

FEATURES

* International standard package

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

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	560 350	A
I_{TSM} , I_{FSM}	$T_{VJ}=45^{\circ}C$ t=10ms (50Hz), sine $V_R=0$ t=8.3ms (60Hz), sine	9200 10100	A
	$T_{VJ}=T_{VJM}$ t=10ms(50Hz), sine $V_R=0$ t=8.3ms(60Hz), sine	8000 8800	
i_{2dt}	$T_{VJ}=45^{\circ}C$ t=10ms (50Hz), sine $V_R=0$ t=8.3ms (60Hz), sine	423000 423000	A _{2s}
	$T_{VJ}=T_{VJM}$ t=10ms(50Hz), sine $V_R=0$ t=8.3ms(60Hz), sine	320000 321000	
$(di/dt)_{cr}$	$T_{VJ}=T_{VJM}$ repetitive, $I_T=45A$ $f=50Hz$, $t_p=200\mu s$ $V_D=2/3V_{DRM}$ $I_G=0.45A$ non repetitive, $I_T=I_{TAVM}$ $di_G/dt=0.45A/\mu s$	100 500	A/ μs
$(dv/dt)_{cr}$	$T_{VJ}=T_{VJM}$; $V_{DR}=2/3V_{DRM}$ $R_{GK} =$; method 1 (linear voltage rise)	1000	V/ μs
P_{GM}	$T_{VJ}=T_{VJM}$ $t_p=30\mu s$ $I_T=I_{TAVM}$ $t_p=300\mu s$	120 60	W
P_{GAV}		20	W
V_{RGM}		10	V
T_{VJ} T_{VJM} T_{stg}		-40...+125 125 -40...+125	$^{\circ}C$
V_{ISOL}	50/60Hz, RMS t=1min $I_{ISOL}<1mA$ 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	Typical including screws	750	g

Outline Table



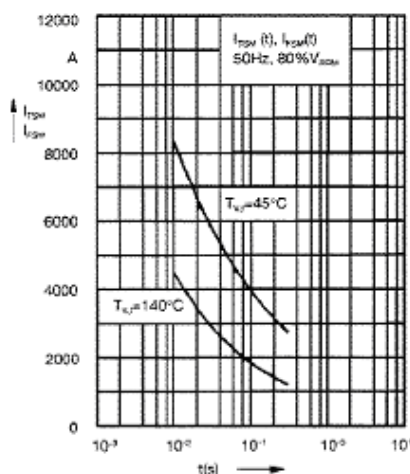


Fig. 1 Surge overload current
 I_{TSM} , I_{FSM} : Crest value, t : duration

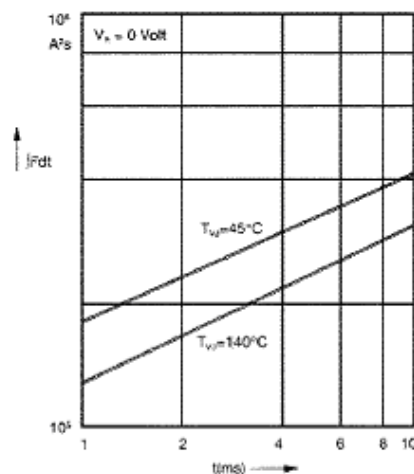


Fig. 2 J^2t versus time (1-10 ms)

