

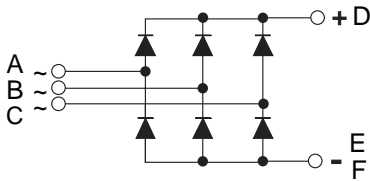
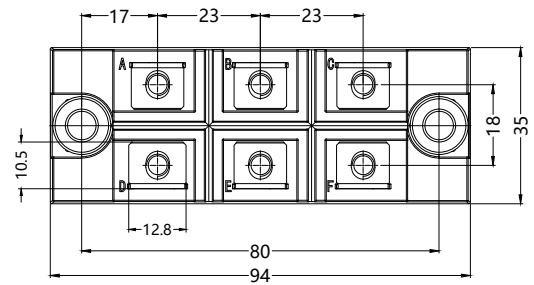
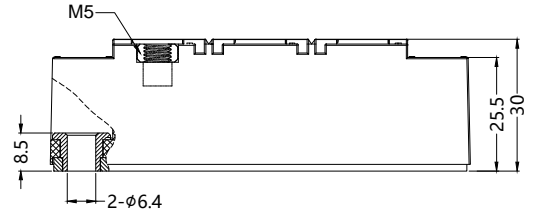
S3PDB161N16

Three Phase Rectifier Modules



Type	V _{RSM} V	V _{RRM} V
S3PDB161N08	900	800
S3PDB161N12	1300	1200
S3PDB161N14	1500	1400
S3PDB161N16	1700	1600
S3PDB161N18	1900	1800

Dimensions in mm



Symbol	Test Conditions	Maximum Ratings	Unit
I _{dav}	T _C =100°C, module	160	A
I _{dav}	T _A =45°C (R _{thCA} =0.6K/W), module	200	
I _{FSM}	T _{VJ} =45°C V _R =0 t=10ms (50Hz), sine t=8.3ms (60Hz), sine	1430 1500	A
	T _{VJ} =T _{VJM} V _R =0 t=10ms(50Hz), sine t=8.3ms(60Hz), sine	1280 1350	
P _{RSM}	Per diode chip, T _{VJ} = 25°C , t _p =10s	6.70	KW
I ² t	T _{VJ} =45°C V _R =0 t=10ms (50Hz), sine t=8.3ms (60Hz), sine	10200 9300	A ² s
	T _{VJ} =T _{VJM} V _R =0 t=10ms(50Hz), sine t=8.3ms(60Hz), sine	9180 8370	
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 4000	V~
M _d	Mounting torque (M5) Terminal connection torque (M5)	5 ± 15% 5 ± 15%	Nm
Weight	typ.	176	g

Sirectifier®

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Symbol	Test Conditions	Characteristic Values	Unit
I_R	$V_R=V_{RRM}; T_{VJ}=25^{\circ}\text{C}$ $V_R=V_{RRM}; T_{VJ}=T_{VJM}$	≤ 0.4 ≤ 6	mA
V_F	$I_F=160\text{A}; T_{VJ}=25^{\circ}\text{C}$	≤ 1.40	V
V_{FO}	For power-loss calculations only	0.75	V
r_F	$T_{VJ}=T_{VJM}$	3.7	m Ω
R_{thJC}	per diode per module	0.73 0.122	K/W
R_{thJK}	per diode per module	0.74 0.123	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 4000 V~
- * Blocking voltage up to 1800 V
- * Low forward voltage drop
- * 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

