



Symbol	Test Conditions	Characteristic Value			
$I_D, I_R$	$T_{VJ} = T_{VJM}, V_R = V_{RRM}, V_D = V_{DRM}$	$\leq$	5	mA	
$V_T$	$I_T = 200A, T_{VJ} = 25^\circ C$	$\leq$	1.57	V	
$V_{TO}$	For power-loss calculations only ( $T_{VJ} = T_{VJM}$ )		0.85	V	
$r_T$			3.5	m $\Omega$	
$V_{GT}$	$V_D = 6V$	$T_{VJ} = 25^\circ C$	$\leq$	1.5	V
		$T_{VJ} = -40^\circ C$	$\leq$	1.6	V
$I_{GT}$	$V_D = 6V$	$T_{VJ} = 25^\circ C$	$\leq$	100	mA
		$T_{VJ} = -40^\circ C$	$\leq$	200	mA
$V_{GD}$	$T_{VJ} = T_{VJM}, V_D = 2/3 V_{DRM}$	$\leq$	0.2	V	
$I_{GD}$	$T_{VJ} = T_{VJM}, V_D = 2/3 V_{DRM}$	$\leq$	5	mA	
$I_L$	$T_{VJ} = 25^\circ C, t_p = 30\mu s$	$\leq$	450	mA	
	$I_G = 0.3A, di_G/dt = 0.3A/\mu s$				
$I_H$	$T_{VJ} = 25^\circ C, V_D = 6V, R_{GK} = \infty$	$\leq$	200	mA	
$t_{gd}$	$T_{VJ} = 25^\circ C, V_D = 1/2 V_{DRM}$	$\leq$	2	$\mu s$	
	$I_G = 0.3A, di_G/dt = 0.3A/\mu s$				
$t_q$	$T_{VJ} = T_{VJM}, I_T = 20A, t_p = 200\mu s, V_R = 100V$		150	$\mu s$	
	$-di/dt = 10A/\mu s, dv/dt = 15V/\mu s, V_D = 2/3 V_{DRM}$				
$R_{thJC}$	per thyristor; sine 180°el		0.46	K/W	
	per module		0.092	K/W	
$R_{thJK}$	per thyristor; sine 180° el		0.55	K/W	
	per module		0.11	K/W	
$d_s$	Creeping distance on surface		10	mm	
$d_A$	Creeping distance in air		9.4	mm	
$a$	Max. allowable acceleration		50	m/s <sup>2</sup>	

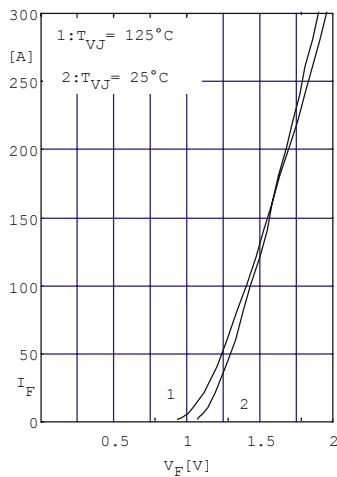


Fig. 1 Forward current vs. voltage drop per diode or thyristor

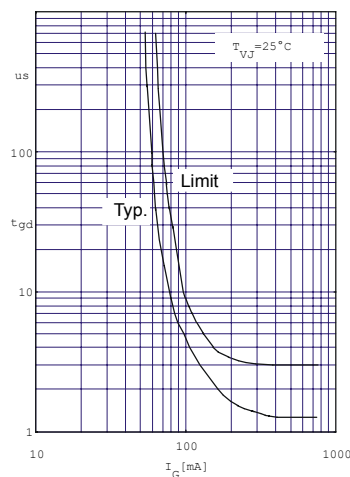


Fig. 2 Gate trigger delay time

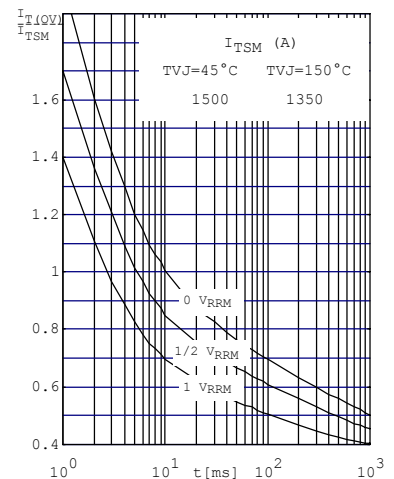


Fig. 3 Surge overload current per diode (or thyristor)  $I_{FSM}$ ,  $I_{TSM}$ : Crest value t: duration

