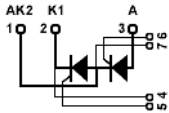


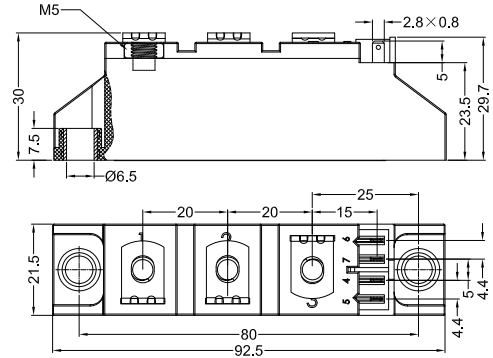
# STT116GKxx

## Thyristor-Thyristor Modules



Type	$V_{RSM}$ $V_{DSM}$ V	$V_{RRM}$ $V_{DRM}$ V
STT116GK08	900	800
STT116GK12	1300	1200
STT116GK14	1500	1400
STT116GK16	1700	1600
STT116GK18	1900	1800
STT116GK20	2100	2000
STT116GK22	2300	2200

Dimensions in mm (1mm=0.0394")



Symbol	Test Conditions	Maximum Ratings	Unit
$I_{TRMS}$ , $I_{FRMS}$ $I_{TAVM}$ , $I_{FAVM}$	$T_{VJ}=T_{VJM}$ $T_C=85^{\circ}C$ ; 180° sine	180 116	A
$I_{TSM}$ , $I_{FSM}$	$T_{VJ}=45^{\circ}C$ $V_R=0$ t=10ms (50Hz), sine t=8.3ms (60Hz), sine	2250 2400	A
	$T_{VJ}=T_{VJM}$ $V_R=0$ t=10ms(50Hz), sine t=8.3ms(60Hz), sine	2000 2150	
$\int i^2 dt$	$T_{VJ}=45^{\circ}C$ $V_R=0$ t=10ms (50Hz), sine t=8.3ms (60Hz), sine	25300 23900	A <sup>2</sup> s
	$T_{VJ}=T_{VJM}$ $V_R=0$ t=10ms(50Hz), sine t=8.3ms(60Hz), sine	20000 19100	
$(di/dt)_{cr}$	$T_{VJ}=T_{VJM}$ f=50Hz, $t_p=200\mu s$ $V_D=2/3V_{DRM}$ $I_G=0.45A$ $di_G/dt=0.45A/\mu s$ repetitive, $I_T=250A$	150	A/ $\mu s$
	non repetitive, $I_T=I_{TAVM}$	500	
$(dv/dt)_{cr}$	$T_{VJ}=T_{VJM}$ ; $R_{GK}=\infty$ ; method 1 (linear voltage rise) $V_{DR}=2/3V_{DRM}$	1000	V/ $\mu s$
$P_{GM}$	$T_{VJ}=T_{VJM}$ $I_T=I_{TAVM}$ $t_p=30\mu s$ $t_p=300\mu s$	10 5	W
		0.5	
$V_{RGM}$		10	V
$T_{VJ}$ $T_{VJM}$ $T_{stg}$		-40...+125 125 -40...+125	°C
$V_{ISOL}$	50/60Hz, RMS $I_{ISOL}\leq 1mA$ t=1min t=1s	3000 3600	V~
$M_d$	Mounting torque (M5) Terminal connection torque (M5)	2.5-4.0/22-35 2.5-4.0/22-35	Nm/lb.in.
Weight	Typ.	90	g



