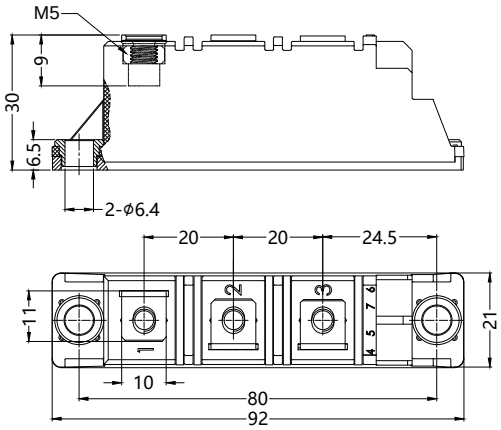
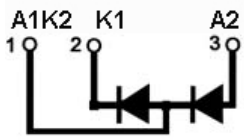
SDD120NxxB

Diode-Diode Modules

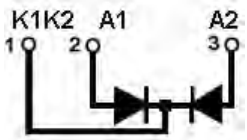
Type	V_{RSM} V	V_{RRM} V
SDD120N08B	900	800
SDD120N12B	1300	1200
SDD120N14B	1500	1400
SDD120N16B	1700	1600
SDD120N18B	1900	1800
SDD120N20B	2100	2000
SDD120N22B	2300	2200

Tolerance:±0.5mm
Dimensions in mm (1mm=0.0394")

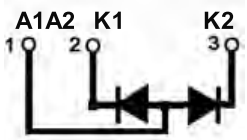




SDD



SDK



SDA

Symbol	Test Conditions		Maximum Ratings	Unit
I_{FRMS} I_{FAVM}	$T_{VJ}=T_{VJM}$ $T_C=100^oC$; 180° sine		188 120	A
I_{FSM}	$T_{VJ}=45^oC$ $V_R=0$	t=10ms (50Hz), sine t=8.3ms (60Hz), sine	2800 3300	A
	$T_{VJ}=T_{VJM}$ $V_R=0$	t=10ms(50Hz), sine t=8.3ms(60Hz), sine	2500 2750	
$\int i^2dt$	$T_{VJ}=45^oC$ $V_R=0$	t=10ms (50Hz), sine t=8.3ms (60Hz), sine	39200 45000	A^2s
	$T_{VJ}=T_{VJM}$ $V_R=0$	t=10ms(50Hz), sine t=8.3ms(60Hz), sine	31200 31300	
T_{VJ} T_{VJM} T_{stg}			-40...+150 150 -40...+125	°C
V_{ISOL}	50/60Hz, RMS $I_{ISOL}\leq 1mA$	t=1min t=1s	3000 3600	V~
M_d	Mounting torque (M5) Terminal connection torque (M5)		2.5-4/22-35 2.5-4/22-35	Nm/lb.in.
Weight	Typ.		105	g

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SDD120NxxB

Diode-Diode Modules

Symbol	Test Conditions	Characteristic Values	Unit
I_R	$T_{VJ}=T_{VJM}$; $V_R=V_{RRM}$	15	mA
V_F	I_F=360A; T_{VJ}=25°C	1.63	V
V_{TO}	For power-loss calculations only	0.75	V
r_T	$T_{VJ}=T_{VJM}$	1.95	mΩ
Q_S	T_{VJ}=125°C; I_F=50A; -di/dt=3A/us	170	uC
I_{RM}		45	A
R_{thJC}	per diode; DC current per module	0.30 0.145	K/W
R_{thJK}	per diode; DC current per module	0.50 0.245	K/W
d_S	Creepage distance on surface	12.7	mm
d_A	Strike distance through air	9.6	mm
a	Maximum allowable acceleration	50	m/s^2

FEATURES

* International standard package
* Copper base plate
* Glass passivated chips
* Isolation voltage 3600 V~
* UL file NO.310749
* RoHs compliant

APPLICATIONS

* Supplies for DC power equipment
* DC supply for PWM inverter
* Field supply for DC motors
* Battery DC power supplies

ADVANTAGES

* Space and weight savings
* Simple mounting
* Improved temperature and power cycling
* Reduced protection circuits

