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We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



## Contact us

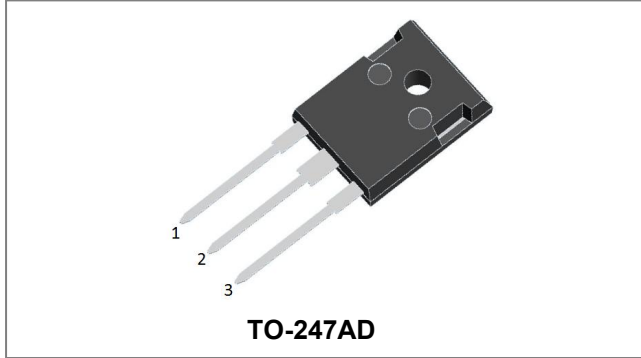
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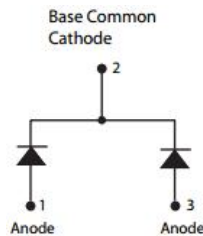
## SDUR3060WT ULTRAFast RECTIFIER



### Applications:

- Antiparallel diode for high frequency switching devices
- Anti saturation diode
- Snubber diode
- Free wheeling diode in converters and motor control circuits
- Rectifiers in switch mode power supplies (SMPS)
- Inductive heating and melting
- Uninterruptible power supplies (UPS)
- Ultrasonic cleaners and welders

### Circuit Diagram



### Features:

- Ultra-Fast switching
- High current capability
- Low reverse leakage current
- High surge current capability
- This is a Pb – free device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

### Maximum Ratings:

| Characteristics  | Symbol                          | Condition   | Max.                          | Units |
|--|---------------------------------|---|-------------------------------|-------|
| Peak Repetitive Reverse Voltage<br>Working Peak Reverse Voltage<br>DC Blocking Voltage | $V_{RRM}$<br>$V_{RWM}$<br>$V_R$ | -   | 600                           | V     |
| Average Rectified Forward Current  | $I_{F(AV)}$                     | 50% duty cycle @ $T_c=140^\circ C$ ,<br>rectangular wave form | 15(Per Leg)<br>30(Per Device) | A     |
| Peak One Cycle Non-Repetitive Surge Current(Per Leg)                                   | $I_{FSM}$                       | 8.3ms, Half Sine pulse  | 110                           | A     |

### Electrical Characteristics:

| Characteristics                 | Symbol   | Condition  | Typ. | Max. | Units   |
|---------------------------------|----------|--|------|------|---------|
| Forward Voltage Drop (Per Leg)* | $V_{F1}$ | @ 15A, Pulse, $T_J = 25^\circ C$                   | 1.71 | 2.03 | V       |
|                                 | $V_{F2}$ | @ 15A, Pulse, $T_J = 125^\circ C$                  | 1.59 | 1.34 | V       |
| Reverse Current (Per Leg)*      | $I_{R1}$ | @ $V_R = \text{rated } V_R$<br>$T_J = 25^\circ C$  | 0.54 | 100  | $\mu A$ |
|                                 | $I_{R2}$ | @ $V_R = \text{rated } V_R$<br>$T_J = 125^\circ C$ | 277  | 500  | $\mu A$ |
| Reverse Recovery Time(Per Leg)  | $t_{rr}$ | $I_F=500mA, I_R=1A, \text{ and } I_m=250mA$        | 40   | 50   | ns      |