# STT116GKxx

## Thyristor-Thyristor Modules

Symbol	Test Conditions	Characteristic Values	Unit
$I_{RRM}, I_{DRM}$	$T_{VJ}=T_{VJM}; V_R=V_{RRM}; V_D=V_{DRM}$	5	mA
$V_{TM}$	$I_{TM}=330A; T_{VJ}=25^{\circ}C$	1.50	V
$V_{TO}$	For power-loss calculations only ( $T_{VJ}=125^{\circ}C$ )	0.8	V
$r_T$		2.4	$m\Omega$
$V_{GT}$	$V_D=6V;$ $T_{VJ}=25^{\circ}C$ $T_{VJ}=-40^{\circ}C$	2.5 2.6	V
$I_{GT}$	$V_D=6V;$ $T_{VJ}=25^{\circ}C$ $T_{VJ}=-40^{\circ}C$	150 200	mA
$V_{GD}$	$T_{VJ}=T_{VJM}; V_D=2/3V_{DRM}$	0.2	V
$I_{GD}$		10	mA
$I_L$	$T_{VJ}=25^{\circ}C; t_p=10\mu s; V_D=6V$ $I_G=0.45A; di_G/dt=0.45A/\mu s$	450	mA
$I_H$	$T_{VJ}=25^{\circ}C; V_D=6V; R_{GK}=\infty$	200	mA
$t_{gd}$	$T_{VJ}=25^{\circ}C; V_D=1/2V_{DRM}$ $I_G=0.45A; di_G/dt=0.45A/\mu s$	2	$\mu s$
$t_q$	$T_{VJ}=T_{VJM}; I_T=150A; t_p=200\mu s; -di/dt=10A/\mu s$ $V_R=100V; dv/dt=20V/\mu s; V_D=2/3V_{DRM}$	185	$\mu s$
$Q_s$	$T_{VJ}=T_{VJM}; I_T, I_F=50A; -di/dt=6A/\mu s$	170	$\mu C$
$I_{RM}$		45	A
$R_{thJC}$	per thyristor/diode; DC current per module	0.22 0.11	K/W
$R_{thJK}$	per thyristor/diode; DC current per module	0.42 0.21	K/W
$d_s$	Creeping distance on surface	12.7	mm
$d_A$	Strike distance through air	9.6	mm
$a$	Maximum allowable acceleration	50	$m/s^2$

### FEATURES

- \* International standard package
- \* DBC baseplate
- \* Glass passivated chips
- \* Isolation voltage 3600 V
- \* UL file NO.310749
- \* RoHs compliant

