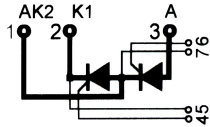
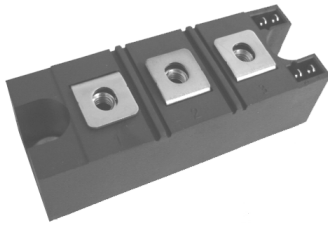


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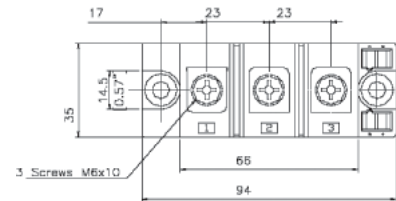
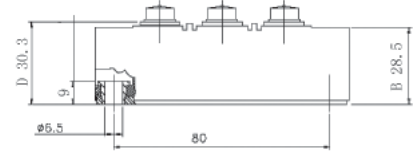
Thyristor-Thyristor Modules



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

Colerance: ±0.5mm

Dimensions in mm (1mm=0.0394")



Symbol	Test Conditions	Maximum Ratings	Unit
I_{TRMS} , I_{FRMS} I_{TAVM} , I_{FAVM}	$T_V = T_{VJM}$ $T_C = 85^\circ C$; 180° sine	259 165	A
I_{TSM} , I_{FSM}	$T_V = 45^\circ C$ $V_R = 0$ $t = 10ms$ (50Hz), sine $t = 8.3ms$ (60Hz), sine	6000 6400	A
	$T_V = T_{VJM}$ $V_R = 0$ $t = 10ms$ (50Hz), sine $t = 8.3ms$ (60Hz), sine	5250 5600	
$\int i^2 dt$	$T_V = 45^\circ C$ $V_R = 0$ $t = 10ms$ (50Hz), sine $t = 8.3ms$ (60Hz), sine	180000 170000	A ² s
	$T_V = T_{VJM}$ $V_R = 0$ $t = 10ms$ (50Hz), sine $t = 8.3ms$ (60Hz), sine	137000 128000	
$(di/dt)_{cr}$	$T_V = T_{VJM}$ $f = 50Hz$, $t_p = 200\mu s$ $V_D = 2/3V_{DRM}$ $I_G = 0.5A$ $di_G/dt = 0.5A/\mu s$ repetitive, $I_T = 500A$	150	A/ μs
	non repetitive, $I_T = I_{TAVM}$	500	
$(dv/dt)_{cr}$	$T_V = T_{VJM}$; $R_{GK} = \infty$; method 1 (linear voltage rise) $V_{DR} = 2/3V_{DRM}$	1000	V/ μs
P_{GM}	$T_V = T_{VJM}$ $I_T = I_{TAVM}$ $t_p = 30\mu s$ $t_p = 500\mu s$	120 60	W
		8	
P_{GAV}		8	W
V_{RGM}		10	V
T_V T_{VJM} T_{stg}		-40...+125 125 -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 (M6)	2.25-2.75/20-25 4.5-5.5/40-48	Nm/lb.in.
Weight	Typ.	180	g

STT165GKxxB

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_{TM}	$I_{TM}=495A; T_{VJ}=25^{\circ}C$	1.75	V
V_{TO}	For power-loss calculations only ($T_{VJ}=T_{VJM}$)	0.8	V
r_T		1.6	$m\Omega$
V_{GT}	$V_D=6V;$ $T_{VJ}=25^{\circ}C$ $T_{VJ}=-40^{\circ}C$	2.0 max 2.6 max	V
I_{GT}	$V_D=6V;$ $T_{VJ}=25^{\circ}C$ $T_{VJ}=-40^{\circ}C$	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	$T_{VJ}=25^{\circ}C; t_p=30\mu s; V_D=6V$ $I_G=0.45A; di_G/dt=0.45A/\mu s$	200	mA
I_H	$T_{VJ}=25^{\circ}C; V_D=6V; R_{GK}=\infty$	150	mA
t_{gd}	$T_{VJ}=25^{\circ}C; V_D=1/2V_{DRM}$ $I_G=0.5A; di_G/dt=0.5A/\mu s$	2	μs
t_q	$T_{VJ}=T_{VJM}; I_T=160A; t_p=200\mu s; -di/dt=10A/\mu s$ $V_R=100V; dv/dt=20V/\mu s; V_D=2/3V_{DRM}$	150	μs
Q_s	$T_{VJ}=T_{VJM}; I_T, I_F=300A; -di/dt=50A/\mu s$	550	μC
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.310749
- * RoHs compliant

