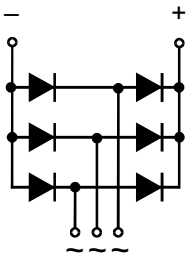
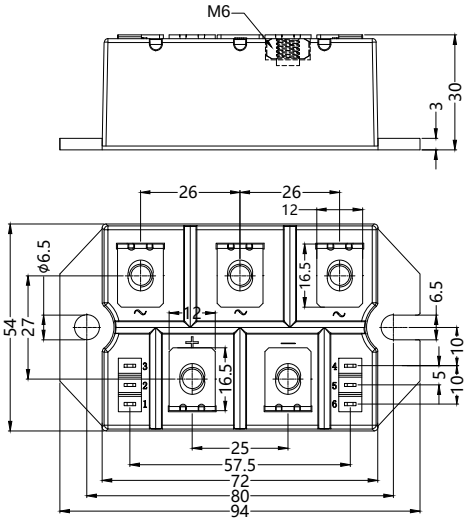
S3PDB200N16

Three Phase Rectifier Modules



Type	V_{RSM} V	V_{RRM} V
S3PDB200N08	900	800
S3PDB200N12	1300	1200
S3PDB200N14	1500	1400
S3PDB200N16	1700	1600
S3PDB200N18	1900	1800
S3PDB200N20	2100	2000
S3PDB200N22	2300	2200

Dimensions in mm (1mm=0.0394")



Symbol	Test Conditions		Maximum Ratings	Unit
I_{dav}	T_C=100°C, module		200	A
I_{FSM}	T_{VJ}=45°C V_R=0	t=10ms (50Hz), sine t=8.3ms (60Hz), sine	2240 2640	A
	T_{VJ}=T_{VJM} V_R=0	t=10ms(50Hz), sine t=8.3ms(60Hz), sine	2000 2200	
I^2t	T_{VJ}=45°C V_R=0	t=10ms (50Hz), sine t=8.3ms (60Hz), sine	31360 36000	A^2s
	T_{VJ}=T_{VJM} V_R=0	t=10ms(50Hz), sine t=8.3ms(60Hz), sine	24960 25040	
T_{VJ} T_{VJM} T_{stg}			-40...+150 150 -40...+125	°C
V_{ISOL}	50/60Hz, RMS I_{ISOL}≤1mA	t=1min t=1s	2500 3000	V~
M_d	Mounting torque (M6) Terminal connection torque (M6)		5 ± 15% 5 ± 15%	Nm
Weight	typical		262	g

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Symbol	Test Conditions	Characteristic Values	Unit
I_R	$V_R=V_{RRM}$; $T_{VJ}=25^oC$ $V_R=V_{RRM}$; $T_{VJ}=T_{VJM}$	≤ 0.3 ≤ 5	mA
V_F	I_F=200A; $T_{VJ}=25^oC$	≤1.23	V
V_{TO}	For power-loss calculations only	0.8	V
r_T	$T_{VJ}=T_{VJM}$	2.2	mΩ
R_{thJC}	per diode, 120° per module	0.45 0.075	K/W
R_{thJK}	per diode, 130° per module	0.6 0.1	K/W
d_S	Creeping distance on surface	10	mm
d_A	Creepage distance in air	9.4	mm
a	Max. allowable acceleration	50	m/s^2

FEATURES

* Package with screw terminals
* Isolation voltage 3000 V~
* Glass passivated chips
* Blocking voltage up to 2200 V
* Low forward voltage drop
* UL File NO.E310749
* RoHS compliant

APPLICATIONS

* Supplies for DC power equipment
* Input rectifiers for PWM inverter
* Battery DC power supplies
* Field supply for DC motors

ADVANTAGES

* Easy to mount with two screws
* Space and weight savings
* Improved temperature and power cycling

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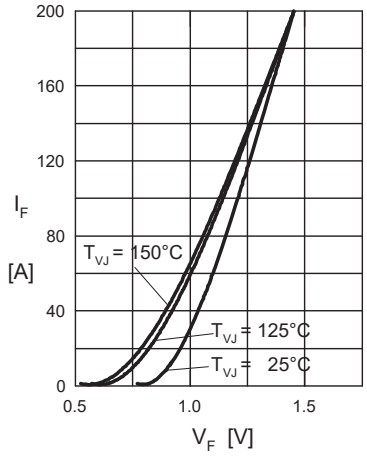