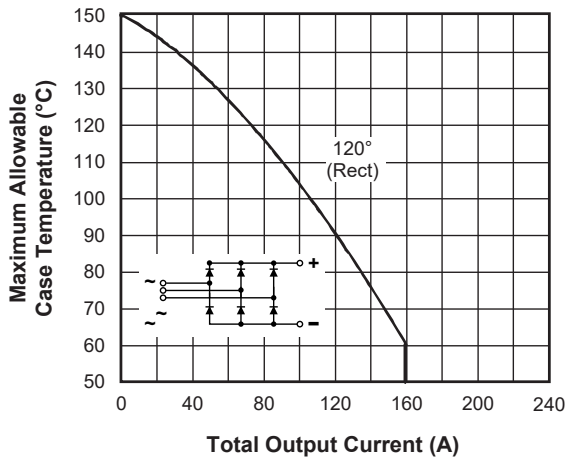


Fig. 1 - Current Ratings Characteristic

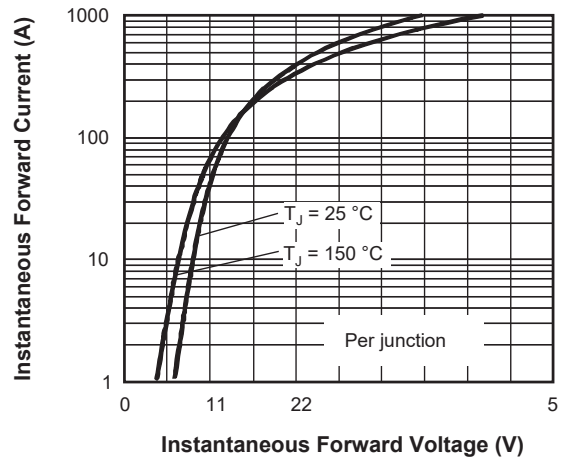


Fig. 2 - Forward Voltage Drop Characteristics

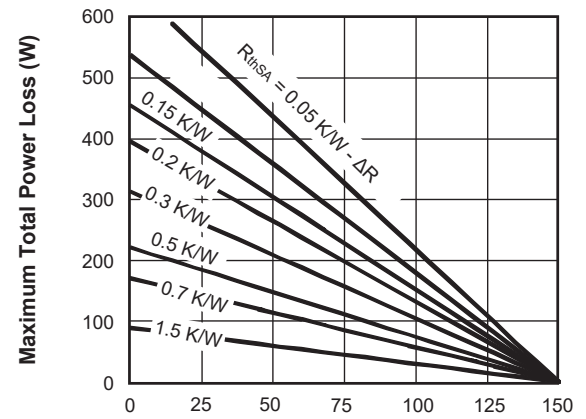
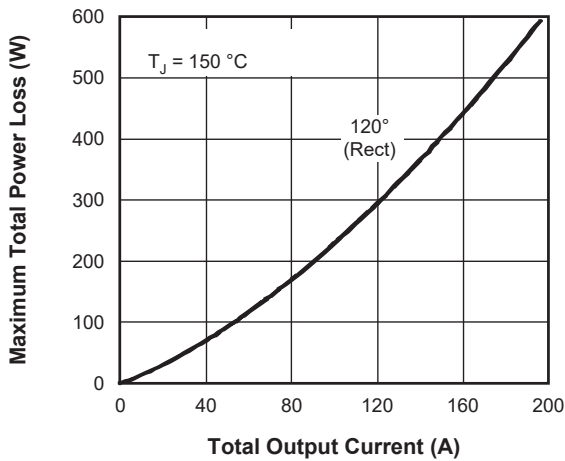


Fig. 3 - Total Power Loss Characteristics

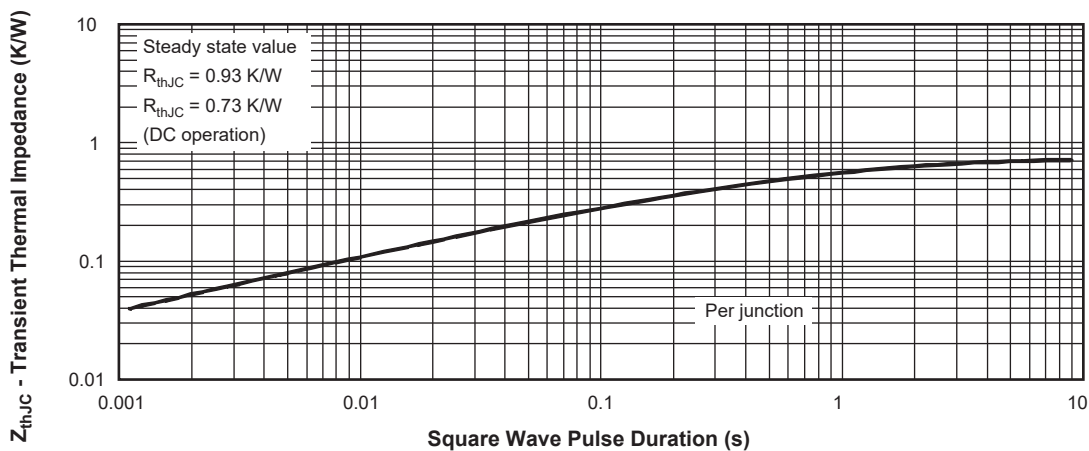


Fig. 4 - Thermal Impedance Z_{thJC} Characteristics