Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

Contact us

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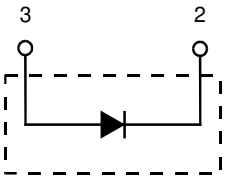
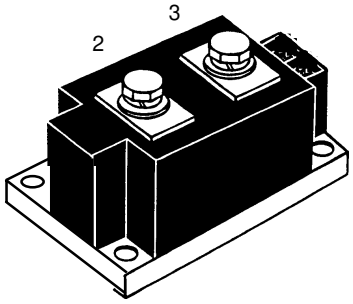
High Power Diode Modules

I_{FRMS} = 880 A
I_{FAVM} = 560 A
V_{RRM} = 1200-2200 V

V_{RSM} V_{DSM} V	V_{RRM} V_{DRM} V	Type
1300	1200	MDO 500-12N1
1500	1400	MDO 500-14N1
1700	1600	MDO 500-16N1
1900	1800	MDO 500-18N1
2100	2000	MDO 500-20N1
2300	2200	MDO 500-22N1





Symbol	Test Conditions		Maximum Ratings	
I_{FRMS}	$T_{VJ} = T_{VJM}$		880	A
I_{FAVM}	T_C = 85°C; 180° sine		560	A
I_{FSM}	T_{VJ} = 45°C	t = 10 ms (50 Hz)	15000	A
	V_R = 0	t = 8.3 ms (60 Hz)	16000	A
	$T_{VJ} = T_{VJM}$	t = 10 ms (50 Hz)	13000	A
	V_R = 0	t = 8.3 ms (60 Hz)	14400	A
I^2t	T_{VJ} = 45°C	t = 10 ms (50 Hz)	1125000	A^2s
	V_R = 0	t = 8.3 ms (60 Hz)	1062000	A^2s
	$T_{VJ} = T_{VJM}$	t = 10 ms (50 Hz)	845000	A^2s
	V_R = 0	t = 8.3 ms (60 Hz)	813000	A^2s
T_{VJ}			-40...140	°C
T_{VJM}			140	°C
T_{stg}			-40...125	°C
V_{ISOL}	50/60 Hz, RMS	t = 1 min	3000	V~
	$I_{ISOL} \leq$ 1 mA	t = 1 s	3600	V~
M_d	Mounting torque (M6)		4.5-7/40-62	Nm/lb.in.
	Terminal connection torque (M8)		11-13/97-115	Nm/lb.in.
Weight	Typical including screws		650	g

Symbol	Test Conditions	Characteristic Values	
I_{RRM}	$T_{VJ} = T_{VJM}$; $V_R = V_{RRM}$	30	mA
V_F	I_F = 1200 A; T_{VJ} = 25°C	1.3	V
V_{T0}	For power-loss calculations only ($T_{VJ} = T_{VJM}$)	0.8	V
r_T		0.38	mΩ
R_{thJC}	DC current	0.072	K/W
R_{thJK}	DC current	0.096	K/W
d_S	Creeping distance on surface	21.7	mm
d_A	Creepage distance in air	9.6	mm
a	Maximum allowable acceleration	50	m/s^2

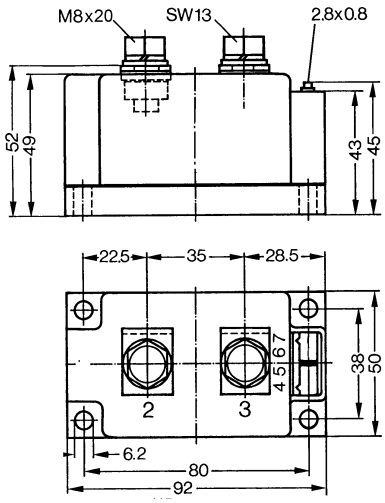
Data according to IEC 60747 and refer to a single diode unless otherwise stated.
IXYS reserves the right to change limits, test conditions and dimensions

