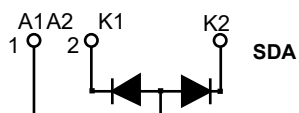
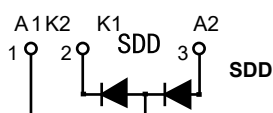
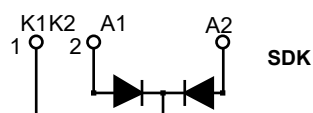


# SDD120N16

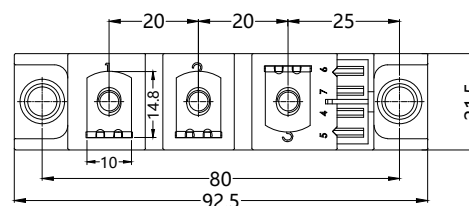
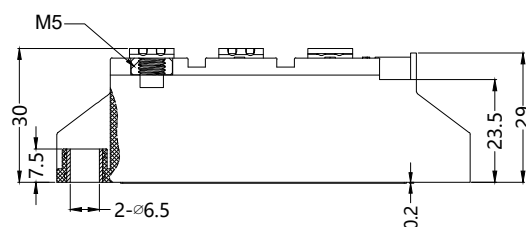
## Diode-Diode Modules



Type	V <sub>RSM</sub> V	V <sub>RPM</sub> V
SDD120N08	900	800
SDD120N12	1300	1200
SDD120N14	1500	1400
SDD120N16	1700	1600
SDD120N18	1900	1800
SDD120N20	2100	2000
SDD120N22	2300	2200



Dimensions in mm (1mm=0.0394")



Symbol	Test Conditions	Maximum Ratings	Unit
I <sub>FRMS</sub> I <sub>FAVM</sub>	T <sub>VJ</sub> =T <sub>VJM</sub> T <sub>C</sub> =100°C; 180°sine	188 120	A
I <sub>FSM</sub>	T <sub>VJ</sub> =45°C V <sub>R</sub> =0 t=10ms (50Hz), sine t=8.3ms (60Hz), sine	2800 3300	A
	T <sub>VJ</sub> =T <sub>VJM</sub> V <sub>R</sub> =0 t=10ms(50Hz), sine t=8.3ms(60Hz), sine	2500 2750	
∫i <sup>2</sup> dt	T <sub>VJ</sub> =45°C V <sub>R</sub> =0 t=10ms (50Hz), sine t=8.3ms (60Hz), sine	39200 45000	A <sup>2</sup> s
	T <sub>VJ</sub> =T <sub>VJM</sub> V <sub>R</sub> =0 t=10ms(50Hz), sine t=8.3ms(60Hz), sine	31200 31300	
T <sub>VJ</sub> T <sub>VJM</sub> T <sub>stg</sub>		-40...+150 150 -40...+125	°C
V <sub>ISOL</sub>	50/60Hz, RMS I <sub>ISOL</sub> ≤1mA t=1min t=1s	3000 3600	V~
M <sub>d</sub>	Mounting torque (M5) Terminal connection torque (M5)	2.5-4/22-35 2.5-4/22-35	Nm/lb.in.
Weight	Typ	78	g



# SDD120N16

## Diode-Diode Modules

Symbol	Test Conditions	Characteristic Values	Unit
$I_R$	$T_{VJ}=T_{VJM}; V_R=V_{RRM}$	15	mA
$V_F$	$I_F=360A; T_{VJ}=25^{\circ}C$	1.43	V
$V_{FO}$	For power-loss calculations only	0.75	V
$r_F$	$T_{VJ}=T_{VJM}$	1.95	m $\Omega$
$Q_S$	$T_{VJ}=125^{\circ}C; I_F=50A; -di/dt=3A/us$	170	$\mu C$
$I_{RM}$		45	A
$R_{thJC}$	per diode; DC current per module	0.26 0.13	K/W
$R_{thJK}$	per diode; DC current per module	0.46 0.23	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 <sup>2</sup>

### FEATURES

- \* International standard package
- \* DCB 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



