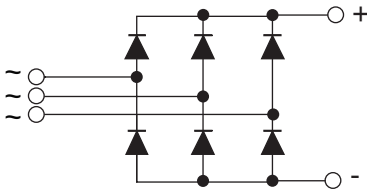


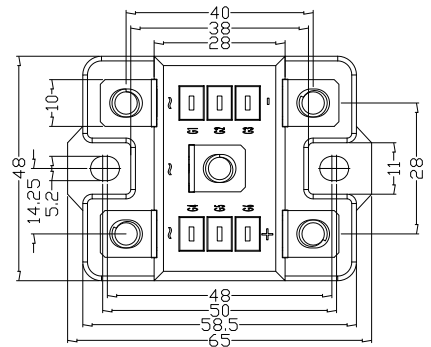
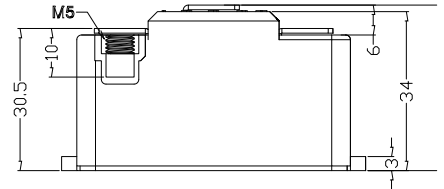
S3PDB101

Three Phase Rectifier Modules



Type	V_{RSM} V	V_{RRM} V
S3PDB101N08	900	800
S3PDB101N12	1300	1200
S3PDB101N14	1500	1400
S3PDB101N16	1700	1600
S3PDB101N18	1900	1800

Dimensions in mm (1mm=0.0394")



Symbol	Test Conditions		Maximum Ratings	Unit
I_{dV}	$T_C=100^{\circ}\text{C}$, module		101	A
I_{dV}	$T_A=45^{\circ}\text{C}$ ($R_{thCA}=0.6\text{K/W}$), module		24	
I_{FSM}	$T_{VJ}=45^{\circ}\text{C}$	$t=10\text{ms}$ (50Hz), sine	1250	A
	$V_R=0$	$t=8.3\text{ms}$ (60Hz), sine	1500	
	$T_{VJ}=T_{VJM}$	$t=10\text{ms}$ (50Hz), sine	1050	
	$V_R=0$	$t=8.3\text{ms}$ (60Hz), sine	1260	
I^2t	$T_{VJ}=45^{\circ}\text{C}$	$t=10\text{ms}$ (50Hz), sine	6000	A^2s
	$V_R=0$	$t=8.3\text{ms}$ (60Hz), sine	6600	
	$T_{VJ}=T_{VJM}$	$t=10\text{ms}$ (50Hz), sine	5000	
	$V_R=0$	$t=8.3\text{ms}$ (60Hz), sine	6000	
T_{VJ}			-40...+150	$^{\circ}\text{C}$
T_{VJM}			150	
T_{stg}			-40...+150	
V_{ISOL}	50/60Hz, RMS	$t=1\text{min}$	2500	V~
	$I_{ISOL}\leq 1\text{mA}$	$t=1\text{s}$	3000	
M_d	Mounting torque (M5)		$5 \pm 15\%$	Nm
	Terminal connection torque (M5)		$5 \pm 15\%$	
Weight	typ.		160	g

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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	$I_F = 150\text{A}; T_{VJ} = 25^{\circ}\text{C}$	≤ 1.35	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	0.85 0.14	K/W
R_{thJK}	per diode per module	1.01 0.168	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

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Three Phase Rectifier Modules

