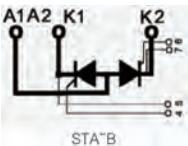
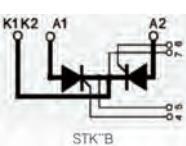
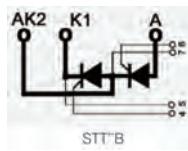


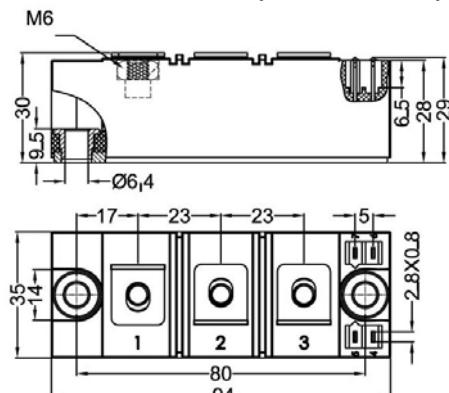
STT165GKLLB

Thyristor-Thyristor Modules



Type	V_{RSM}	V_{RRM}
	V_{DSM}	V_{DRM}
	V	V
STT165GK08B	900	800
STT165GK12B	1300	1200
STT165GK14B	1500	1400
STT165GK16B	1700	1600
STT165GK18B	1900	1800
STT165GK20B	2100	2000
STT165GK22B	2300	2200

Dimensions in mm (1mm=0.0394")



Symbol	Test Conditions	Maximum Ratings	Unit
I_{TRMS}, I_{FRMS}	$T_{VJ}=T_{VJM}$	300	
I_{TAVM}, I_{FAVM}	$T_c=85^\circ C$; 180° sine	165	A
I_{TSM}, I_{FSM}	$T_{VJ}=45^\circ C$ $V_R=0$	6000 6400	A
	$T_{VJ}=T_{VJM}$ $V_R=0$	5250 5600	
$\int i^2 dt$	$T_{VJ}=45^\circ C$ $V_R=0$	180000 170000	$A^2 s$
	$T_{VJ}=T_{VJM}$ $V_R=0$	137000 128000	
$(di/dt)_{cr}$	$T_{VJ}=T_{VJM}$ $f=50Hz, t_p=200\mu s$ $V_D=2/3V_{DRM}$ $I_G=0.5A$ $di/dt=0.5A/\mu s$	150 500	A/us
$(dv/dt)_{cr}$	$T_{VJ}=T_{VJM}; V_{DR}=2/3V_{DRM}$ $R_{GK}=\infty$; method 1 (linear voltage rise)	1000	V/us
P_{GM}	$T_{VJ}=T_{VJM}$ $I_T=I_{TAVM}$	120 60	W
P_{GAV}		8	W
V_{RGM}		10	V
T_{VJ} T_{VJM} T_{stg}		-40...+125 125 -40...+125	°C
V_{ISOL}	50/60Hz, RMS $I_{ISOL}\leq 1mA$	3000 3600	V~
M_d	Mounting torque (M6) Terminal connection torque (M6)	2.25-2.75/20-25 4.5-5.5/40-48	Nm/lb.in.
Weight	Typical	173	g

