

SDD165NXXB

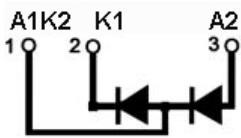
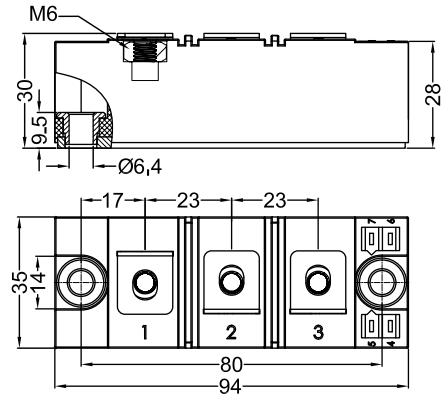
Diode-Diode Modules



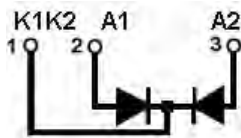
| Type | V _{RSM} V | V _{RRM} V |
|------------|-----------------------|-----------------------|
| SDD165N08B | 900 | 800 |
| SDD165N12B | 1300 | 1200 |
| SDD165N14B | 1500 | 1400 |
| SDD165N16B | 1700 | 1600 |
| SDD165N18B | 1900 | 1800 |

Holerance: ±0.5mm

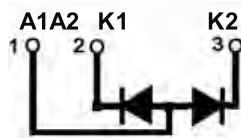
Dimensions in mm (1mm=0.0394")



SDD



SDK



SDA

| Symbol | Test Conditions | Maximum Ratings | Unit |
|---|---|----------------------------------|------------------|
| I _{FRMS} I _{FAVM} | T _{VJ} =T _{VJM} T _C =100°C; 180° sine | 300 165 | A |
| I _{FSM} | T _{VJ} =45°C 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 | |
| ∫i ² dt | T _{VJ} =45°C V _R =0 t=10ms (50Hz), sine t=8.3ms (60Hz), sine | 110000 104000 | A ² s |
| | 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} ≤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 | $I_F=500A; T_{VJ}=25^{\circ}C$ | 1.5 | V |
| V_{TO} | For power-loss calculations only | 0.8 | V |
| r_T | $T_{VJ}=T_{VJM}$ | 1.3 | m Ω |
| Q_S | $T_{VJ}=125^{\circ}C; I_F=300A; -di/dt=50A/us$ | 550 | μC |
| 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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Diode-Diode Modules