Features
- International standard package
- Direct copper bonded Al_2O_3-ceramic with copper base plate
- Planar passivated chips
- Isolation voltage 3600 V~
- UL registered E 72873

Applications
- Supplies for DC power equipment
- DC supply for PWM inverter
- Field supply for DC motors
- Battery DC power supplies

Advantages
- Simple mounting
- Improved temperature and power cycling
- Reduced protection circuits

Dimensions in mm (1 mm = 0.0394")



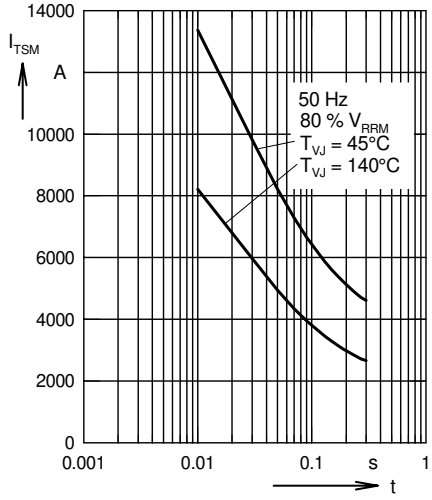


Fig. 1 Surge overload current
I_{FSM}: Crest value, t: duration

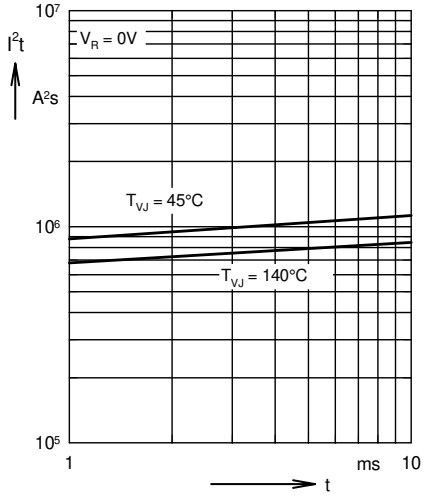


Fig. 2 I^2t versus time (1-10 ms)