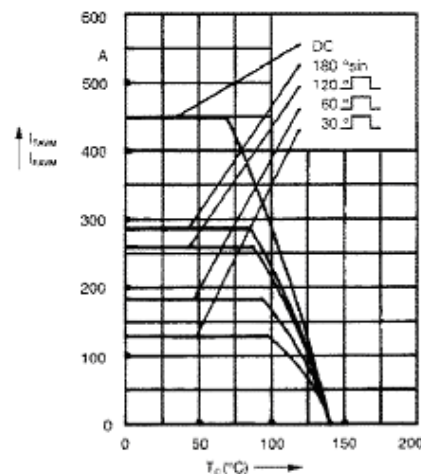


Fig. 2a Maximum forward current at case temperature

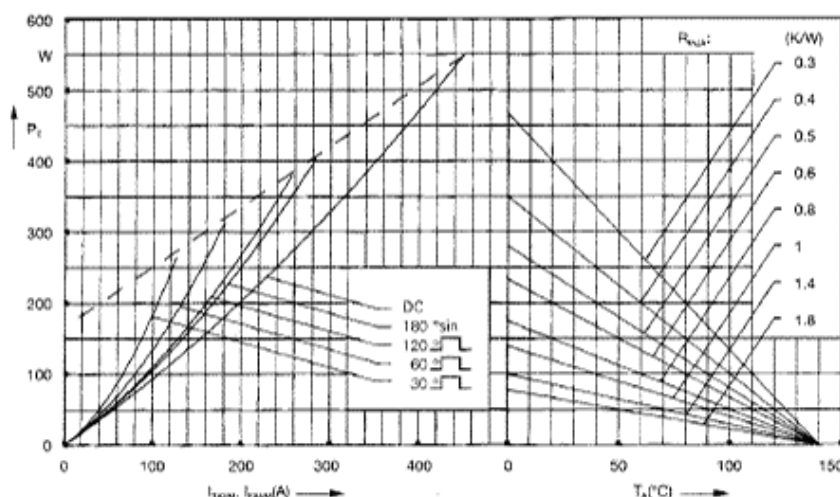


Fig. 3 Power dissipation versus on-state current and ambient temperature (per thyristor or diode)

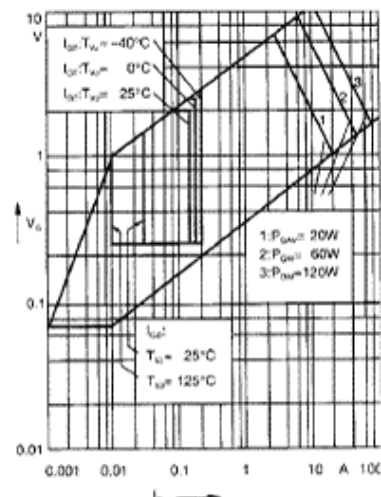


Fig. 4 Gate trigger characteristics

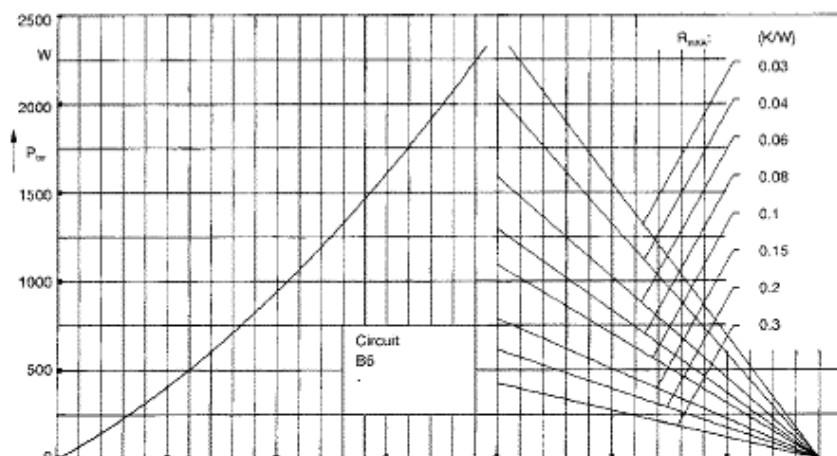


Fig. 5 Three phase rectifier bridge: Power dissipation versus direct output current and ambient temperature

