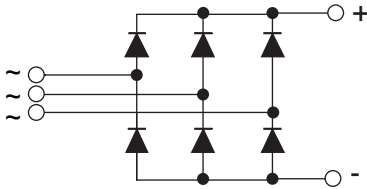


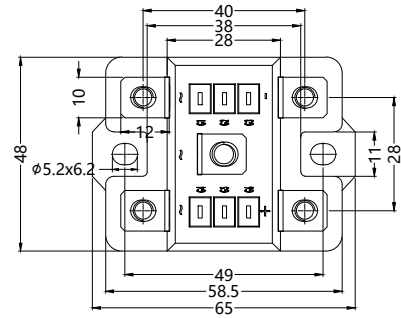
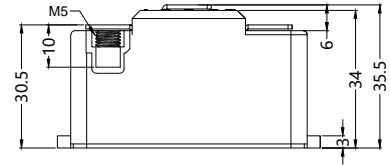
S3PDB61N18

Three Phase Rectifier Modules



Type	V _{RSM} V	V _{RRM} V
S3PDB61N08	900	800
S3PDB61N12	1300	1200
S3PDB61N14	1500	1400
S3PDB61N16	1700	1600
S3PDB61N18	1900	1800

Dimensions in mm (1mm=0.0394")



Symbol	Test Conditions	Maximum Ratings	Unit
I _{dav}	T _C =100°C, module	1	A
I _{dav}	T _A =45°C (R _{thCA} =0.6K/W), module	F4	
I _{FSM}	T _{VJ} =45°C V _R =0 t=10ms (50Hz), sine t=8.3ms (60Hz), sine	50 100	A
	T _{VJ} =T _{VJM} V _R =0 t=10ms(50Hz), sine t=8.3ms(60Hz), sine	50 60	
I ² t	T _{VJ} =45°C V _R =0 t=10ms (50Hz), sine t=8.3ms (60Hz), sine	100 100	A ² s
	T _{VJ} =T _{VJM} V _R =0 t=10ms(50Hz), sine t=8.3ms(60Hz), sine	100 100	
T _{VJ} T _{VJM} T _{stg}		-40...+150 150 -40...+150	°C
V _{ISOL}	50/60Hz, RMS I _{ISOL} ≤1mA t=1min t=1s	2500 3000	V~
M _d	Mounting torque (M5) Terminal connection torque (M5)	5 ± 15% 5 ± 15%	Nm
Weight	typ.	160	g



Sirectifier®

S3PDB61N18

Three Phase Rectifier Modules

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	$I_F=10\text{A}; T_{VJ}=25^{\circ}\text{C}$	≤ 1.65	V
V_{TO}	For power-loss calculations only	0.85	V
r_T	$T_{VJ}=T_{VJM}$	5	m Ω
R_{thJC}	per diode per module	0.11 0.11	K/W
R_{thJK}	per diode per module	1.1 0.6	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~
- * Blocking voltage up to 1800 V
- * Low forward voltage drop

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

S3PDB61N18

Three Phase Rectifier Modules

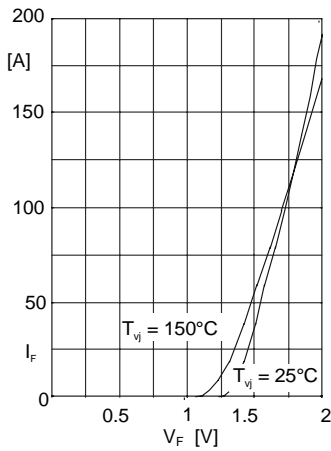


Fig. 1 Forward current versus voltage drop per diode

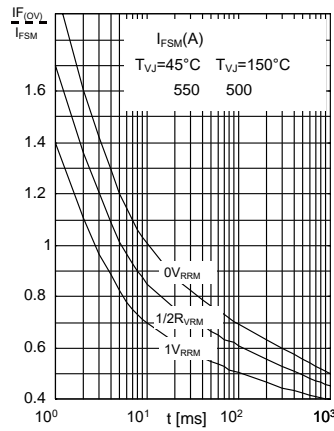


Fig. 2 Surge overload current per diode I_{FSM} : Crest value. t : duration

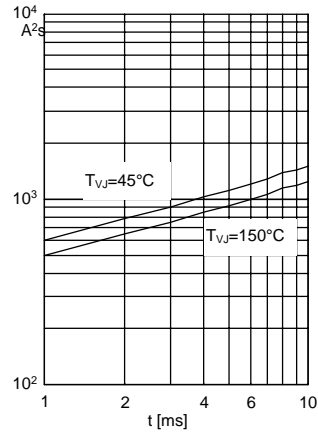


Fig. 3 $\int i^2 dt$ versus time (1-10ms) per diode (or thyristor)

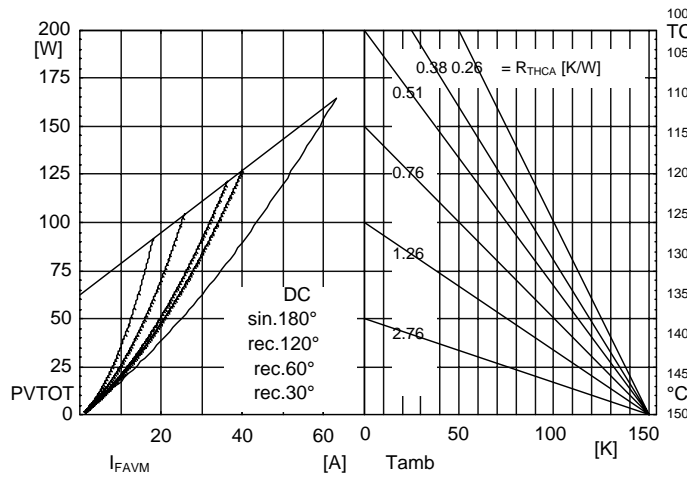


Fig. 4 Power dissipation versus direct output current and ambient temperature

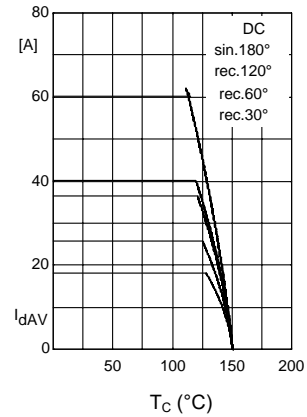


Fig. 5 Maximum forward current at case temperature

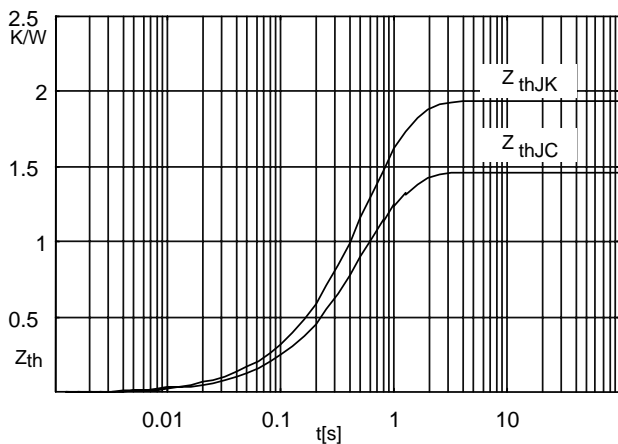


Fig. 6 Transient thermal impedance per diode calculated