APPLICATIONS

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

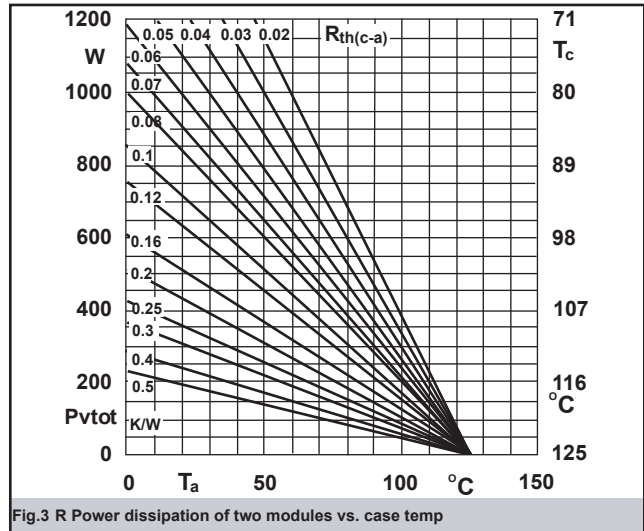
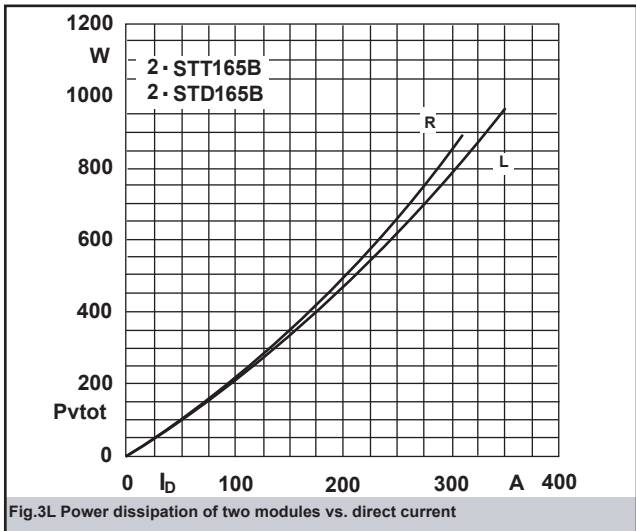
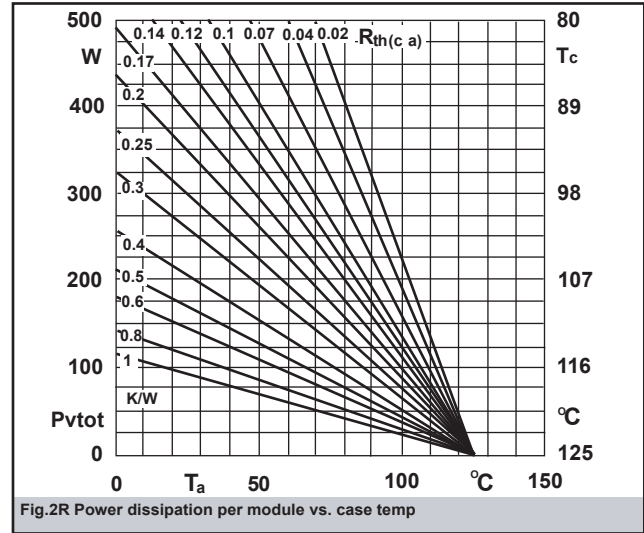
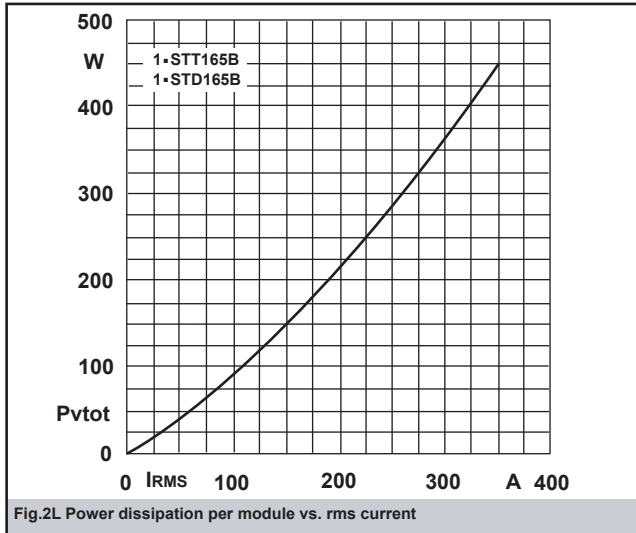
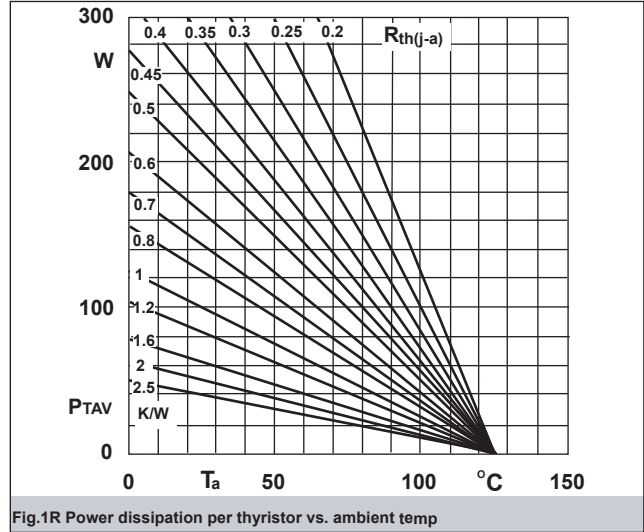
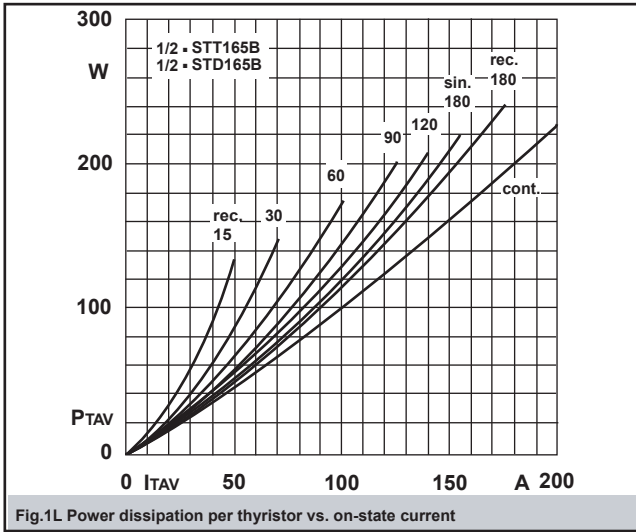
ADVANTAGES

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



STT165GKxxB

Thyristor-Thyristor Modules



STT165GKxxB

Thyristor-Thyristor Modules