### APPLICATIONS

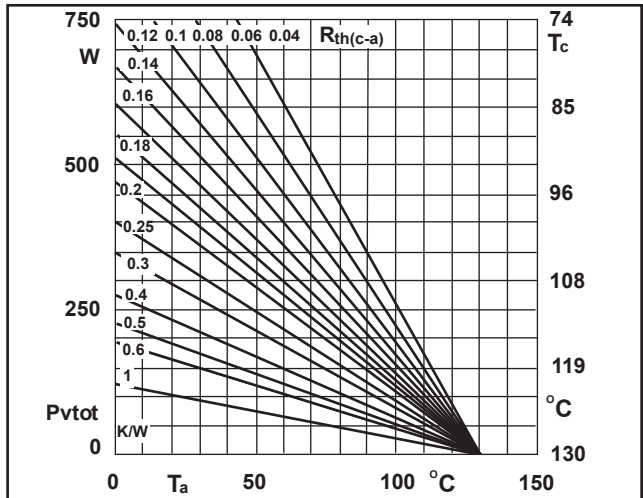
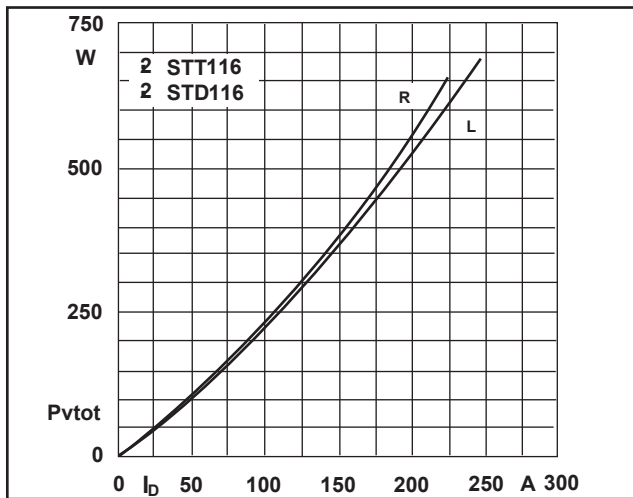
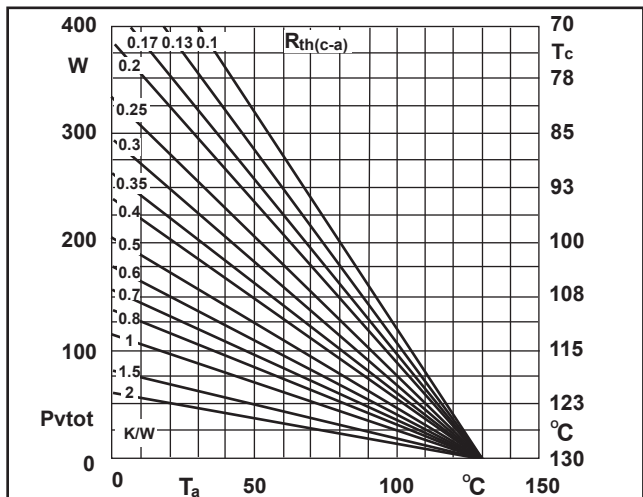
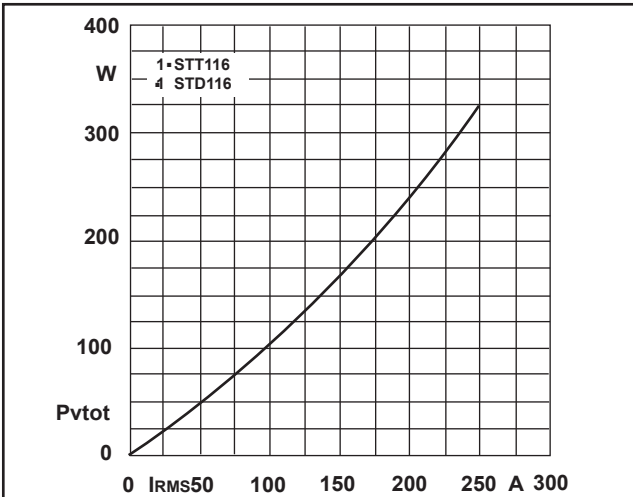
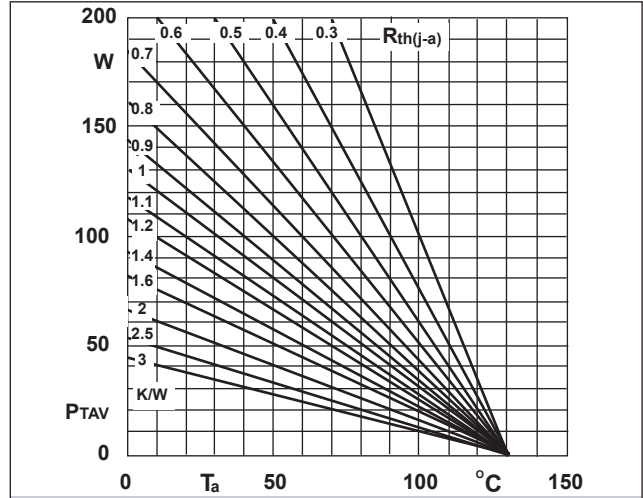
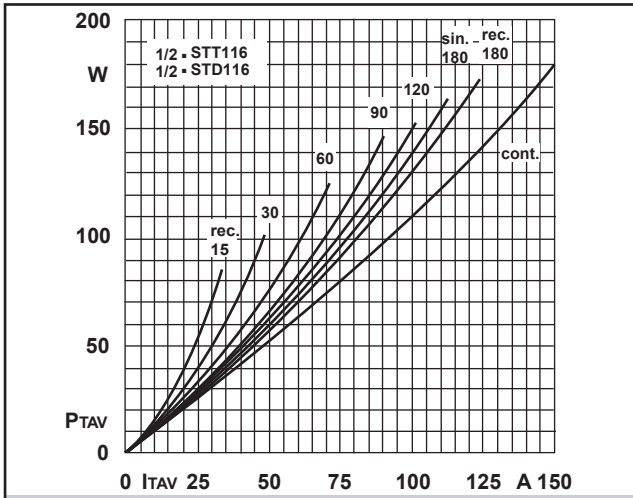
- \* DC motor control
- \* Softstart AC motor controller
- \* Light, heat and temperature control

### ADVANTAGES

- \* Space and weight savings
- \* Simple mounting with two screws
- \* Improved temperature and power cycling
- \* Reduced protection circuits

