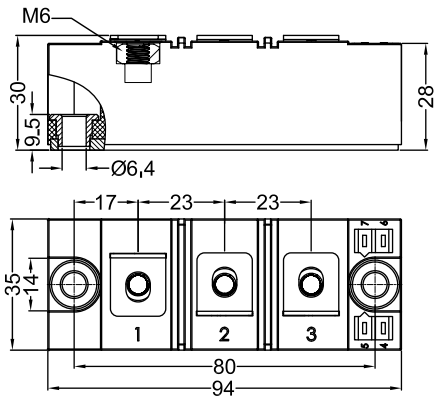
SDD165NXXB

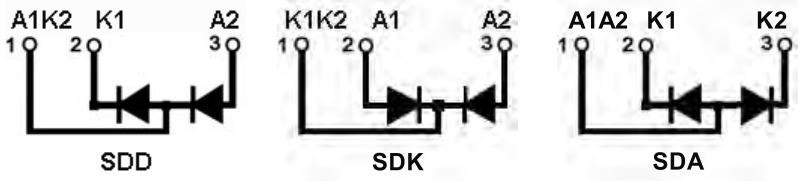
Diode-Diode Modules



Type	V_{RSM} V	V_{RRM} V
SDD165N08B	900	800
SDD165N12B	1300	1200
SDD165N14B	1500	1400
SDD165N16B	1700	1600
SDD165N18B	1900	1800

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		300 165	A
I_{FSM}	$T_{VJ}=45^oC$ $V_R=0$	t=10ms (50Hz), sine t=8.3ms (60Hz), sine	4700 5000	A
	$T_{VJ}=T_{VJM}$ $V_R=0$	t=10ms(50Hz), sine t=8.3ms(60Hz), sine	4100 4300	
$\int i^2dt$	$T_{VJ}=45^oC$ $V_R=0$	t=10ms (50Hz), sine t=8.3ms (60Hz), sine	110000 104000	A^2s
	$T_{VJ}=T_{VJM}$ $V_R=0$	t=10ms(50Hz), sine t=8.3ms(60Hz), sine	84000 77000	
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 (M6) Terminal connection torque (M6)		2.25-2.75/20-25 4.5-5.5/40-48	Nm/lb.in.
Weight	Typ.		177	g

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SDD165NxxB

Diode-Diode Modules

Symbol	Test Conditions	Characteristic Values	Unit
I_R	$T_{VJ}=T_{VJM}$; $V_R=V_{RRM}$	20	mA
V_F	I_F=500A; T_{VJ}=25°C	1.5	V
V_{TO}	For power-loss calculations only	0.8	V
r_T	$T_{VJ}=T_{VJM}$	1.3	mΩ
Q_S	T_{VJ}=125°C; I_F=300A; -di/dt=50A/us	550	uC
I_{RM}		235	A
R_{thJC}	per diode; DC current per module	0.21 0.105	K/W
R_{thJK}	per diode; DC current per module	0.31 0.155	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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SDD165NxxB