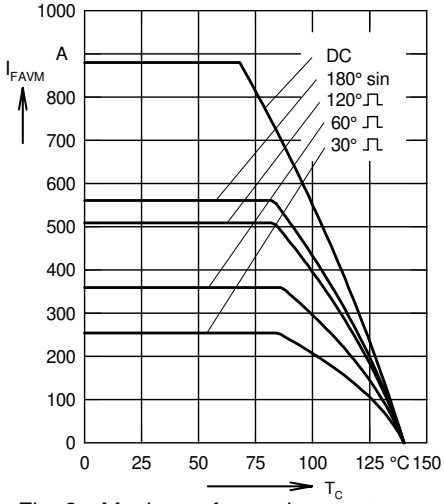


Fig. 3 Maximum forward current at case temperature

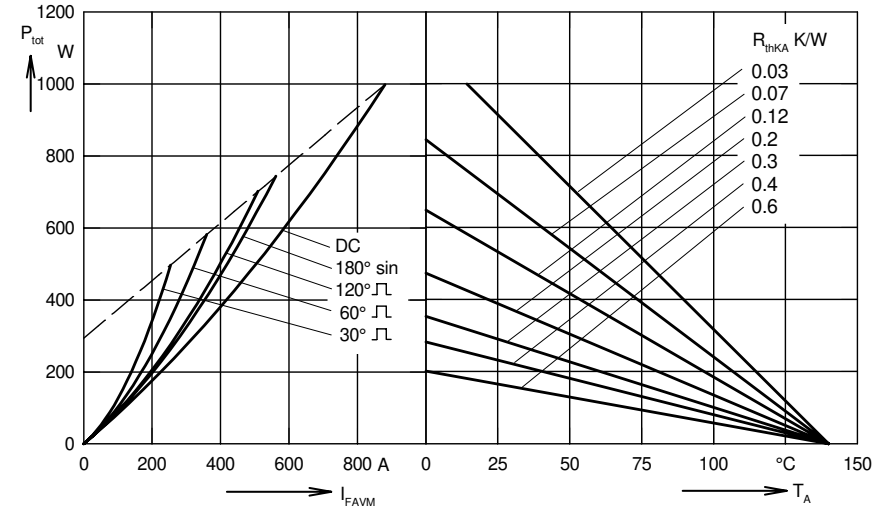


Fig. 4 Power dissipation versus forward current and ambient temperature

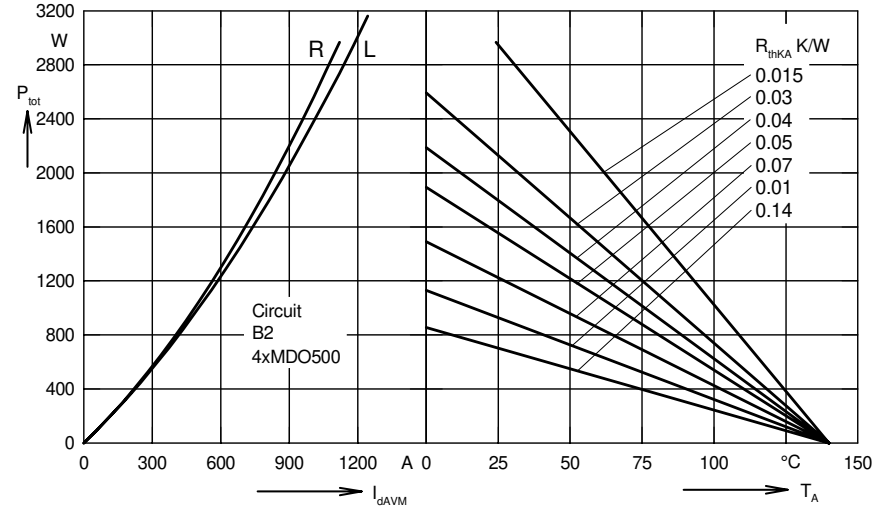


Fig. 5 Single phase rectifier bridge: Power dissipation versus direct output current and ambient temperature
R = resistive load
L = inductive load

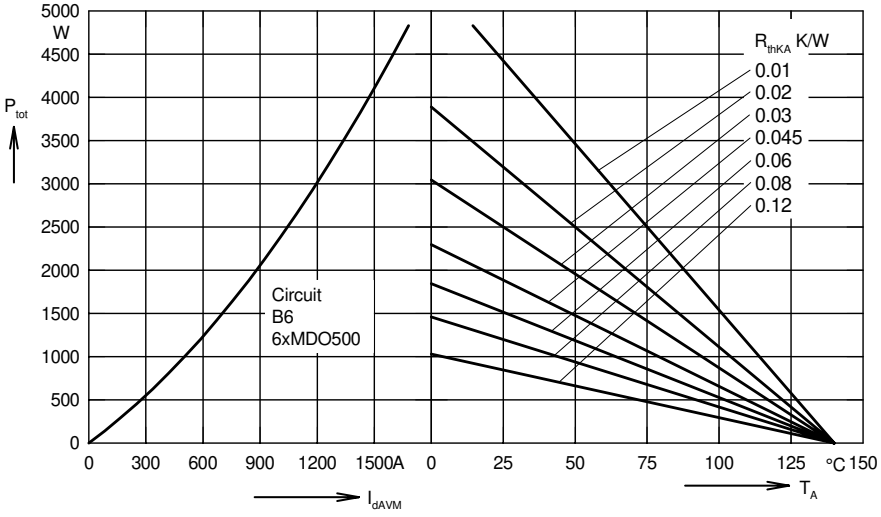


Fig. 6 Three phase rectifier bridge: Power dissipation versus direct output current and ambient temperature

