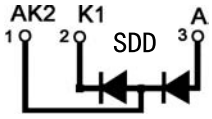
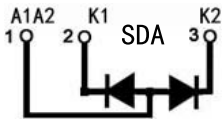
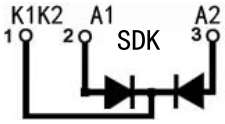
SDD90N22B

Diode-Diode Modules



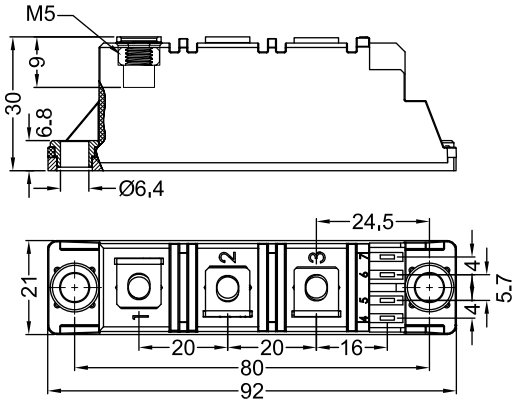






Type	V_{RSM} V	V_{RRM} V
SDD90N08B	900	800
SDD90N12B	1300	1200
SDD90N14B	1500	1400
SDD90N16B	1700	1600
SDD90N18B	1900	1800
SDD90N20B	2100	2000
SDD90N22B	2300	2200

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



Symbol	Test Conditions		Maximum Ratings	Unit
I_{FRMS} I_{FAVM}	$T_{VJ}=T_{VJM}$ $T_C=100^oC$; 180° sine		141 90	A
I_{FSM}	$T_{VJ}=45^oC$ $V_R=0$	t=10ms (50Hz), sine t=8.3ms (60Hz), sine	1600 1760	A
	$T_{VJ}=T_{VJM}$ $V_R=0$	t=10ms(50Hz), sine t=8.3ms(60Hz), sine	1440 1580	
$\int i^2dt$	$T_{VJ}=45^oC$ $V_R=0$	t=10ms (50Hz), sine t=8.3ms (60Hz), sine	11720 10650	A^2s
	$T_{VJ}=T_{VJM}$ $V_R=0$	t=10ms(50Hz), sine t=8.3ms(60Hz), sine	10660 9590	
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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SDD90N22B

Diode-Diode Modules

Symbol	Test Conditions	Characteristic Values	Unit
I_R	$T_{VJ}=T_{VJM}$; $V_R=V_{RRM}$	12	mA
V_F	I_F=270A; T_{VJ}=25°C	1.5	V
V_{TO}	For power-loss calculations only	0.85	V
r_T	$T_{VJ}=T_{VJM}$	2.6	mΩ
Q_S	T_{VJ}=125°C; I_F=50A; -di/dt=3A/us	150	uC
I_{RM}		42	A
R_{thJC}	per diode; DC current per module	0.39 0.195	K/W
R_{thJK}	per diode; DC current per module	0.59 0.295	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