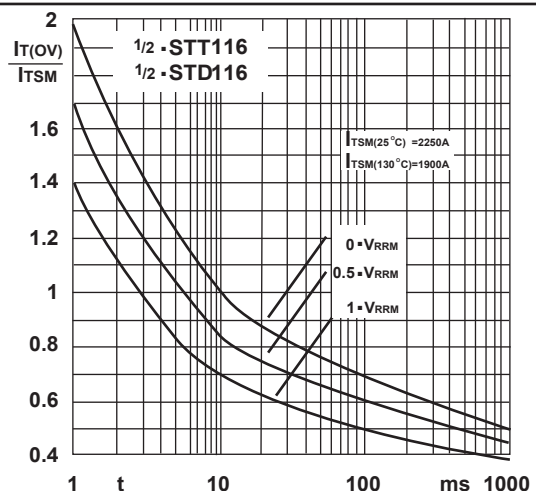
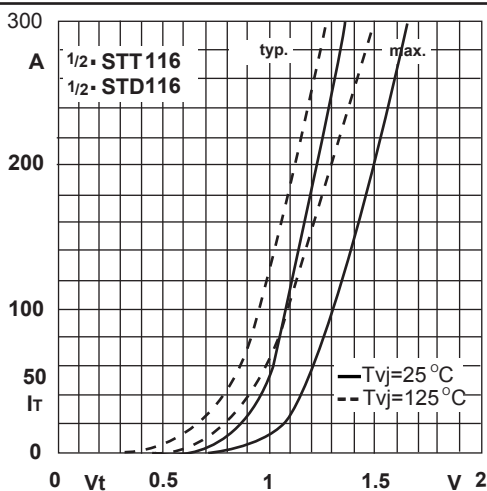
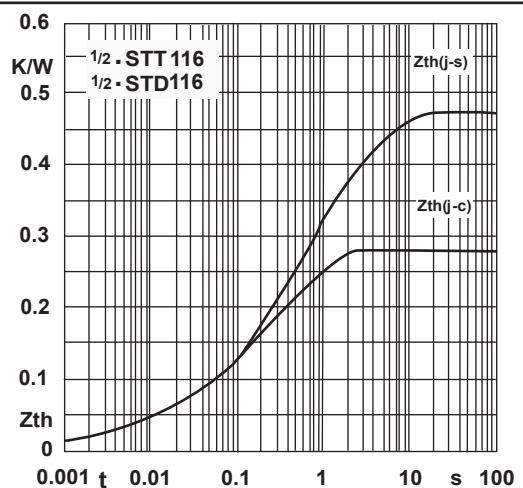
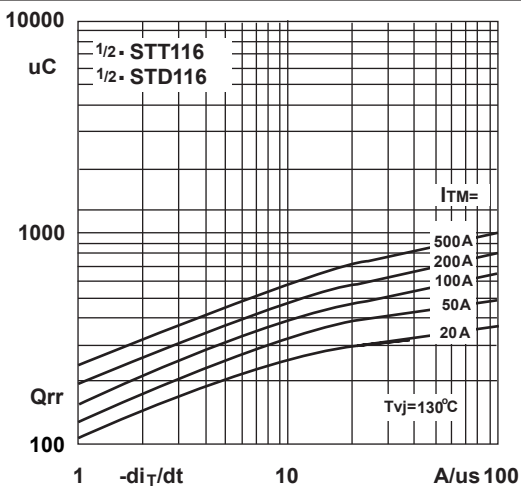
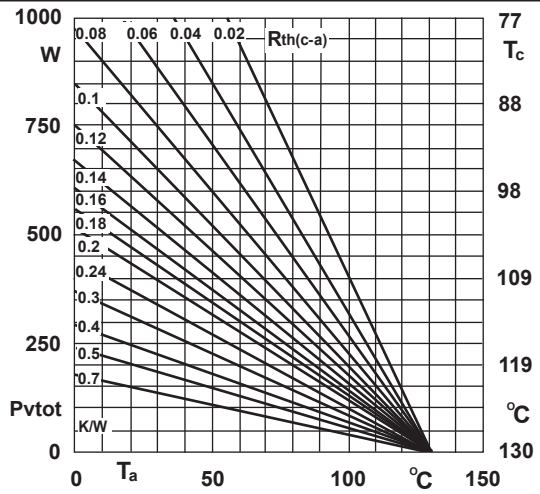
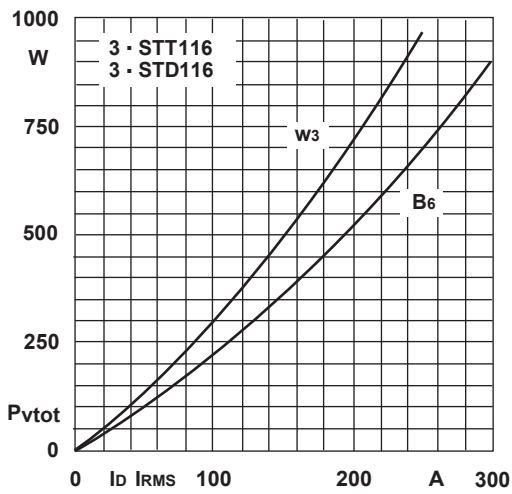
# STT116GKxx

## Thyristor-Thyristor Modules



# STT116GKxx

## Thyristor-Thyristor Modules



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