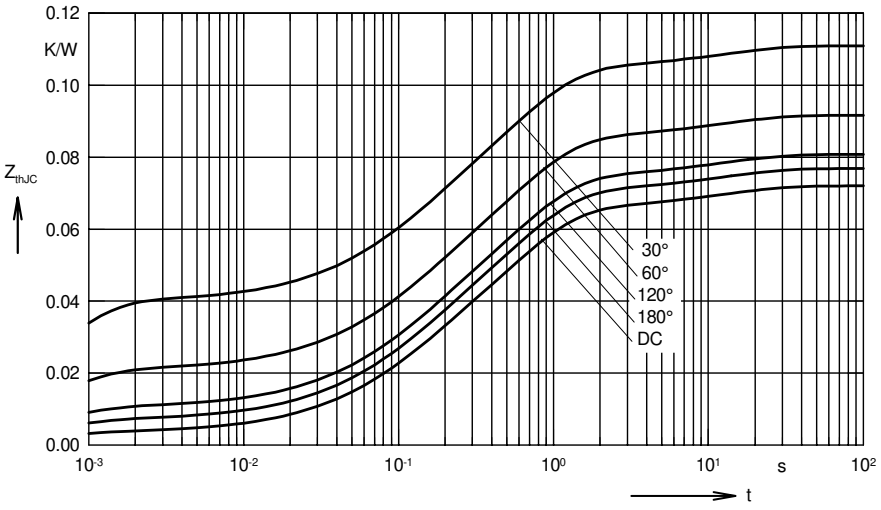


Fig. 7 Transient thermal impedance junction to case

R_{thJC} for various conduction angles d:

d	R_{thJC} (K/W)
DC	0.072
180°	0.0768
120°	0.081
60°	0.092
30°	0.111

Constants for Z_{thJC} calculation:

i	R_{thi} (K/W)	t_i (s)
1	0.0035	0.0054
2	0.0186	0.098
3	0.0432	0.54
4	0.0067	12

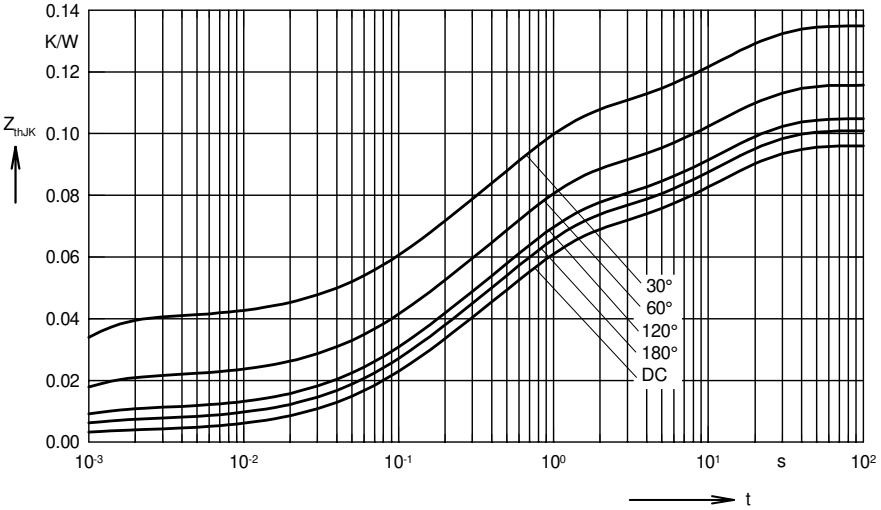


Fig. 8 Transient thermal impedance junction to heatsink

R_{thJK} for various conduction angles d:

d	R_{thJK} (K/W)
DC	0.096
180°	0.1
120°	0.105
60°	0.116
30°	0.135

Constants for Z_{thJK} calculation:

i	R_{thi} (K/W)	t_i (s)
1	0.0035	0.0054
2	0.0186	0.098
3	0.0432	0.54
4	0.0067	12
5	0.024	12