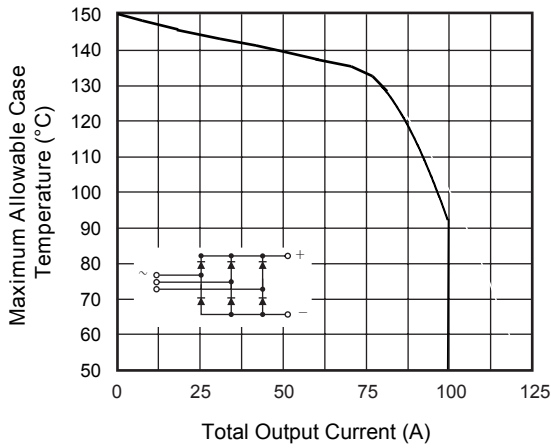


Fig. 1 - Current Ratings Characteristic

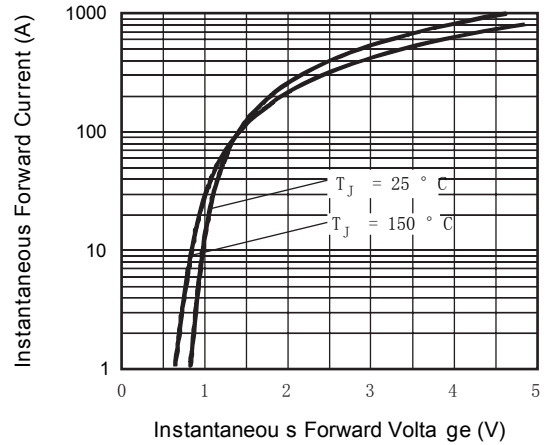


Fig. 2 - Forward Voltage Drop Characteristics

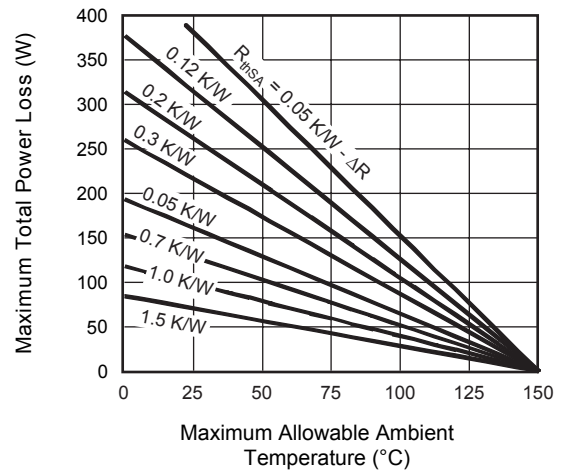
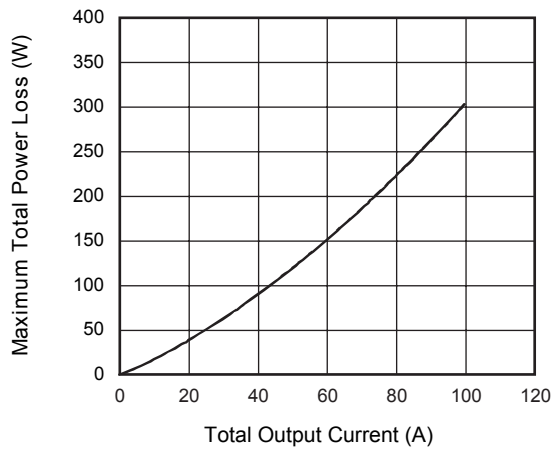


Fig. 3 - Total Power Loss Characteristics

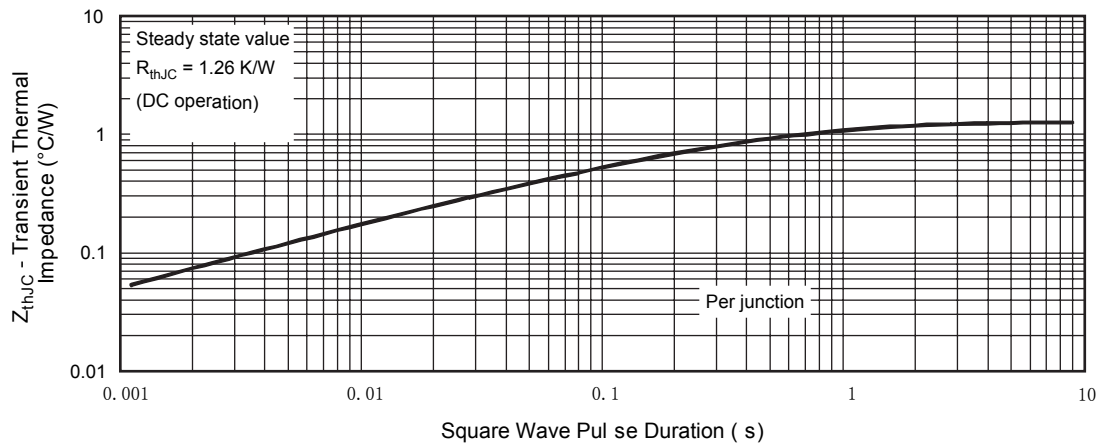


Fig. 4 - Thermal Impedance Z_{thJC} Characteristic

