

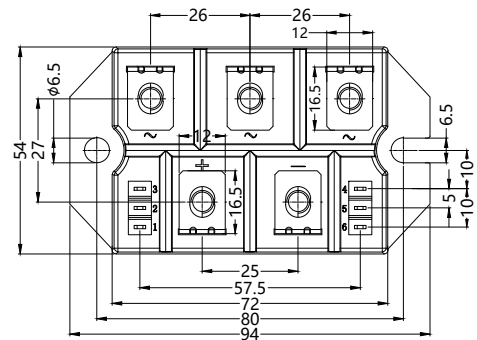
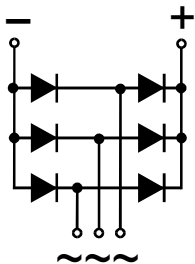
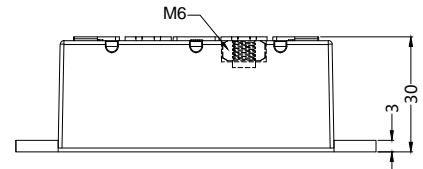
S3PDB250N18

Three Phase Rectifier Modules

Dimensions in mm (1mm=0.0394")



Type	V _{RSM} V	V _{RRM} V
S3PDB250N08	900	800
S3PDB250N12	1300	1200
S3PDB250N14	1500	1400
S3PDB250N16	1700	1600
S3PDB250N18	1900	1800



Symbol	Test Conditions	Maximum Ratings	Unit
I _{dav}	T _C =100°C, module	250	A
I _{FSM}	T _{VJ} =45°C V _R =0 t=10ms (50Hz), sine t=8.3ms (60Hz), sine	2800 3300	A
	T _{VJ} =T _{VJM} V _R =0 t=10ms(50Hz), sine t=8.3ms(60Hz), sine	2500 2750	
i ² t	T _{VJ} =45°C V _R =0 t=10ms (50Hz), sine t=8.3ms (60Hz), sine	39200 45000	A ² s
	T _{VJ} =T _{VJM} V _R =0 t=10ms(50Hz), sine t=8.3ms(60Hz), sine	31200 31300	
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

Sirectifier®

S3PDB250N18

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Symbol	Test Conditions	Characteristic Values	Unit
I_R	$V_R=V_{RRM}; T_{VJ}=25^{\circ}\text{C}$ $V_R=V_{RRM}; T_{VJ}=T_{VJM}$	≤ 0.3 ≤ 5	mA
V_F	$I_F=250\text{A}; T_{VJ}=25^{\circ}\text{C}$	≤ 1.20	V
V_{TO}	For power-loss calculations only	0.8	V
r_T	$T_{VJ}=T_{VJM}$	2.2	m Ω
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 1800 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

