

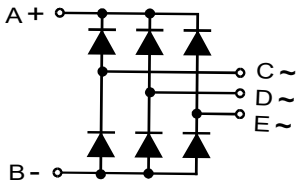
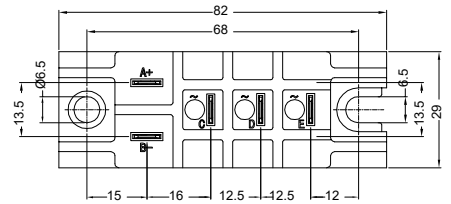
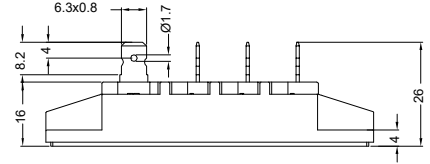
S3PDB70N16

Three Phase Rectifier Modules



Type	V _{RSM} V	V _{RRM} V
S3PDB70N08	900	800
S3PDB70N12	1300	1200
S3PDB70N14	1500	1400
S3PDB70N16	1700	1600
S3PDB70N18	1900	1800

Dimensions in mm (1mm=0.0394")



Symbol	Test Conditions	Maximum Ratings	Unit
I _{dav}	T _C =100°C, module	70	A
I _{FSM}	T _{VJ} =45°C V _R =0 t=10ms (50Hz), sine t=8.3ms (60Hz), sine	550 600	A
	T _{VJ} =T _{VJM} V _R =0 t=10ms(50Hz), sine t=8.3ms(60Hz), sine	500 550	
i ² _t	T _{VJ} =45°C V _R =0 t=10ms (50Hz), sine t=8.3ms (60Hz), sine	1520 1520	A ² s
	T _{VJ} =T _{VJM} V _R =0 t=10ms(50Hz), sine t=8.3ms(60Hz), sine	1250 1250	
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 (M5) (10-32 UNF)	5±15% 44±15%	Nm lb.in.
Weight	typical	92	g

Sirectifier®

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Symbol	Test Conditions	Characteristic Values	Unit
I_R	$V_R=V_{RRM}; T_{VJ}=25^{\circ}C$ $V_R=V_{RRM}; T_{VJ}=T_{VJM}$	≤ 0.5 ≤ 10	mA
V_F	$I_F=70A; T_{VJ}=25^{\circ}C$	≤ 1.2	V
V_{TO}	For power-loss calculations only	0.8	V
r_T		8	m Ω
R_{thJC}	per diode per module	1.45 0.36	K/W
R_{thJK}	per diode per module	1.9 0.48	K/W
d_s	Creeping distance on surface	16.1	mm
d_A	Creepage distance in air	7.5	mm
a	Max. allowable acceleration	50	m/s ²

FEATURES

- * Package with copper base plate
- * Isolation voltage 3000 V~
- * Glass passivated chips
- * 1/4" fast-on power terminals
- * 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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Three Phase Rectifier Modules

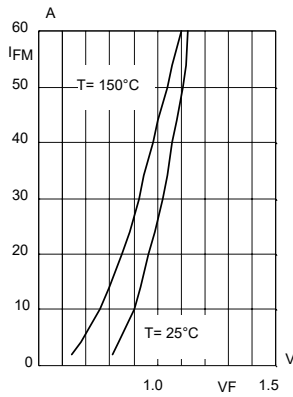


Fig. 1 Forward current versus voltage drop per diode

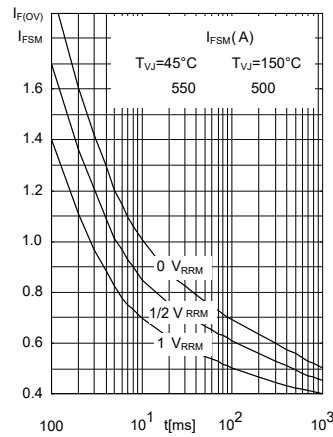


Fig. 2 Surge overload current per diode IFSM: Crest value. t: duration

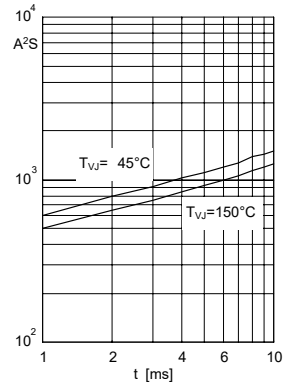


Fig. 3 i^2dt versus time (1-10ms) per diode

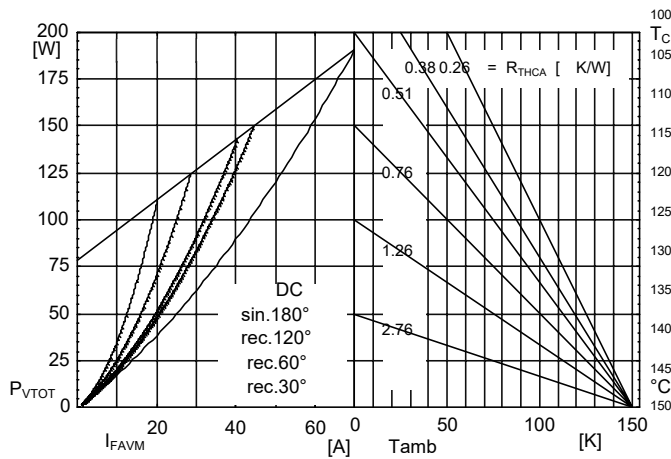


Fig. 4 Power dissipation versus direct output current and ambient temperature

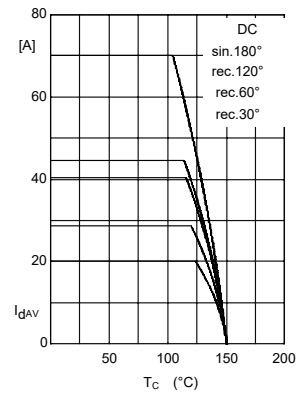


Fig. 5 Maximum forward current at case temperature

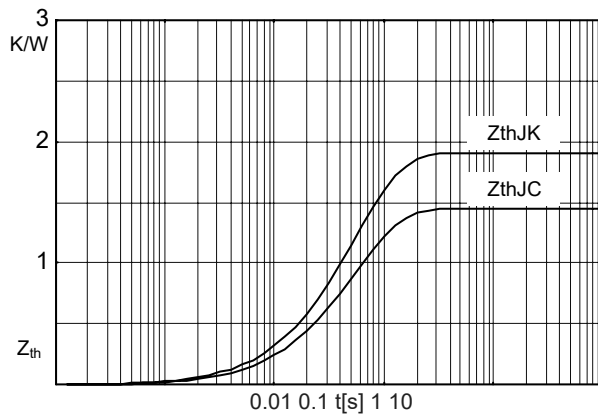


Fig. 6 Transient thermal impedance per diode, calculated