Fig. 1 Forward current vs. voltage drop per diode

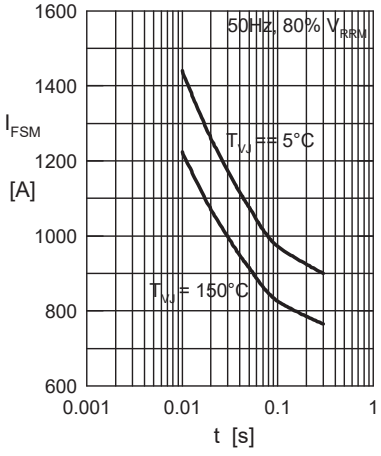

Fig. 2 Surge overload current vs. time per diode

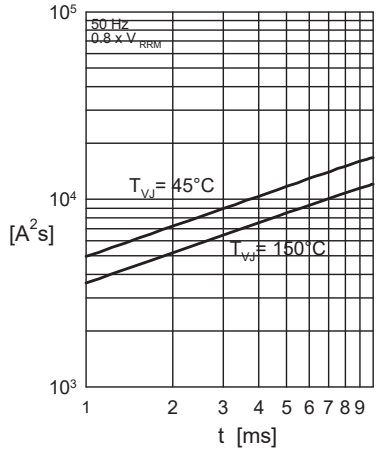

Fig. 3 I^2t vs. time per diode

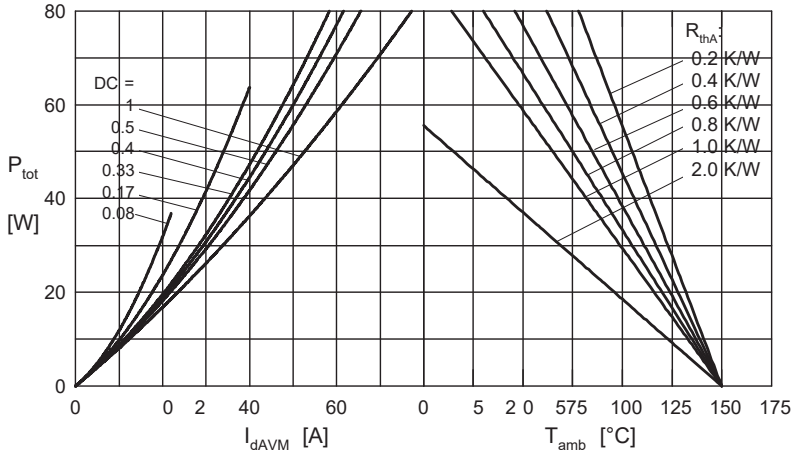

Fig. 4 Power dissipation vs. forward current and ambient temperature per diode

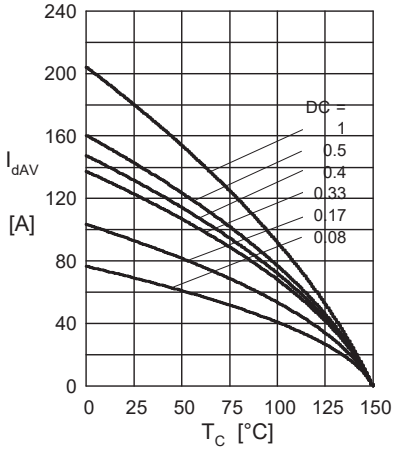

Fig. 5 Max. forward current vs. case temperature per diode

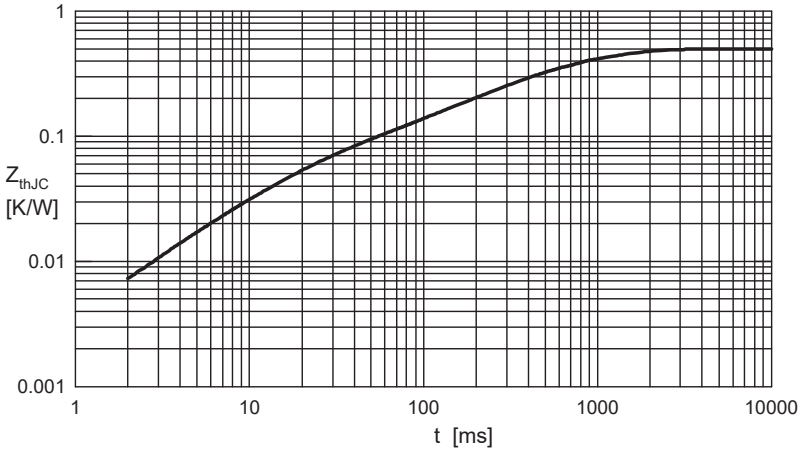

Fig. 6 Transient thermal impedance junction to case vs. time per diode

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