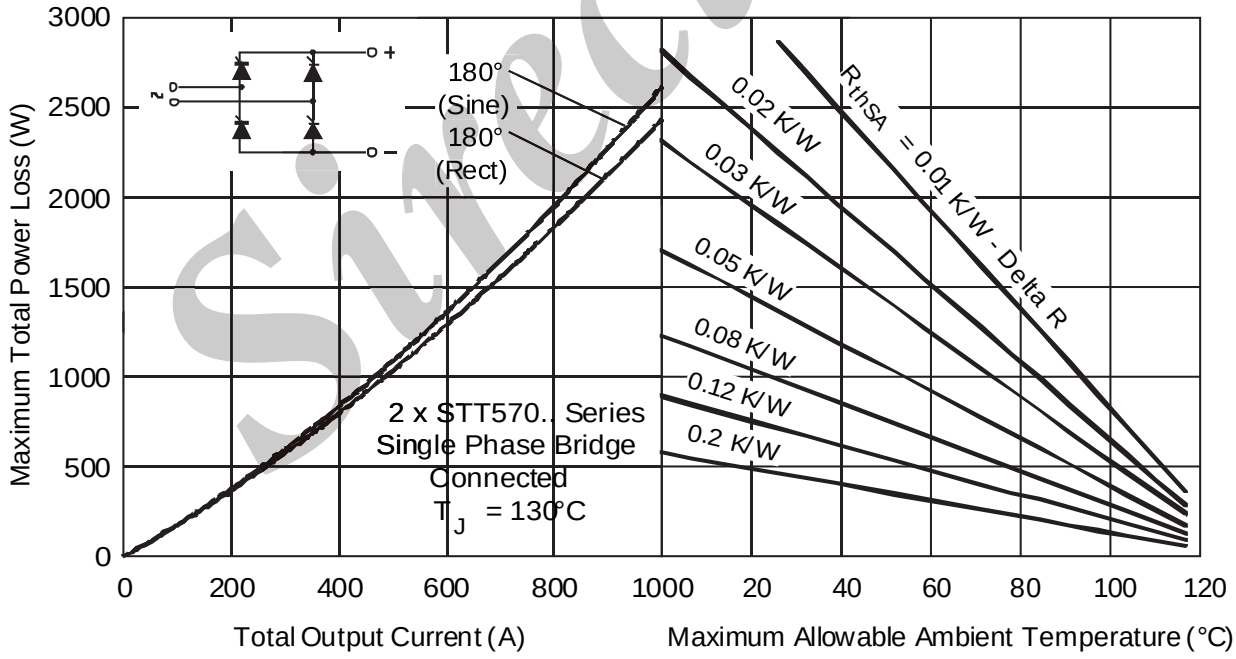


Fig. 10 - On-state Power Loss Characteristics

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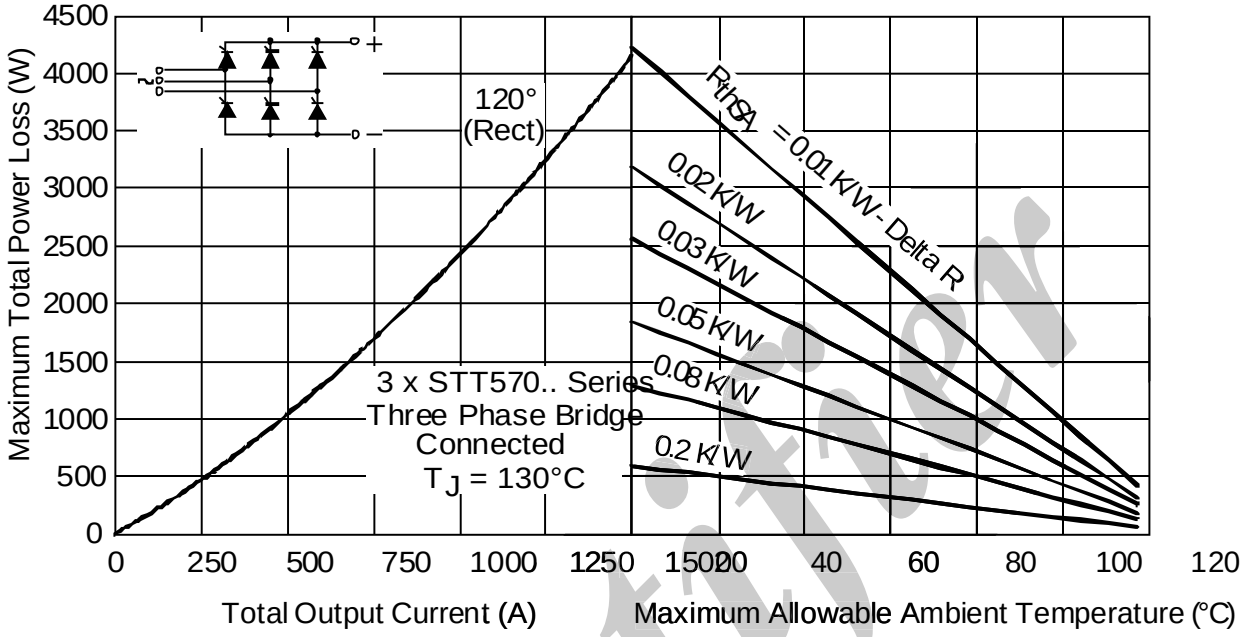