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Diode-Diode Modules

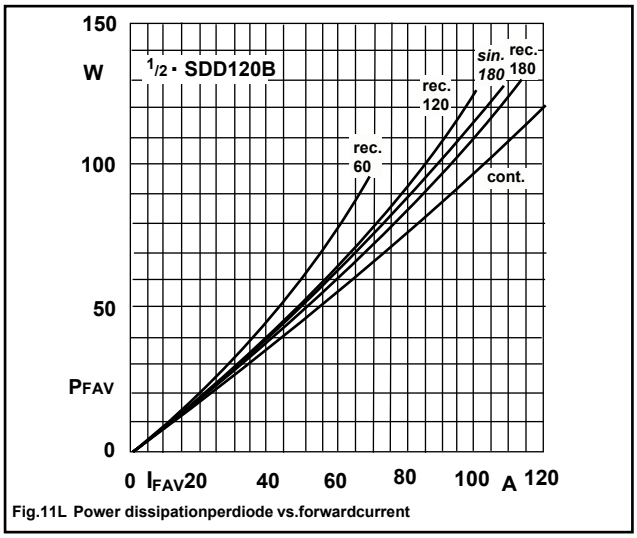

Fig.11L Power dissipationperdiode vs.forwardcurrent

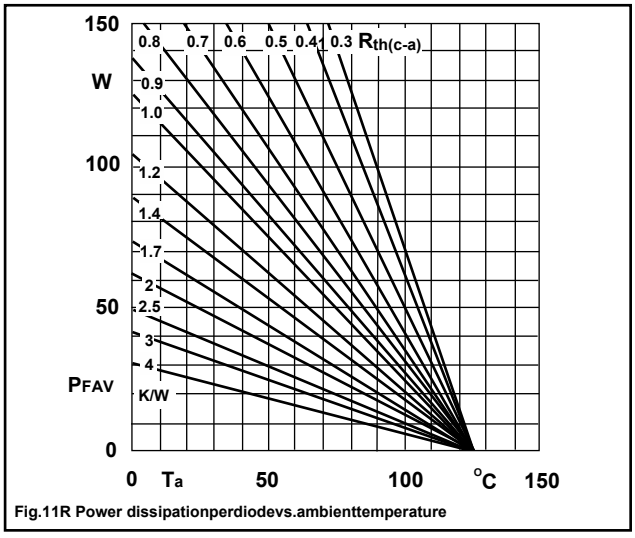

Fig.11R Power dissipationperdiodevs.ambienttemperature

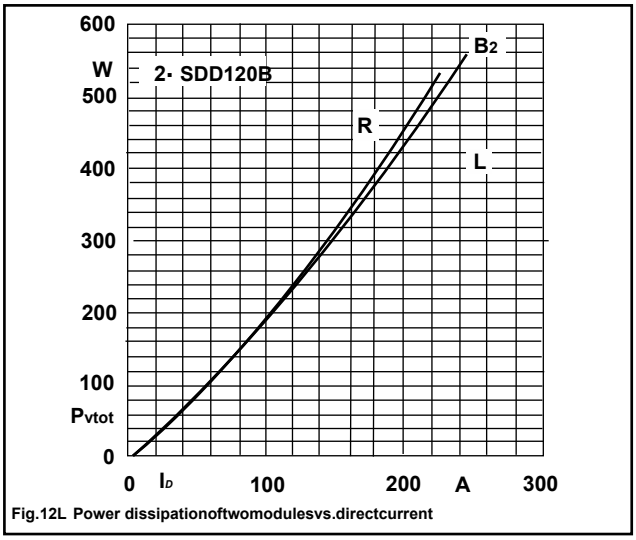

Fig.12L Power dissipationoftwomodulesvs.directcurrent

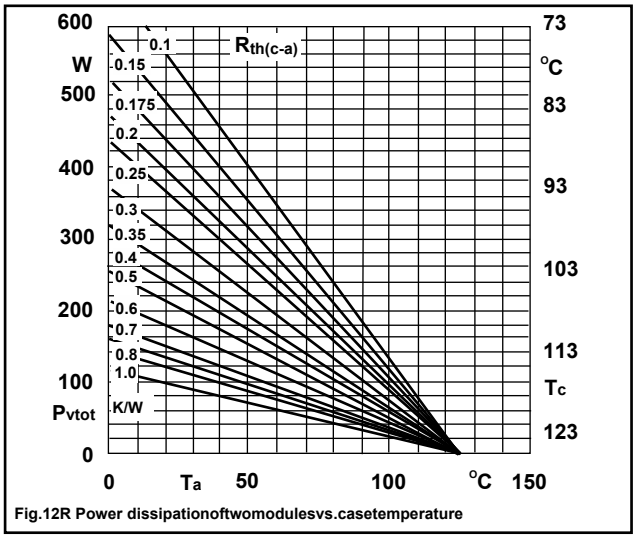

Fig.12R Power dissipationoftwomodulesvs.casetemperature

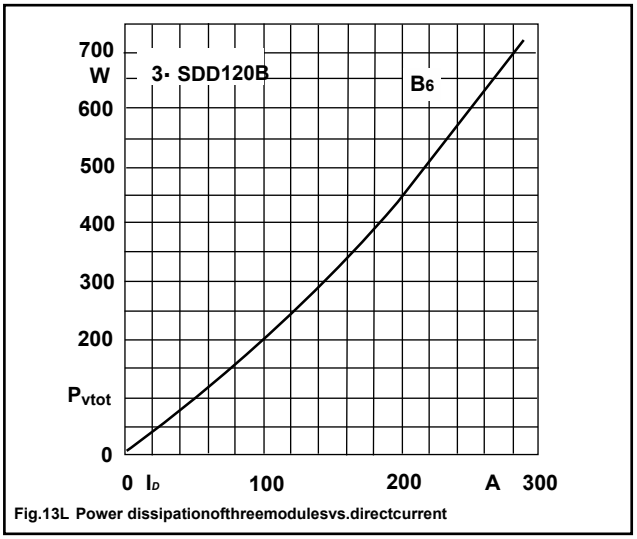

