# SDD80NXX
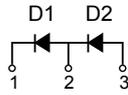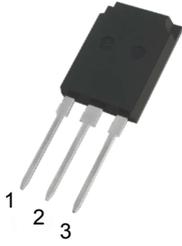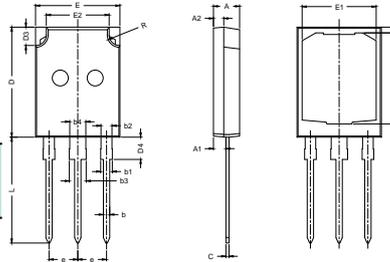
## Discrete Diodes



Dimensions TO-247P

| Dim. | Millimeter | | Dim. | Millimeter | |
|------|------|------|------|------|------|
| | Min. | Max. | | Min. | Max. |
| A | 4.85 | 5.10 | D2 | 0.96 | 1.25 |
| A1 | 2.31 | 2.51 | D3 | 3.35 | 3.80 |
| A2 | 1.85 | 2.10 | D4 | 3.95 | 4.45 |
| b | 1.16 | 1.26 | E | 15.80 | 16.05 |
| b1 | / | 2.25 | E1 | 13.50 | 14.40 |
| b2 | 1.96 | 2.15 | E2 | 11.25 | 12.45 |
| b3 | / | 3.25 | | | |
| b4 | 2.96 | 3.15 | e | 5.44(BSC) | |
| c | 0.59 | 0.66 | L | 19.80 | 20.25 |
| D | 20.85 | 21.10 | | | |
| D1 | 17.15 | 17.75 | R | 1.90 | 2.10 |

| | $V_{RSM}$ | $V_{RRM}$ |
|------|------|------|
| | V | V |
| SDD80N01 | 200 | 100 |
| SDD80N02 | 300 | 200 |
| SDD80N04 | 500 | 400 |
| SDD80N08 | 900 | 800 |
| SDD80N10 | 1100 | 1000 |
| SDD80N12 | 1300 | 1200 |
| SDD80N16 | 1700 | 1600 |


RoHS Compliant

| Symbol | Test Conditions | | Maximum Ratings | Unit |
|------|------|------|------|------|
| $I_{F(AV)M}$ | $T_C$=105$^o$C; 180$^o$ sine , each Die | | 80 (For D1), 60 (For D2) | A |
| $I_{FSM}$ | $T_{VJ}$=45$^o$C; $V_R$ =0V; | t=10ms (50Hz), sine t=8.3ms (60Hz), sine | 1710 (For D1), 1280 (For D2) 1880 (For D1), 1410 (For D2) | A |
| | $T_{VJ}$=150$^o$C; $V_R$ =0V; | t=10ms(50Hz), sine t=8.3ms(60Hz), sine | 1400 (For D1), 1050 (For D2) 1550 (For D1), 1160 (For D2) | |
| $I^2t$ | $T_{VJ}$=45$^o$C; $V_R$ =0V; | t=10ms (50Hz), sine t=8.3ms (60Hz), sine | 16000 (For D1), 12000 (For D2) 17140 (For D1), 12850 (For D2) | $A^2s$ |
| | $T_{VJ}$=150$^o$C; $V_R$ =0V; | t=10ms(50Hz), sine t=8.3ms(60Hz), sine | 117700 (For D1), 8820 (For D2) 13700 (For D1), 10280 (For D2) | |
| $T_{VJ}$ $T_{VJM}$ $T_{stg}$ | | | -40...+175 175 -55...+150 | $^o$C |
| $M_d$ | Mounting torque | | 0.8...1.2 | Nm |
| Weight | Typical | | 6 | g |

| Symbol | Test Conditions | Characteristic Values | Unit |
|------|------|------|------|
| $I_R$ | $T_{VJ}$=$T_{VJM}$; $V_R$=$V_{RRM}$ | < 3.00 | mA |
| $V_F$ | $I_F$=80A; $T_{VJ}$=25$^o$C | < 1.25 | V |
| $V_{FO}$ | For power-loss calculations only | 0.80 | V |
| $r_F$ | $T_{VJ}$=$T_{VJM}$ | 3.0 | mΩ |
| $R_{thJC}$ $R_{thCH}$ | DC current typical | 0.33 0.20 | K/W |