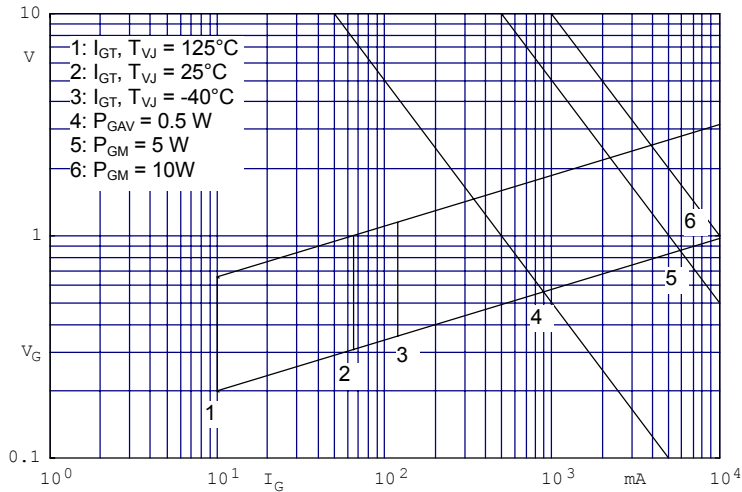


Fig.4 Gate trigger characteristic

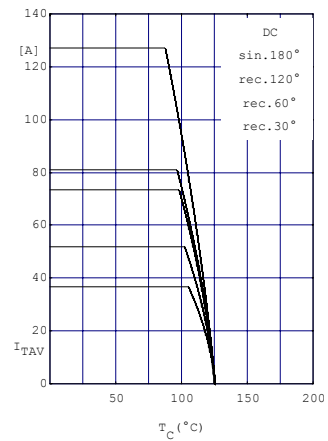


Fig.5 Maximum forward current at case temperature

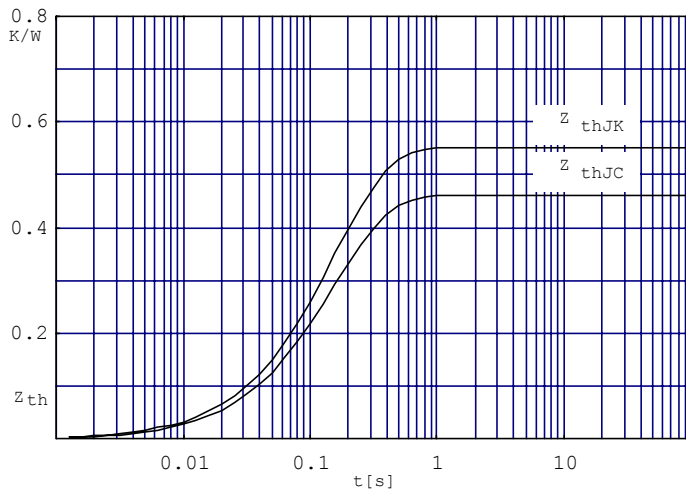


Fig.6 Transient thermal impedance per thyristor or diode (calculated)

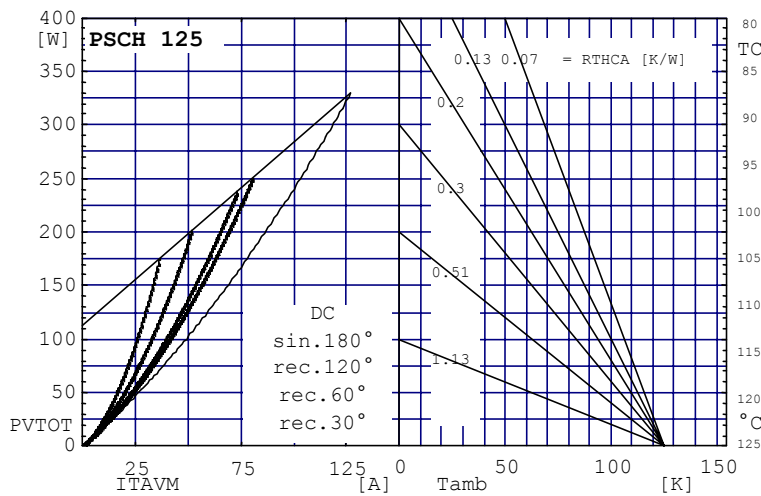


Fig. 7 Power dissipation vs. direct output current and ambient temperature