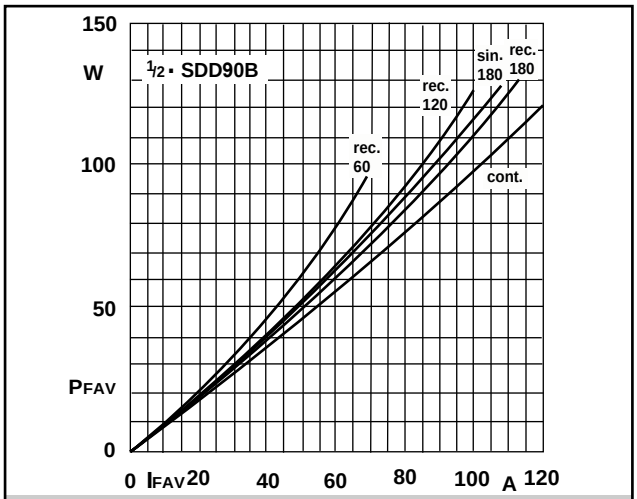

Fig 11L Power dissipation per diode vs. forward current

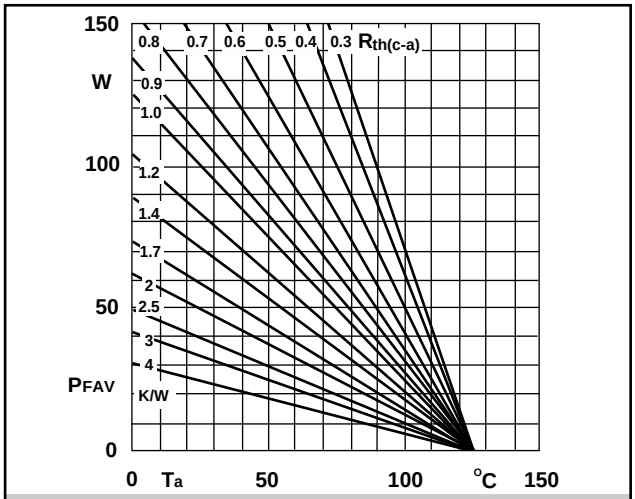

Fig 11R Power dissipation per diode vs. ambient temperature

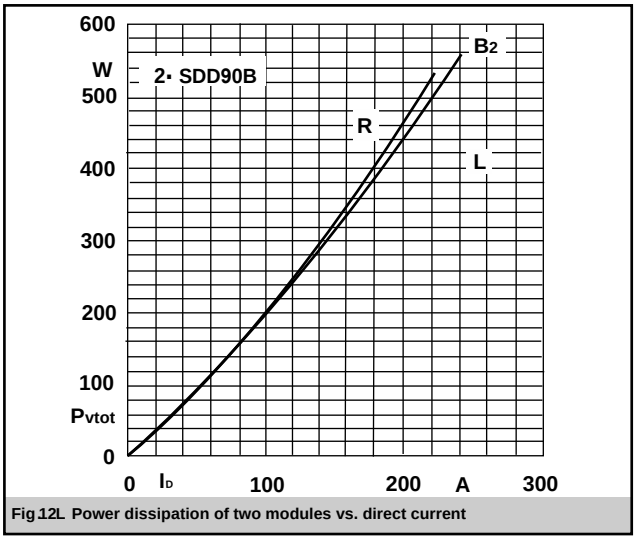

Fig 12L Power dissipation of two modules vs. direct current

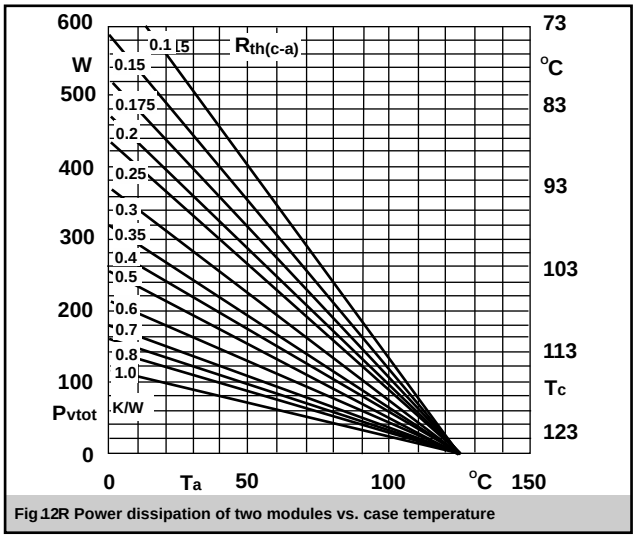

Fig 12R Power dissipation of two modules vs. case temperature

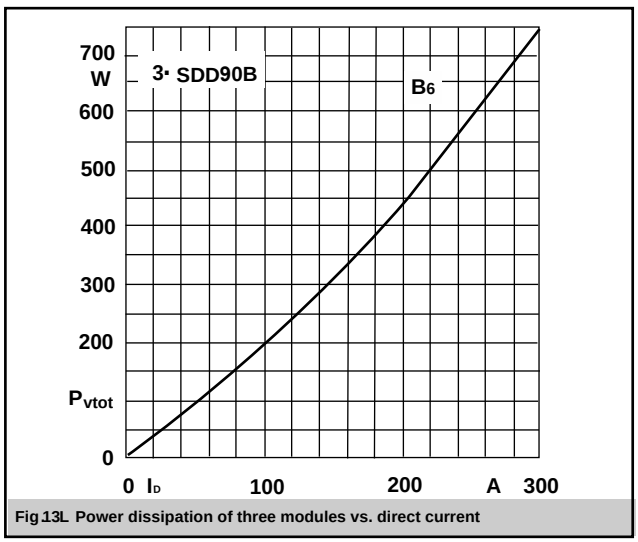

Fig 13L Power dissipation of three modules vs. direct current