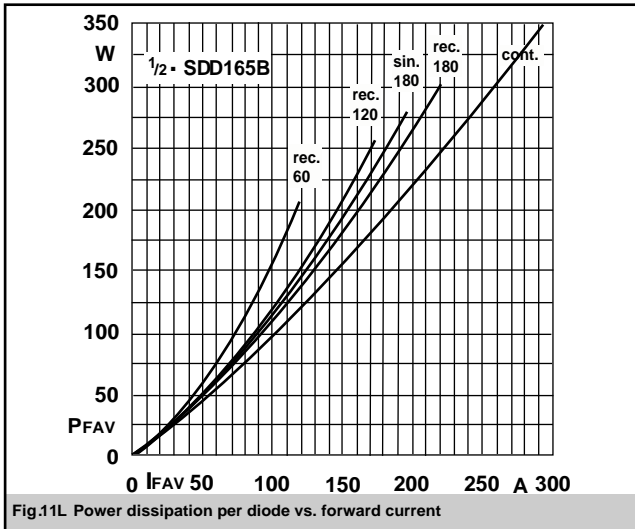


Fig.11L Power dissipation per diode vs. forward current

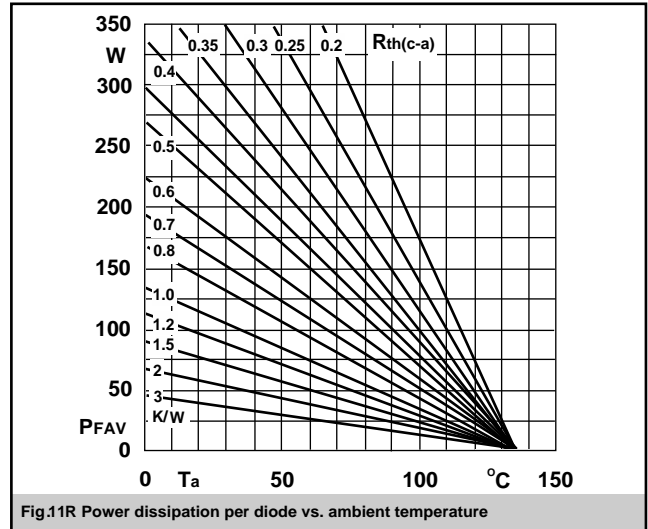


Fig.11R Power dissipation per diode vs. ambient temperature

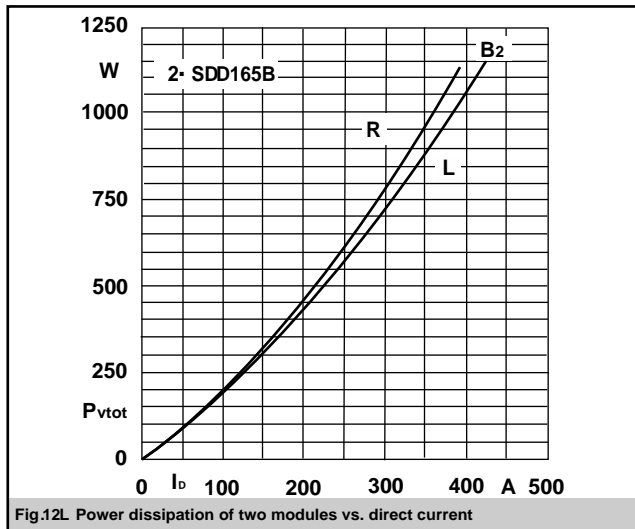


Fig.12L Power dissipation of two modules vs. direct current

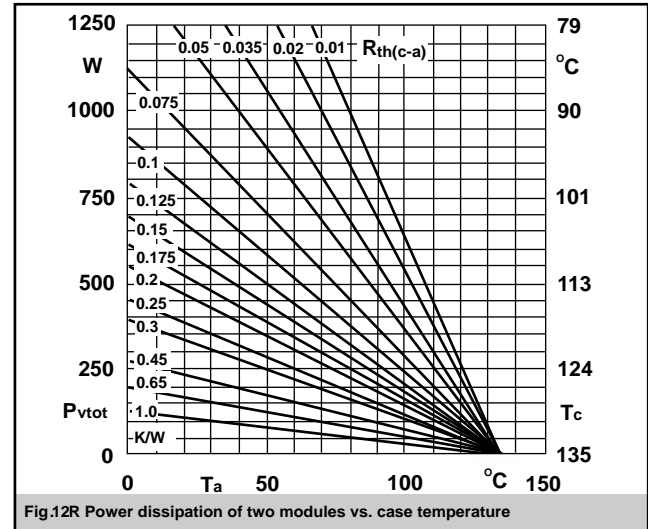


Fig.12R Power dissipation of two modules vs. case temperature

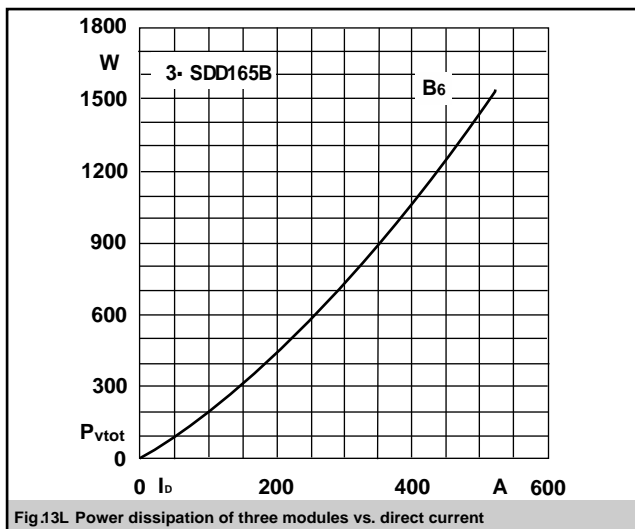