**Sirectifier®**

# SDD120N16

## Diode-Diode Modules

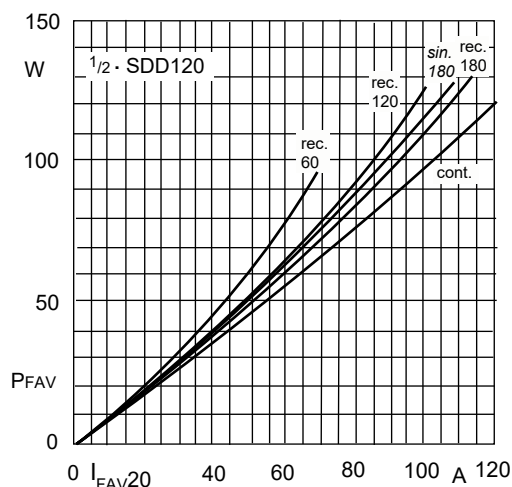


Fig.11L Power dissipation per diode vs. forward current

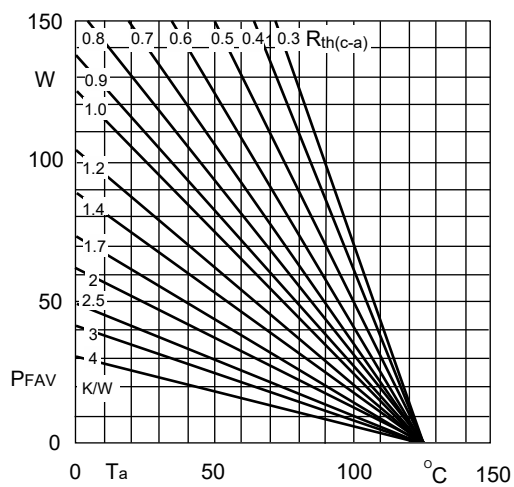


Fig.11R Power dissipation per diode vs. ambient temperature

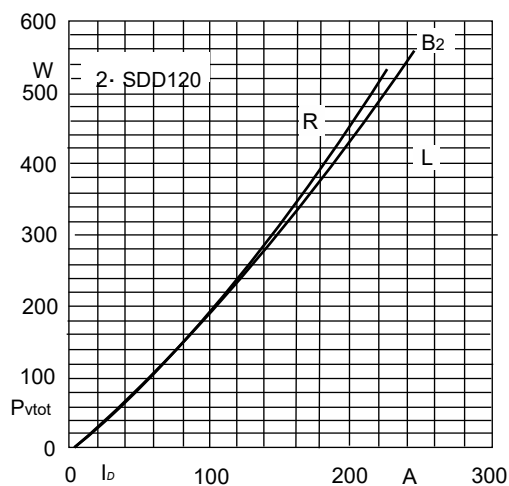


Fig.12L Power dissipation of two modules vs. direct current

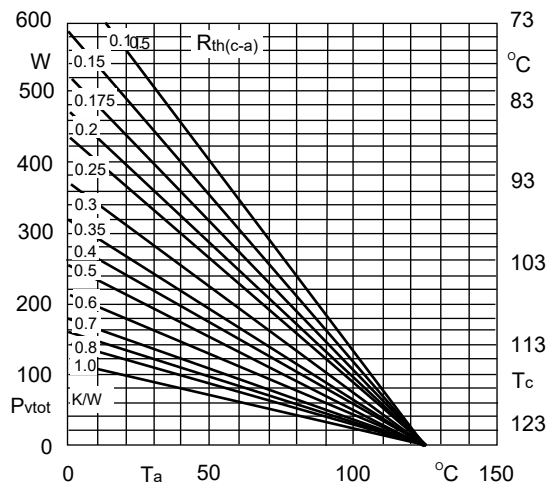


Fig.12R Power dissipation of two modules vs. case temperature

