

Symbol	Test Conditions	Characteristic Value	
I_D, I_R	$T_{VJ} = T_{VJM}, V_R = V_{RRM}, V_D = V_{DRM}$	≤ 5 mA	
V_T	$I_T = 200A, T_{VJ} = 25^\circ C$	≤ 1.75 V	
V_{TO}	For power-loss calculations only ($T_{VJ} = T_{VJM}$)	0.85 V	
r_T		6 m Ω	
V_{GT}	$V_D = 6V$	$T_{VJ} = 25^\circ C$	≤ 1.5 V
		$T_{VJ} = -40^\circ C$	≤ 1.6 V
I_{GT}	$V_D = 6V$	$T_{VJ} = 25^\circ C$	≤ 100 mA
		$T_{VJ} = -40^\circ C$	≤ 200 mA
V_{GD}	$T_{VJ} = T_{VJM}, V_D = 2/3 V_{DRM}$	≤ 0.2 V	
I_{GD}	$T_{VJ} = T_{VJM}, V_D = 2/3 V_{DRM}$	≤ 5 mA	
I_L	$T_{VJ} = 25^\circ C, t_p = 30\mu s$	≤ 450 mA	
	$I_G = 0.3A, di_G/dt = 0.3A/\mu s$		
I_H	$T_{VJ} = 25^\circ C, V_D = 6V, R_{GK} = \infty$	≤ 200 mA	
t_{gd}	$T_{VJ} = 25^\circ C, V_D = 1/2 V_{DRM}$	≤ 2 μs	
	$I_G = 0.3A, di_G/dt = 0.3A/\mu s$		
t_q	$T_{VJ} = T_{VJM}, I_T = 20A, t_p = 200\mu s, V_R = 100V$	150 μs	
	$-di/dt = 10A/\mu s, dv/dt = 15V/\mu s, V_D = 2/3 V_{DRM}$		
R_{thJC}	per thyristor; sine 180°el	0.65 K/W	
	per module	0.1625 K/W	
R_{thJK}	per thyristor; sine 180° el	0.8 K/W	
	per module	0.2 K/W	
d_s	Creeping distance on surface	10.0 mm	
d_A	Creeping distance in air	9.4 mm	
a	Max. allowable acceleration	50 m/s ²	

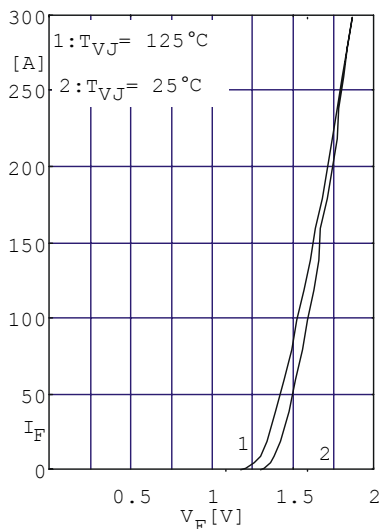


Fig. 1 Forward current vs. voltage drop per diode or thyristor

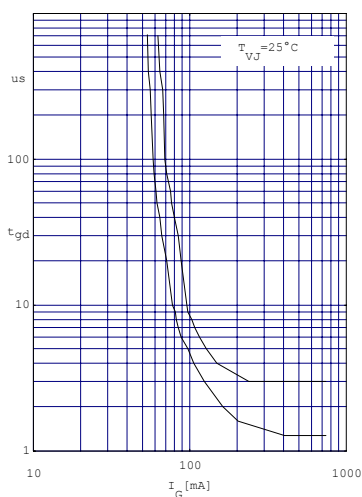


Fig. 2 Gate trigger delay time

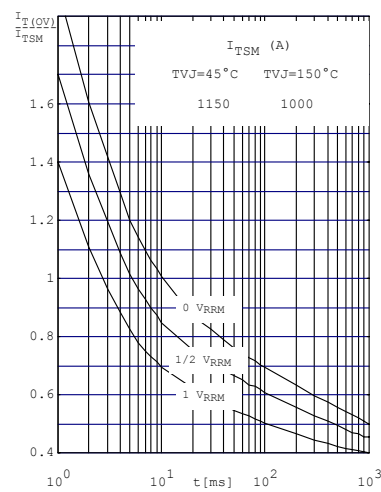


Fig. 3 Surge overload current per diode (or thyristor) I_{FSM} , I_{TSM} : Crest value t: duration