Fig.13L Power dissipation of three modules vs. direct current

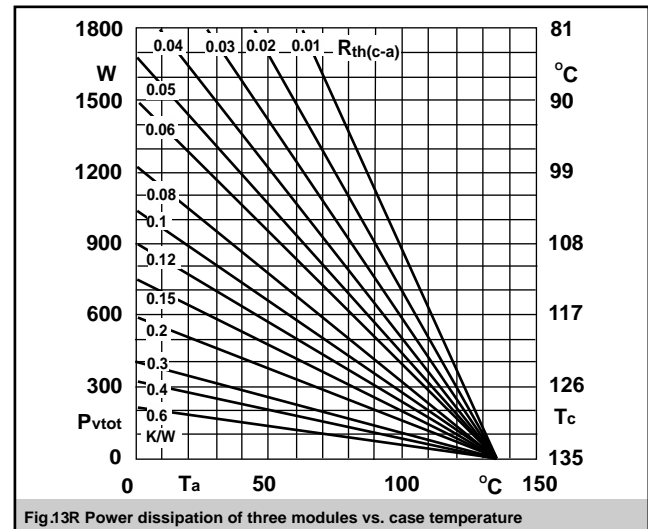
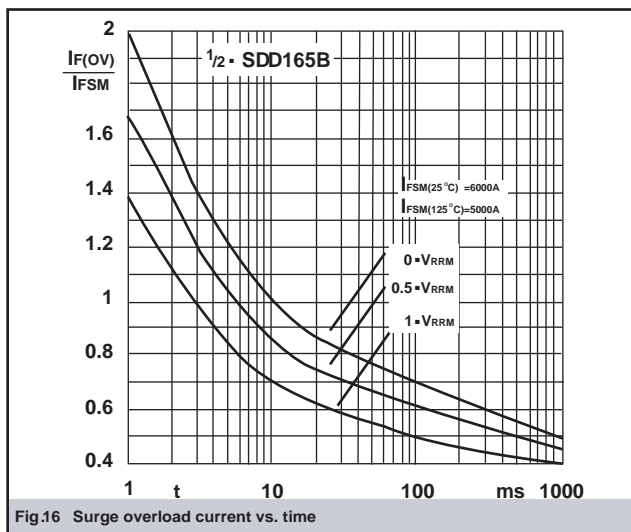
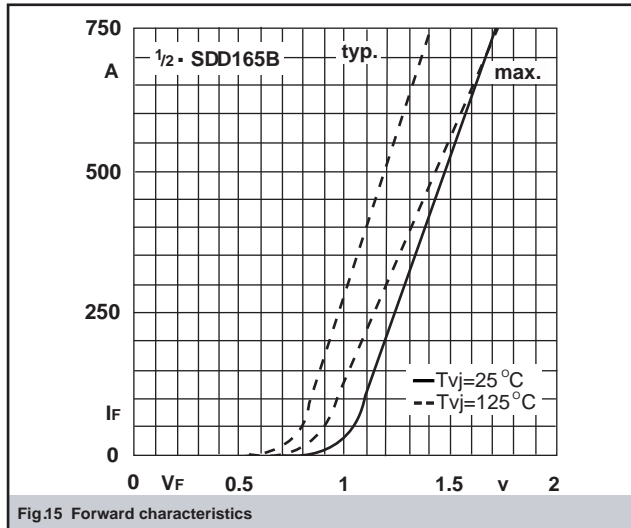
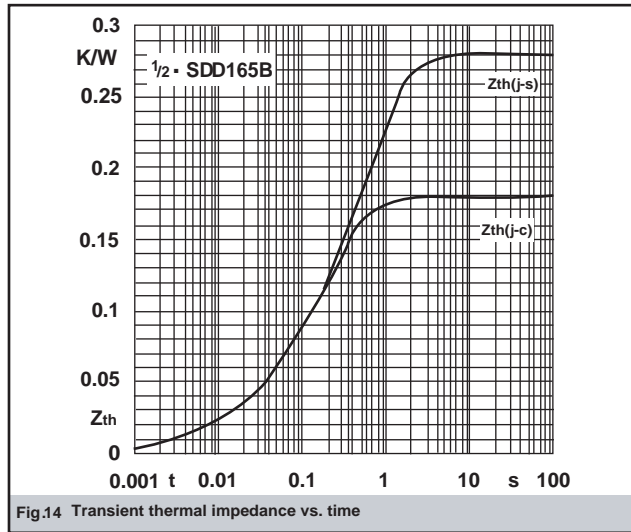


Fig.13R Power dissipation of three modules vs. case temperature



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Diode-Diode Modules



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