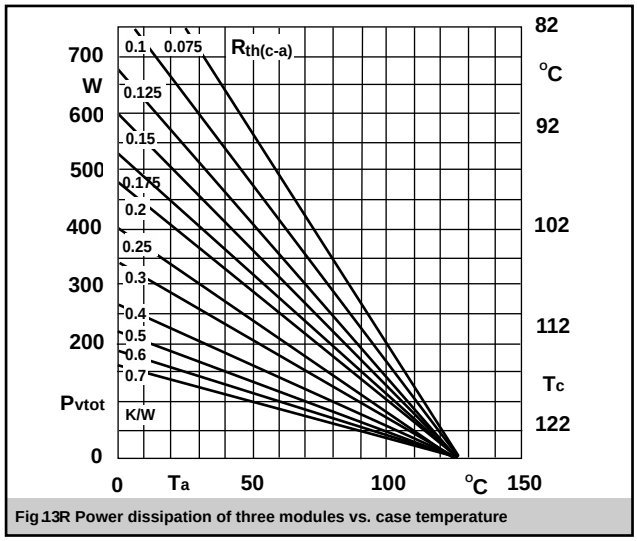

Fig 13R Power dissipation of three modules vs. case temperature

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Diode-Diode Modules

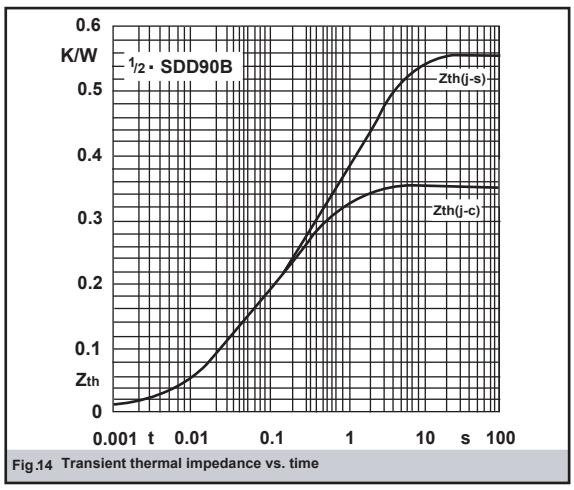

Fig.14 Transient thermal impedance vs. time

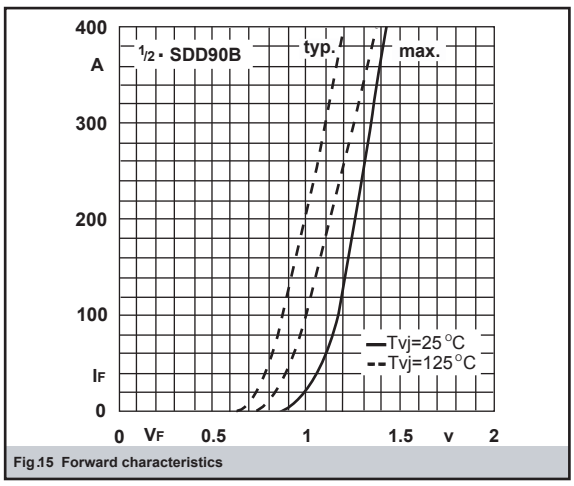

Fig.15 Forward characteristics

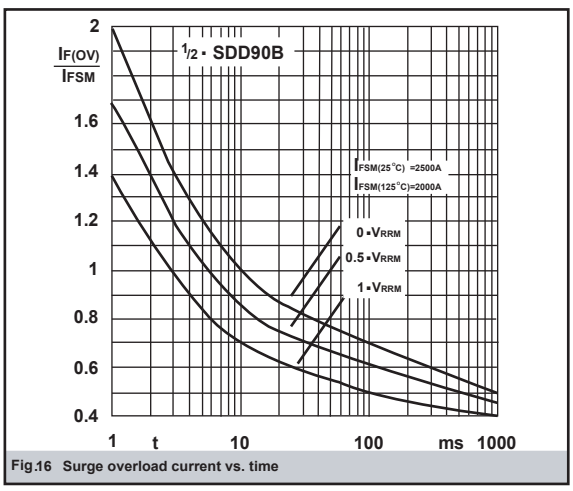

Fig.16 Surge overload current vs. time

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