Fig. 11 - On-state Power Loss Characteristics

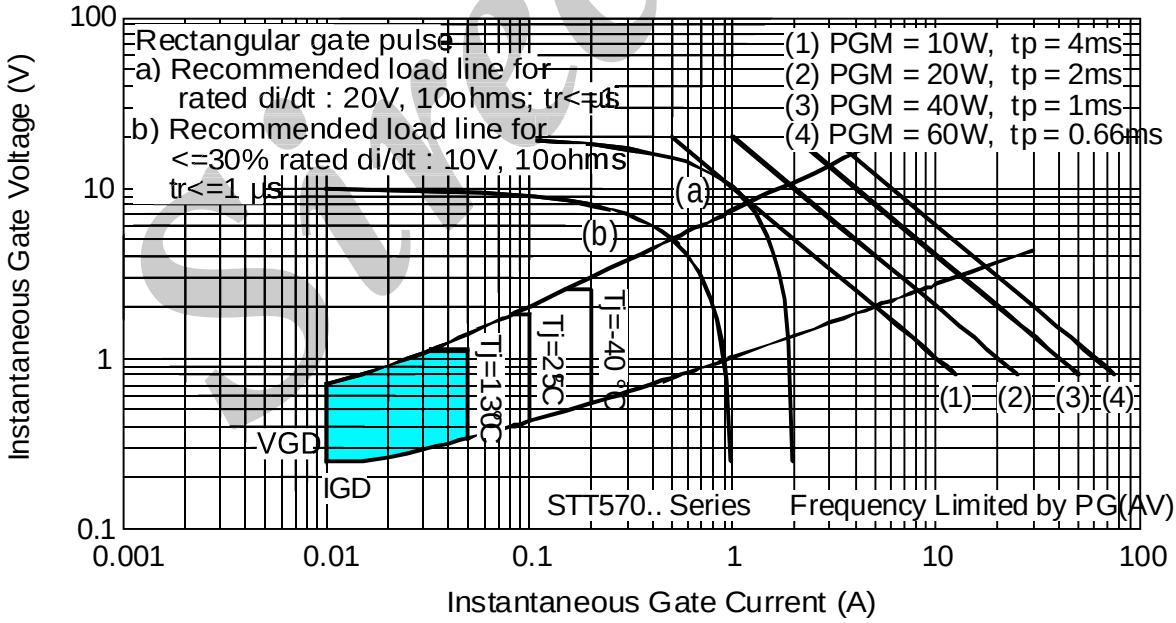


Fig. 12 - Gate Characteristics

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