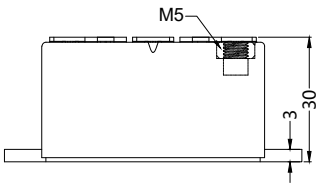
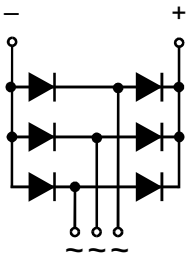
S3PDB80

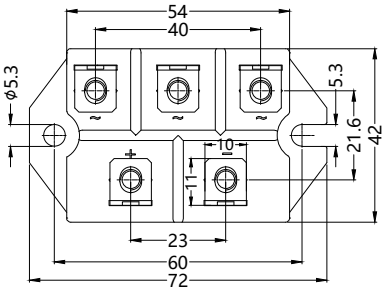
Three Phase Rectifier Modules

Type	V_{RSM} V	V_{RRM} V
S3PDB80N08	900	800
S3PDB80N12	1300	1200
S3PDB80N14	1500	1400
S3PDB80N16	1700	1600
S3PDB80N18	1900	1800

Dimensions in mm







Symbol	Test Conditions		Maximum Ratings	Unit
I_{dav} I_{dav}	T_C=110°C, module T_A=45°C (R_{thCA}=0.6K/W), module		80 57	A
I_{FSM}	T_{VJ}=45°C V_R=0	t=10ms (50Hz), sine t=8.3ms (60Hz), sine	750 820	A
	T_{VJ}=T_{VJM} V_R=0	t=10ms(50Hz), sine t=8.3ms(60Hz), sine	670 740	
I^2t	T_{VJ}=45°C V_R=0	t=10ms (50Hz), sine t=8.3ms (60Hz), sine	2800 3370	A^2s
	T_{VJ}=T_{VJM} V_R=0	t=10ms(50Hz), sine t=8.3ms(60Hz), sine	2250 2710	
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) Terminal connection torque (M5)		5 ± 15% 5 ± 15%	Nm
Weight	typ.		160	g

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Symbol	Test Conditions	Characteristic Values	Unit
I_R	$V_R=V_{RRM}$; TVJ=25°C VR=VRRM; TVJ=TVJM	≤0.3 ≤ 5	mA
V_F	IF=80A; TVJ=25°C	≤ 1.25	V
V_{FO}	For power-loss calculations only	0.8	V
r_F	TVJ=TVJM	5	mΩ
R_{thJC}	per diode per module	1.1 0.183	K/W
R_{thJK}	per diode per module	1.52 0.253	K/W
dS	Creeping distance on surface	10	mm
dA	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. 310749
* 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

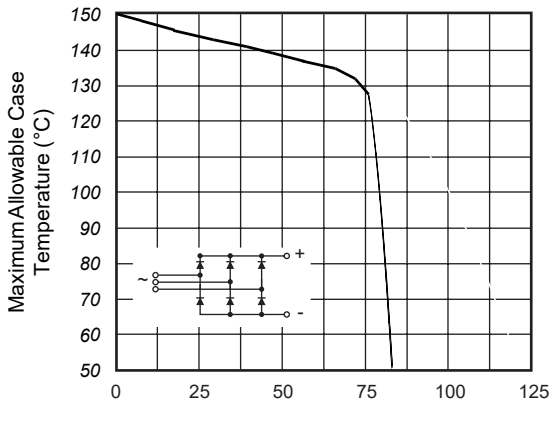


Fig. 1 - Current Ratings Characteristic

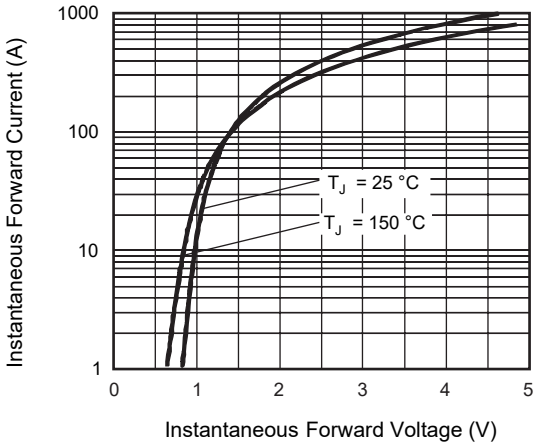
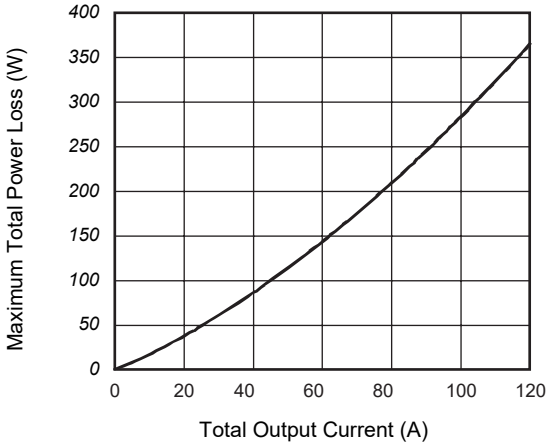


Fig. 2 - Forward Voltage Drop Characteristics



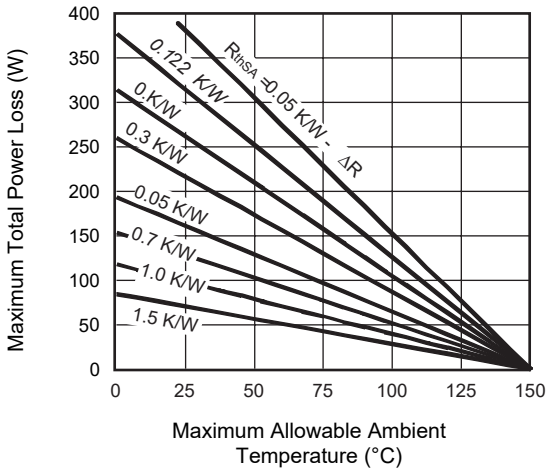


Fig. 3 - Total Power Loss Characteristics

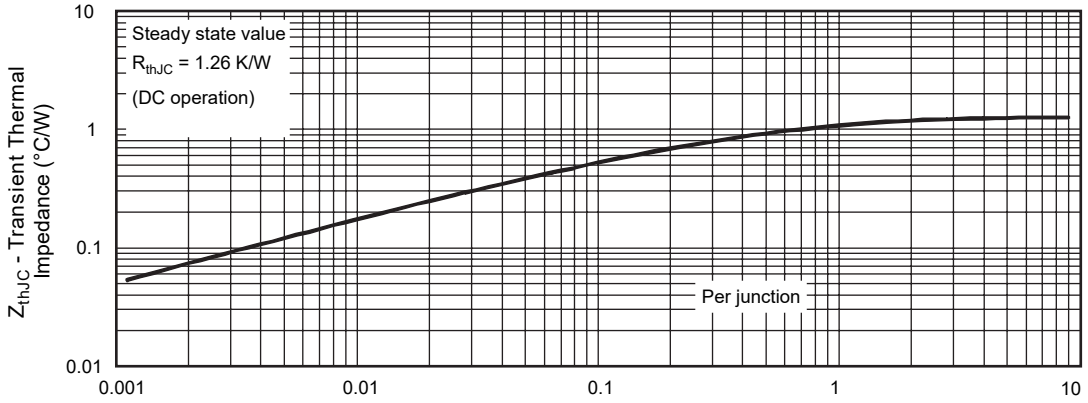


Fig.4 - Thermal Impedance Z_{thJC} Characteristic

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