Sirectifier®

STT165GKLLB

Thyristor-Thyristor Modules

Symbol	Test Conditions	Characteristic Values	Unit
I _{RRM} , I _{DRM}	T _{VJ} =T _{VJM} ; V _R =V _{RRM} ; V _D =V _{DRM}	40	mA
V _T , V _F	I _T , I _F =300A; T _{VJ} =25°C	1.36	V
V _{TO}	For power-loss calculations only (T _{VJ} =T _{VJM})	0.8	V
r _T		1.6	mΩ
V _{GT}	V _D =6V; T _{VJ} =25°C T _{VJ} =-40°C	2 2.6	V
I _{GT}	V _D =6V; T _{VJ} =25°C T _{VJ} =-40°C	150 200	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 =0.45A; dI _G /dt=0.45A/us	200	mA
I _H	T _{VJ} =25°C; V _D =6V; R _{GK} =∞	150	mA
t _{gd}	T _{VJ} =25°C; V _D =1/2V _{DRM} I _G =0.5A; dI _G /dt=0.5A/us	2	us
t _q	T _{VJ} =T _{VJM} ; I _T =160A; t _p =200us; -dI/dt=10A/us V _R =100V; dv/dt=20V/us; V _D =2/3V _{DRM}	typ. 150	us
Q _S	T _{VJ} =T _{VJM} ; I _T , I _F =300A; -dI/dt=50A/us	550	uC
I _{RM}		235	A
R _{thJC}	per thyristor/diode; DC current per module	0.155 0.0775	K/W
R _{thJK}	per thyristor/diode; DC current per module	0.225 0.1125	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
- * Glass passivated chips
- * Isolation voltage 3600 V~
- * UL file NO.E310749
- * RoHS compliant

APPLICATIONS

- * Motor control
- * Power converter
- * Heat and temperature control for industrial furnaces and chemical processes
- * Lighting control
- * Contactless switches

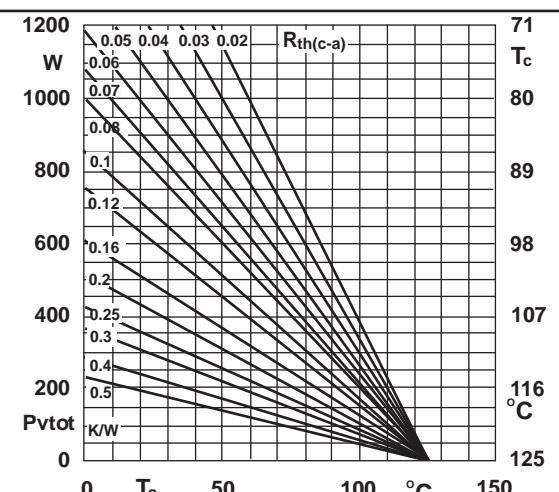
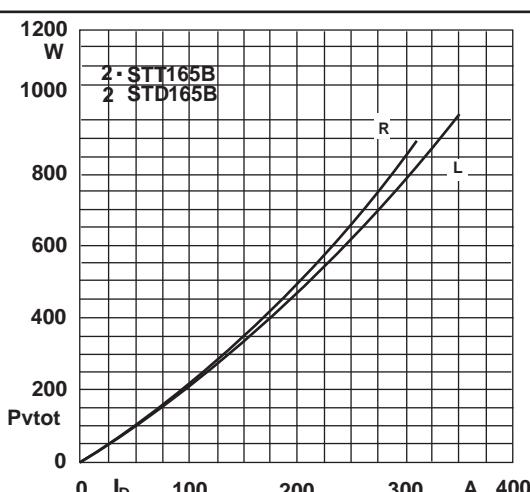
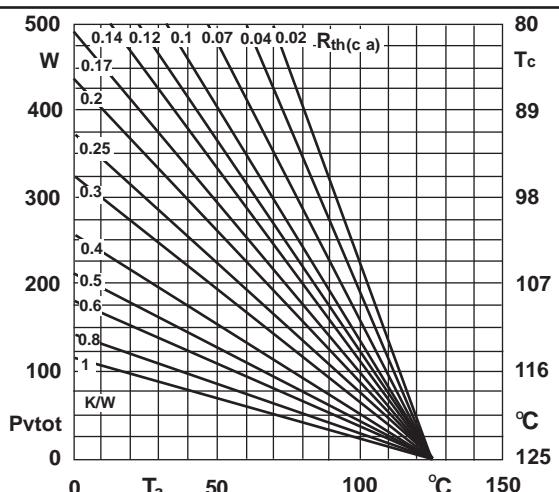
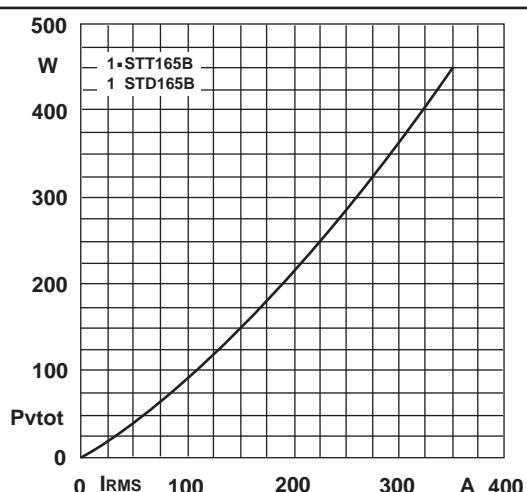
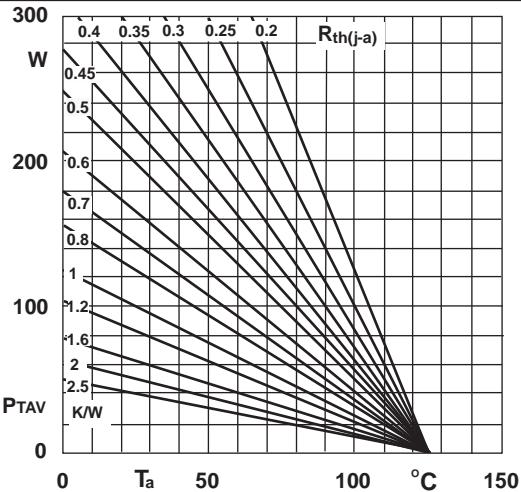
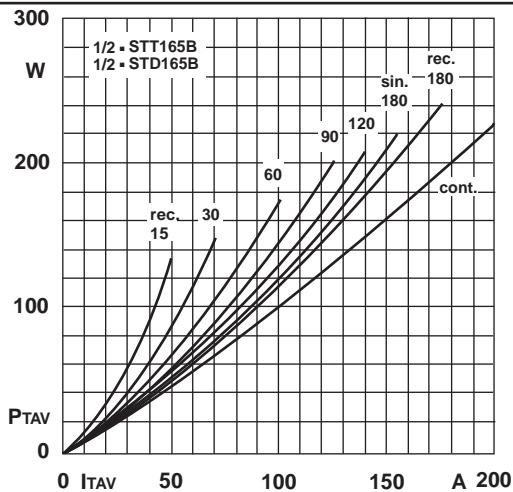
ADVANTAGES