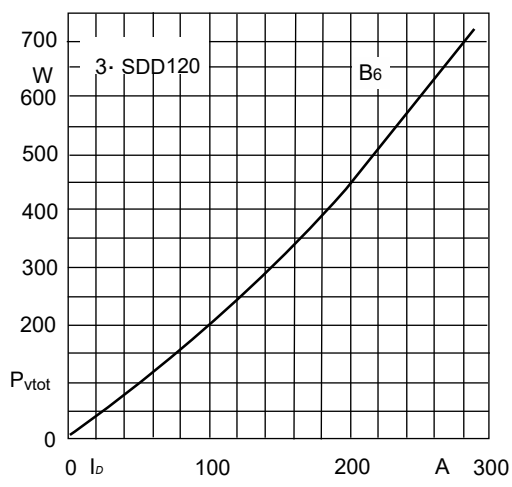


Fig.13L Power dissipation of three modules vs. direct current

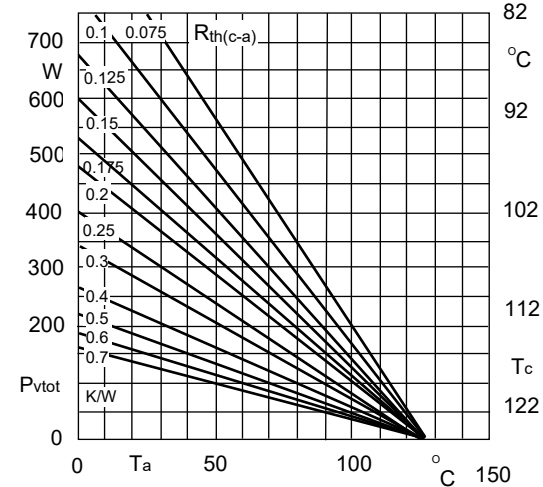


Fig.13R Power dissipation of three modules vs. case temperature



# SDD120N16

## Diode-Diode Modules

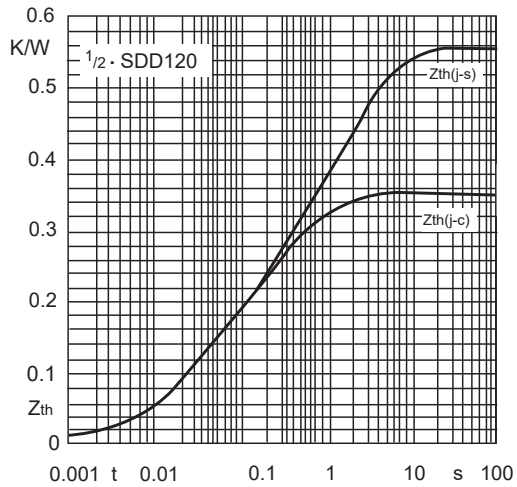


Fig.14 Transient thermal impedance vs. time

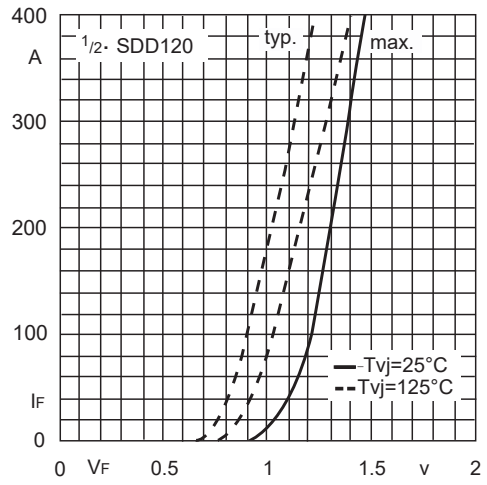


Fig.15 Forward characteristics

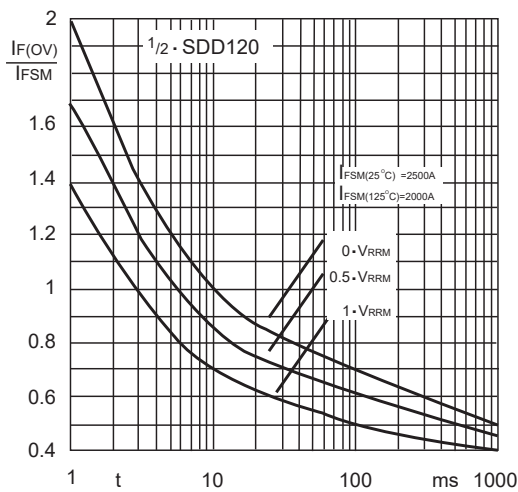


Fig.16 Surge overload current vs. time