Diode-Diode Modules

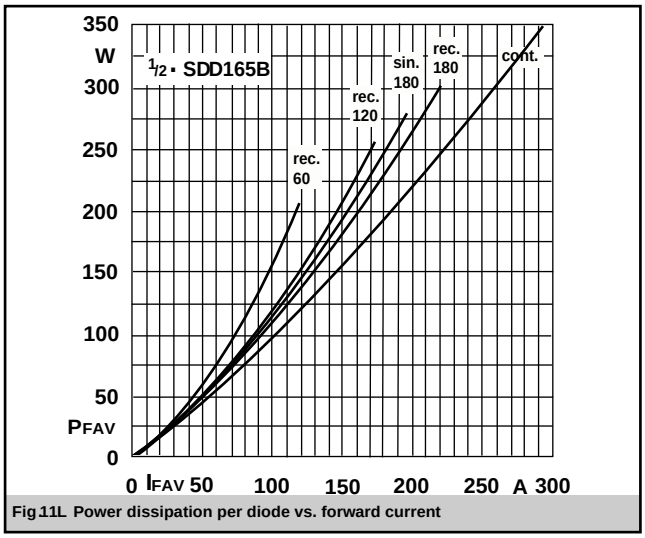


Fig 11L Power dissipation per diode vs. forward current

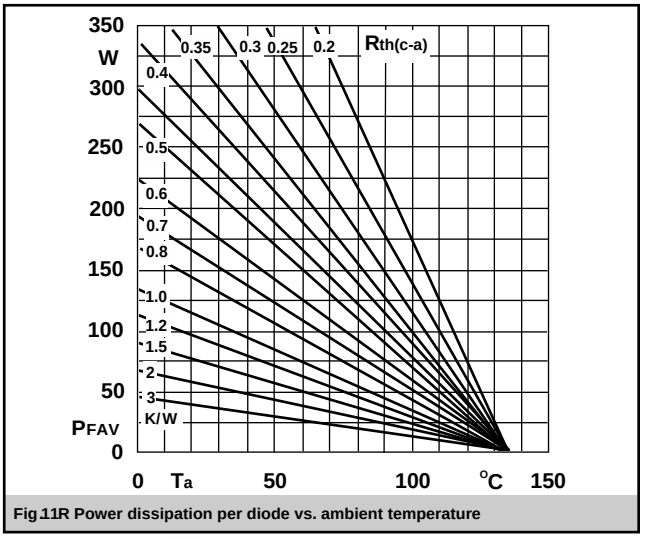


Fig 11R Power dissipation per diode vs. ambient temperature

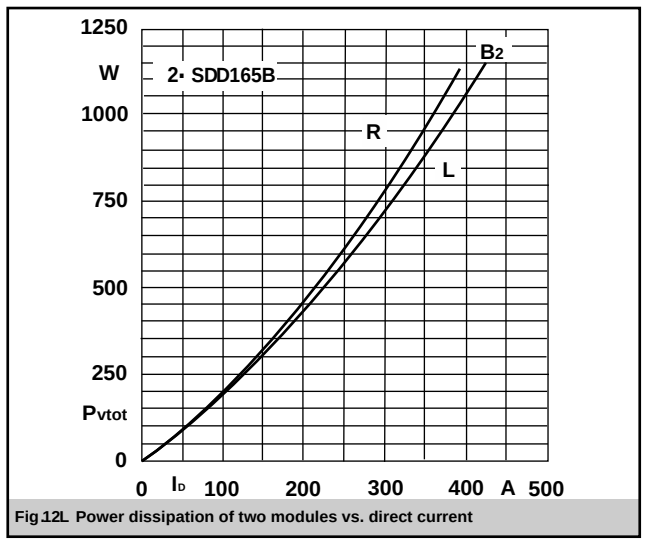


Fig 12L Power dissipation of two modules vs. direct current

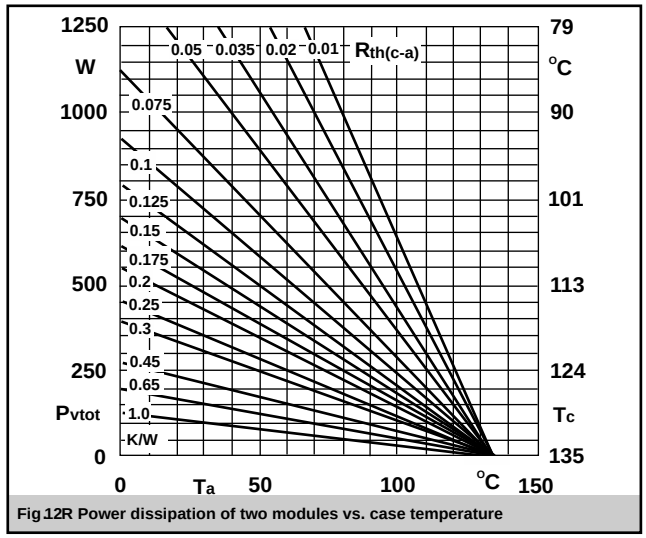


Fig 12R Power dissipation of two modules vs. case temperature

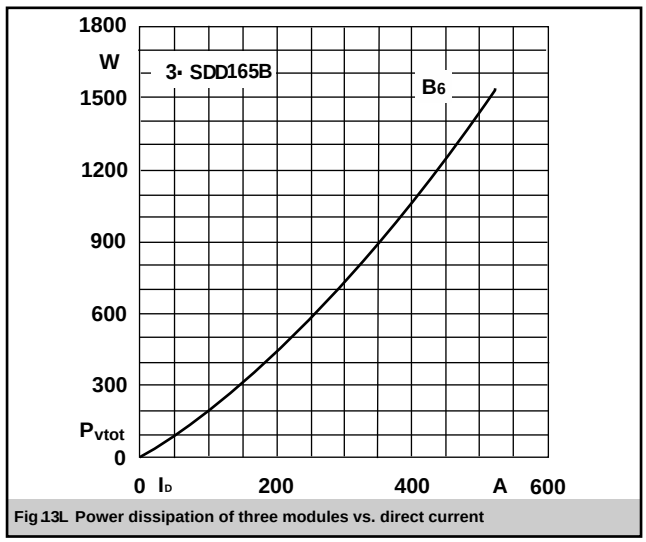