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

Sirectifier®

STT165GKLLB

Thyristor-Thyristor Modules



STT165GKLLB

Thyristor-Thyristor Modules

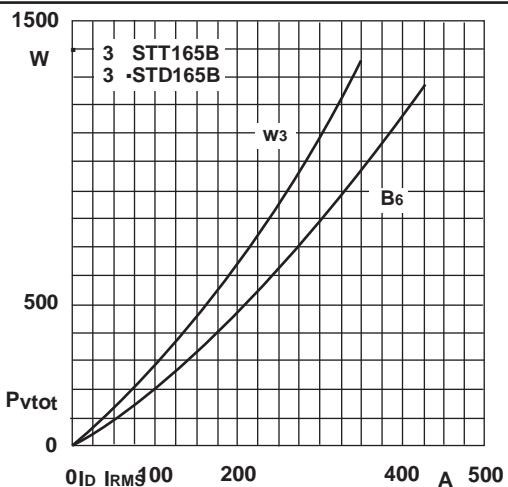


Fig.4L Power dissipation of three modules vs. direct and rms current

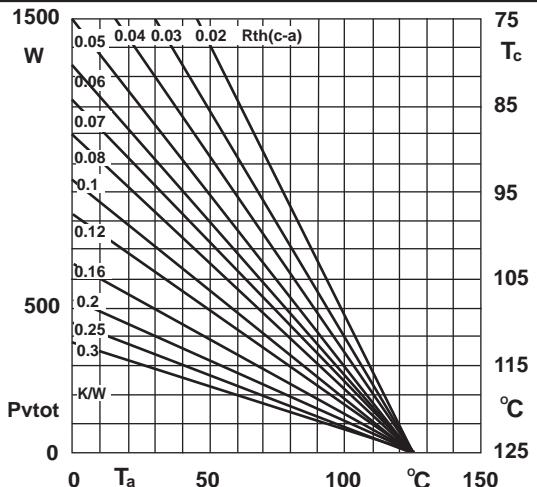


Fig.4R Power dissipation of three modules vs. case temp

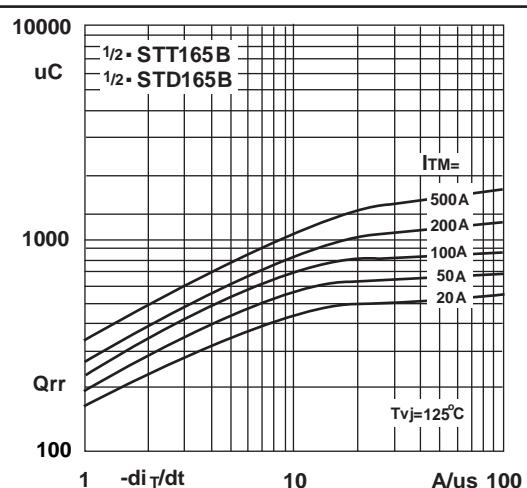


Fig.5 Recovered charge vs. current decrease

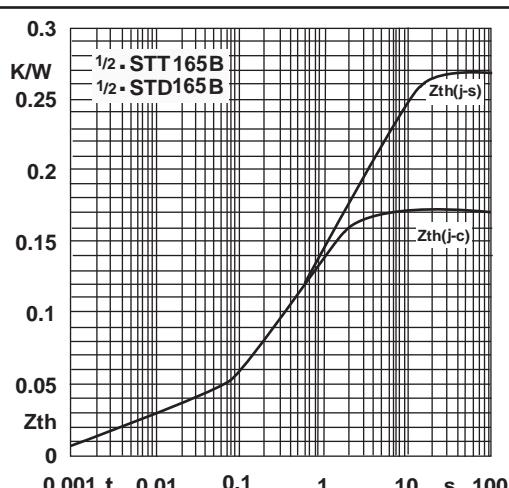


Fig.6 Transient thermal impedance vs. time

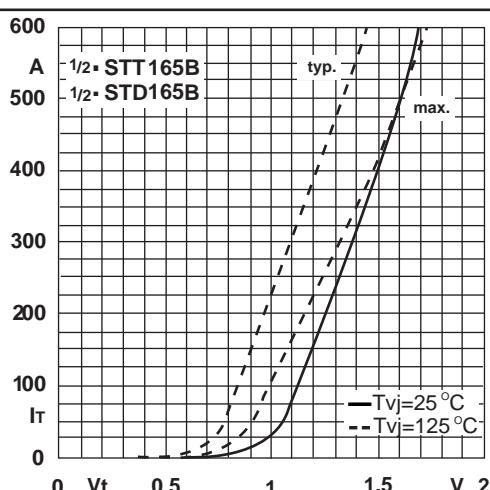


Fig.7 On-state characteristics

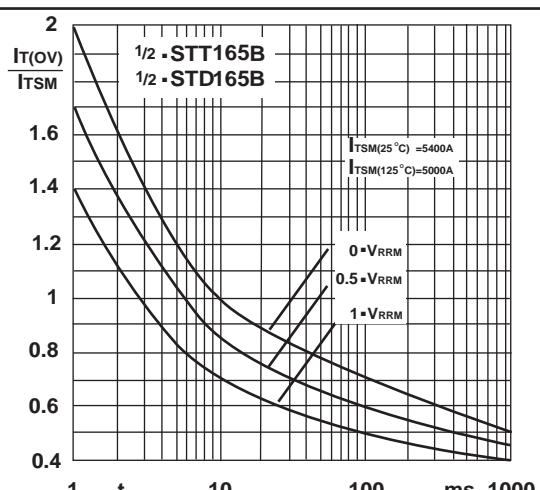


Fig.8 Surge overload current vs. time

Sirectifier®