Fig.13L Power dissipationofthreemodulesvs.directcurrent

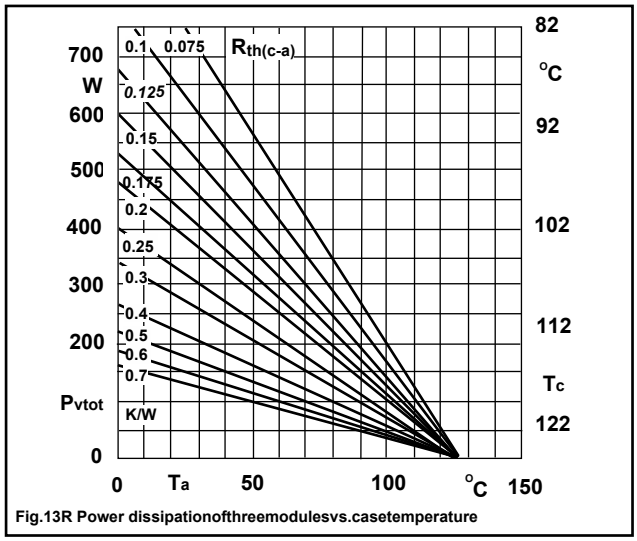

Fig.13R Power dissipationofthreemodulesvs.casetemperature

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Diode-Diode Modules

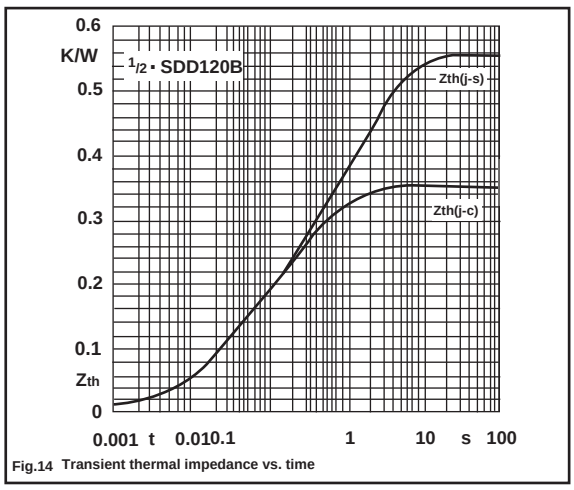

Fig.14 Transient thermal impedance vs. time

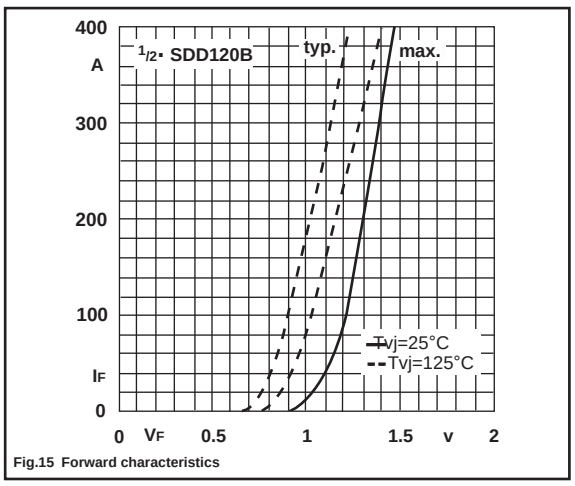

Fig.15 Forward characteristics

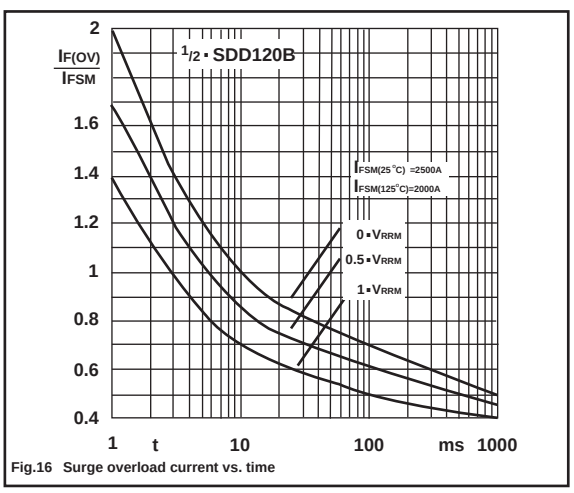

Fig.16 Surge overload current vs. time

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