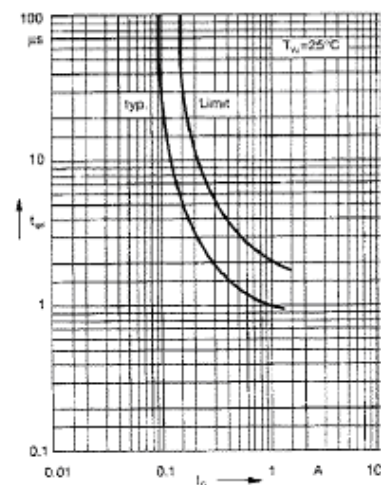


Fig. 6 Gate trigger delay time

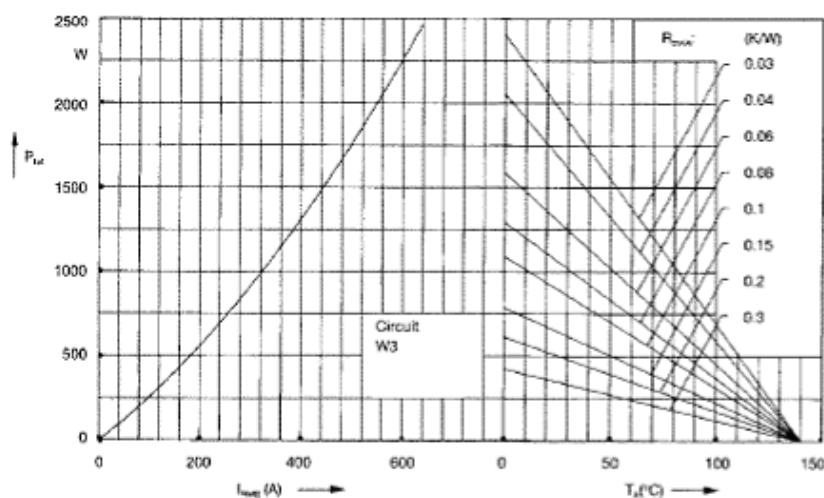


Fig. 7 Three phase AC-controller:
Power dissipation versus RMS
output current and ambient
temperature

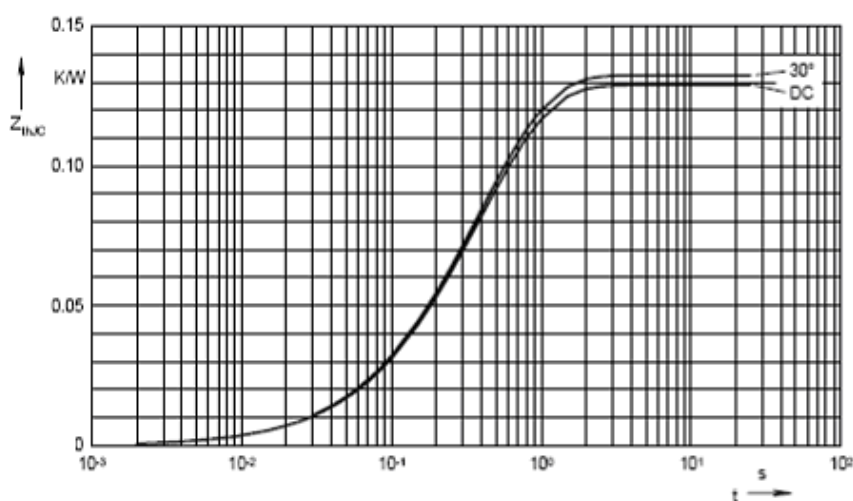


Fig. 8 Transient thermal impedance
junction to case (per thyristor or
diode)

R_{thJC} for various conduction angles d :

d	R_{thJC} (K/W)
DC	0.129
180°C	0.131
120°C	0.131
60°C	0.132
30°C	0.132

Constants for Z_{thJC} calculation:

i	R_{thi} (K/W)	t_i (s)
1	0.0035	0.099
2	0.0165	0.168
3	0.1091	0.456

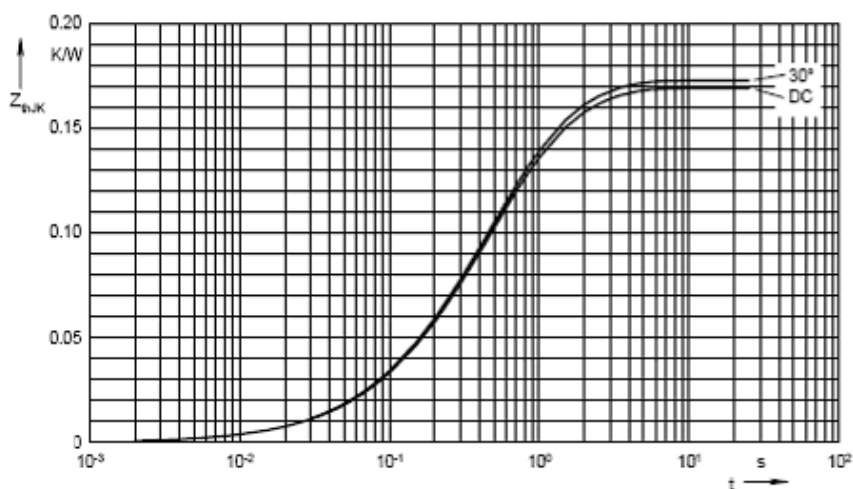


Fig. 9 Transient thermal impedance
junction to heatsink (per thyristor
or diode)

R_{thJK} for various conduction angles d :

d	R_{thJK} (K/W)
DC	0.169
180°C	0.171
120°C	0.172
60°C	0.172
30°C	0.173

Constants for Z_{thJK} calculation:

i	R_{thi} (K/W)	t_i (s)
1	0.0033	0.099
2	0.0159	0.168
3	0.1053	0.456
4	0.04	1.36