S3PDB250N16

Three Phase Rectifier Modules

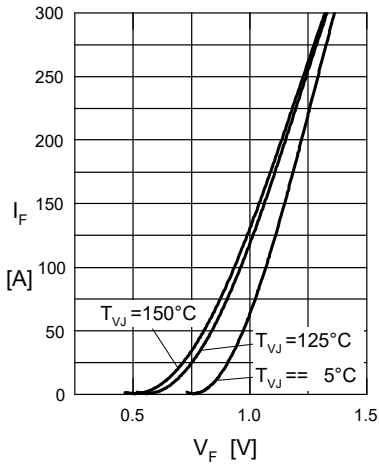


Fig. 1 Forward current vs. voltage drop per diode

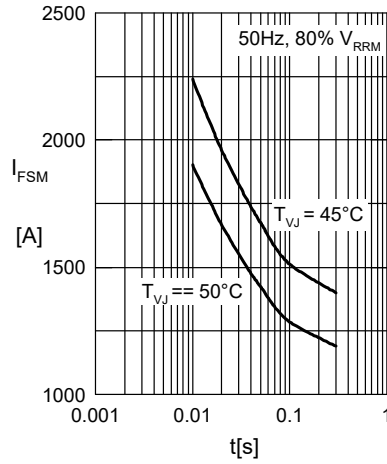


Fig. 2 Surge overload current vs. time per diode

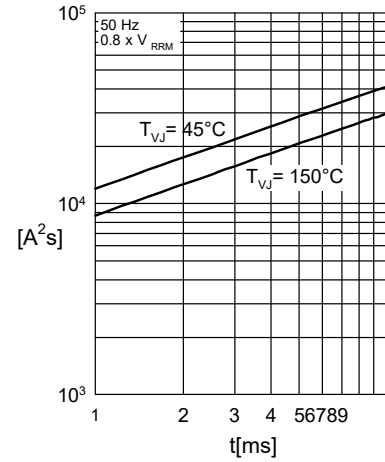


Fig. 3 I^2t vs. time per diode

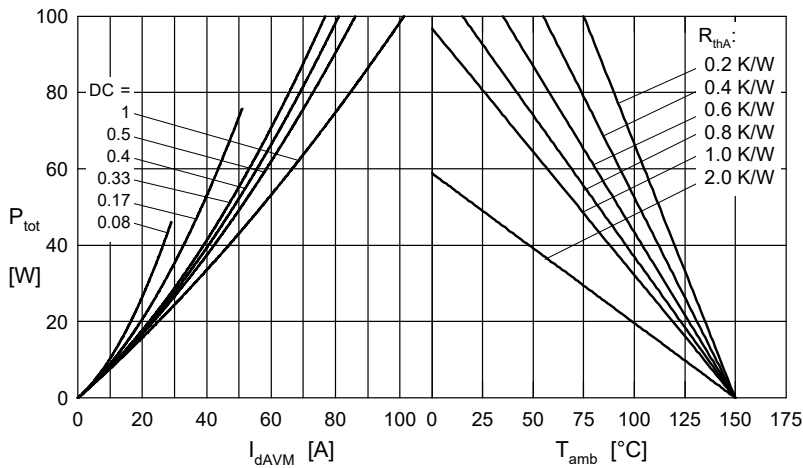


Fig. 4 Power dissipation vs. forward current and ambient temperature per diode

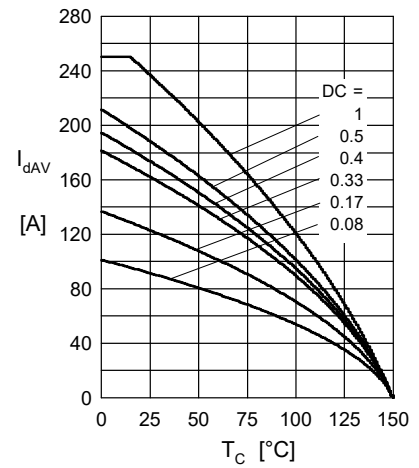


Fig. 5 Max. forward current vs. case temperature per diode

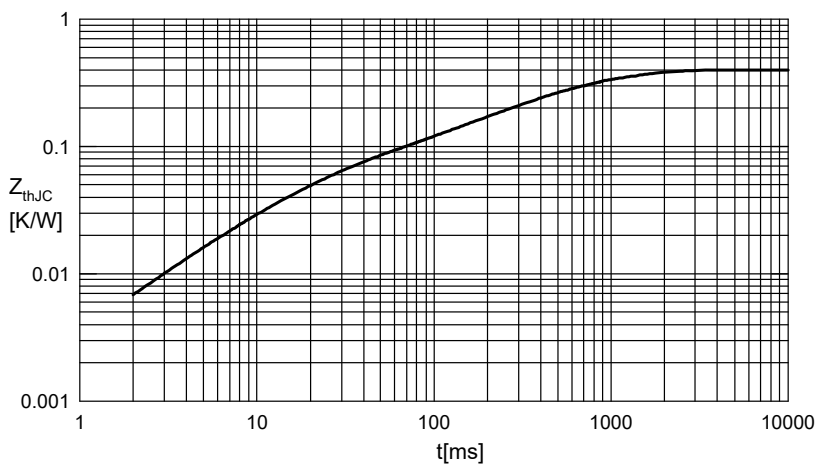


Fig. 6 Transient thermal impedance junction to case vs. time per diode