Fig 13L Power dissipation of three modules vs. direct current

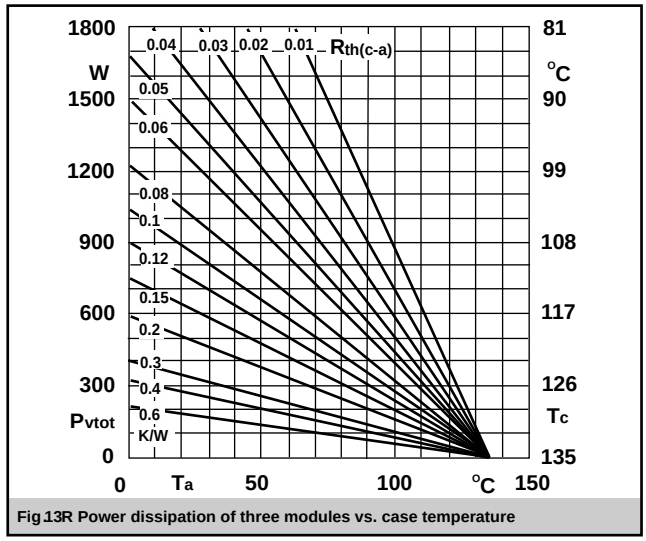


Fig 13R Power dissipation of three modules vs. case temperature

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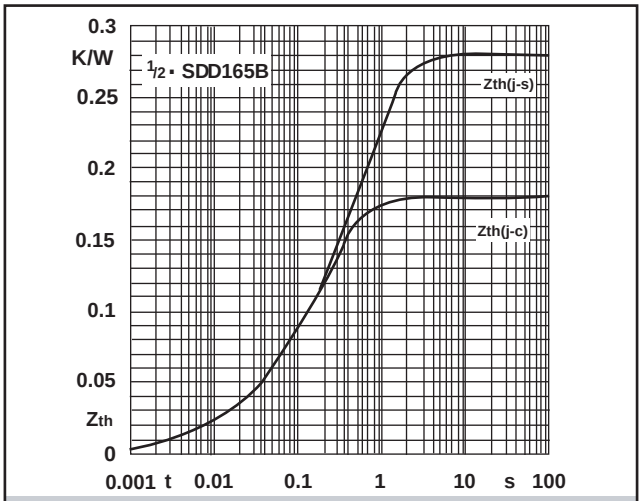


Fig 14 Transient thermal impedance vs. time

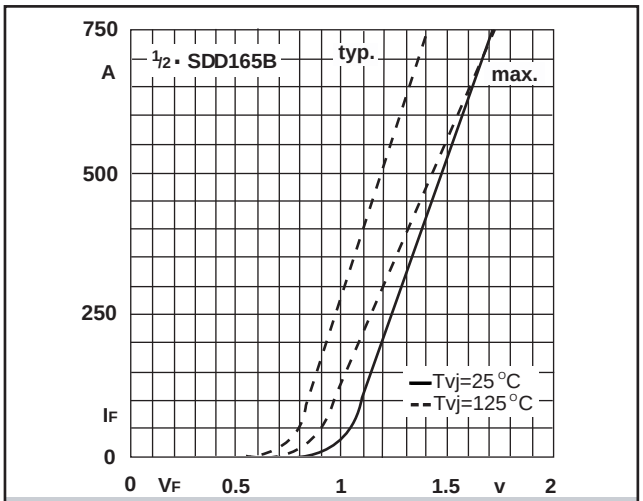


Fig 15 Forward characteristics

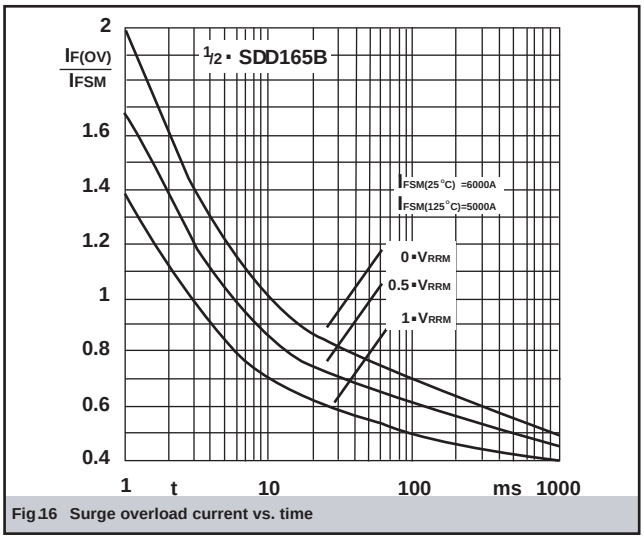


Fig 16 Surge overload current vs. time

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