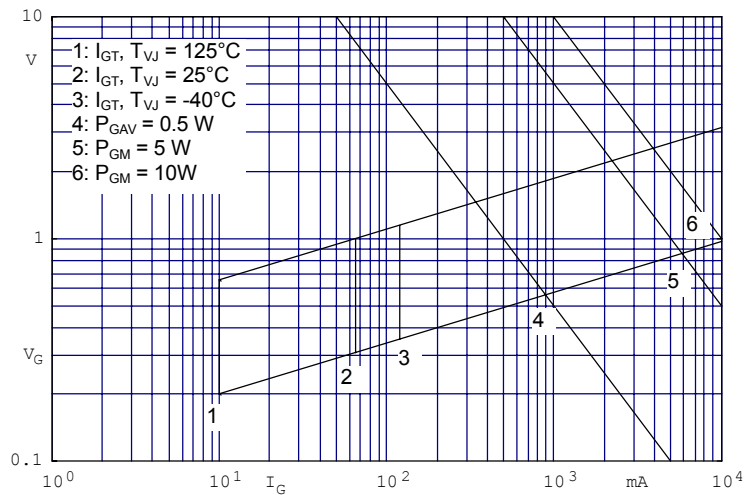


Fig.4 Gate trigger characteristic

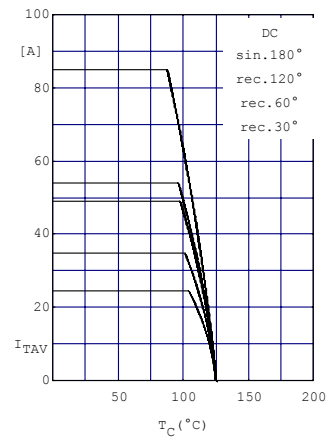


Fig.5 Maximum forward current at case temperature

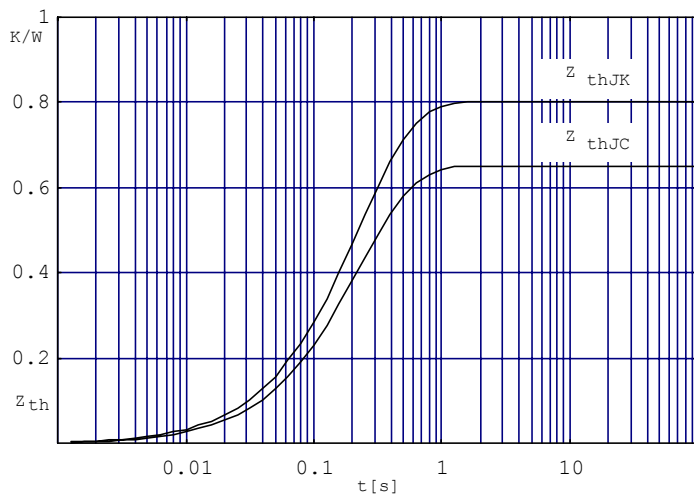


Fig.6 Transient thermal impedance per thyristor or diode (calculated)

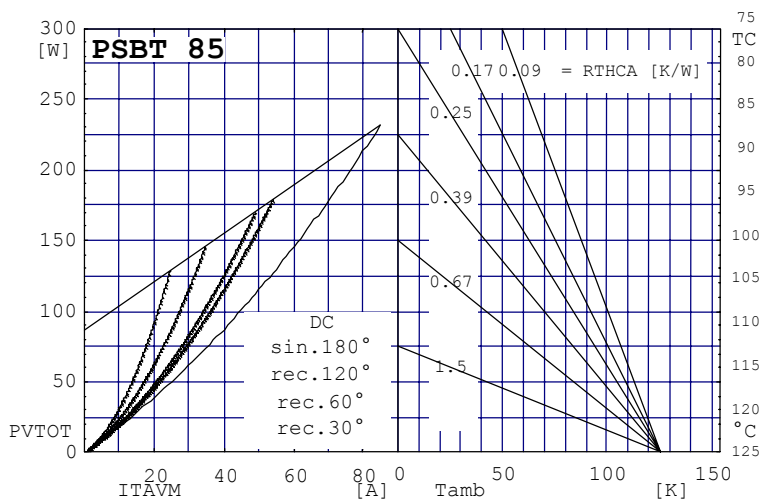


Fig. 7 Power dissipation vs. direct output current and ambient temperature