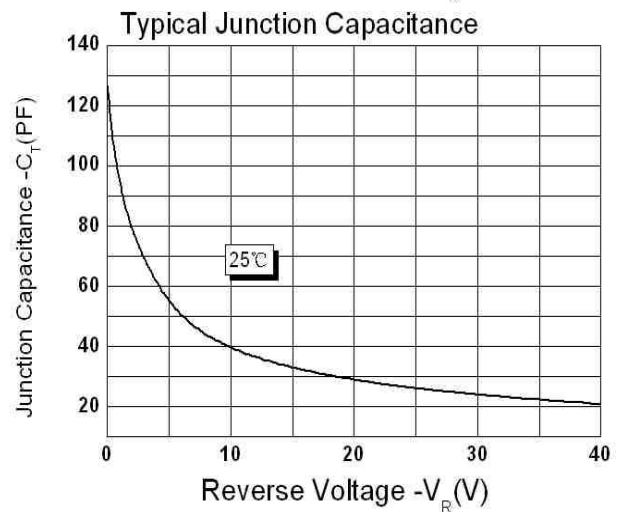
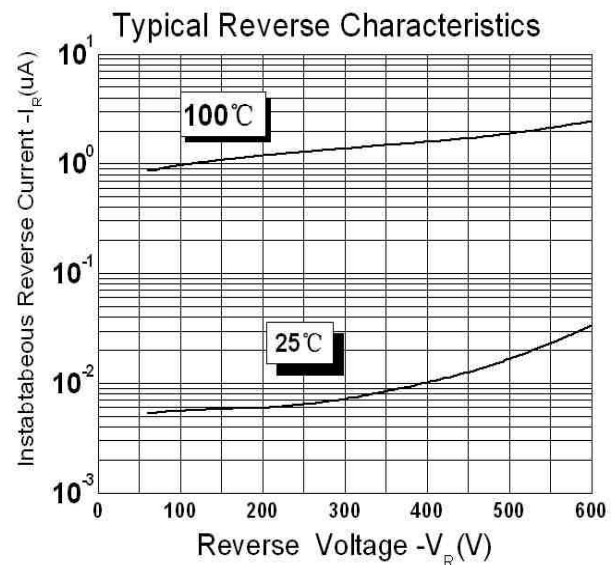
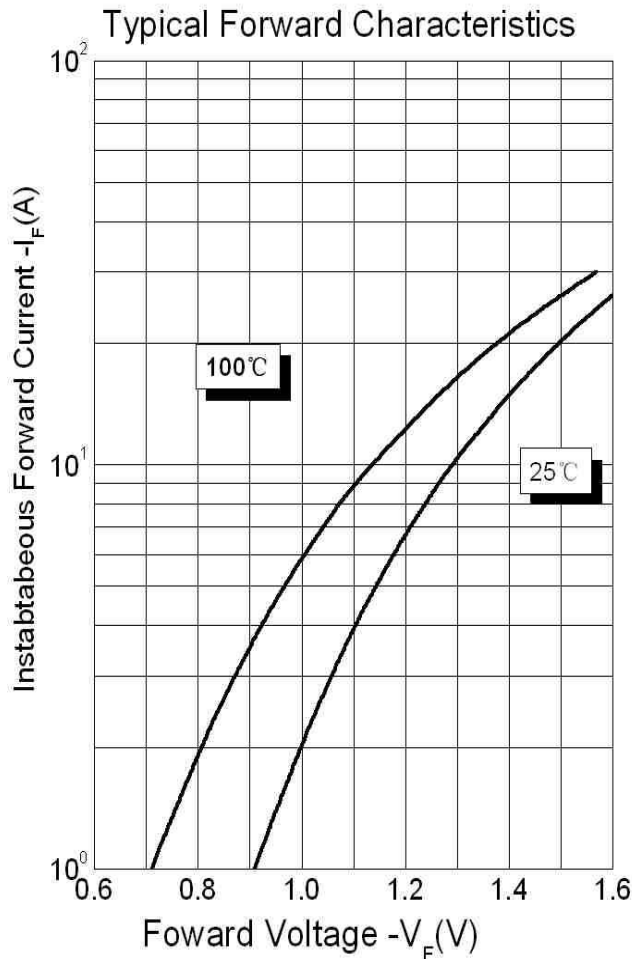
\* Pulse width < 300  $\mu s$ , duty cycle < 2%



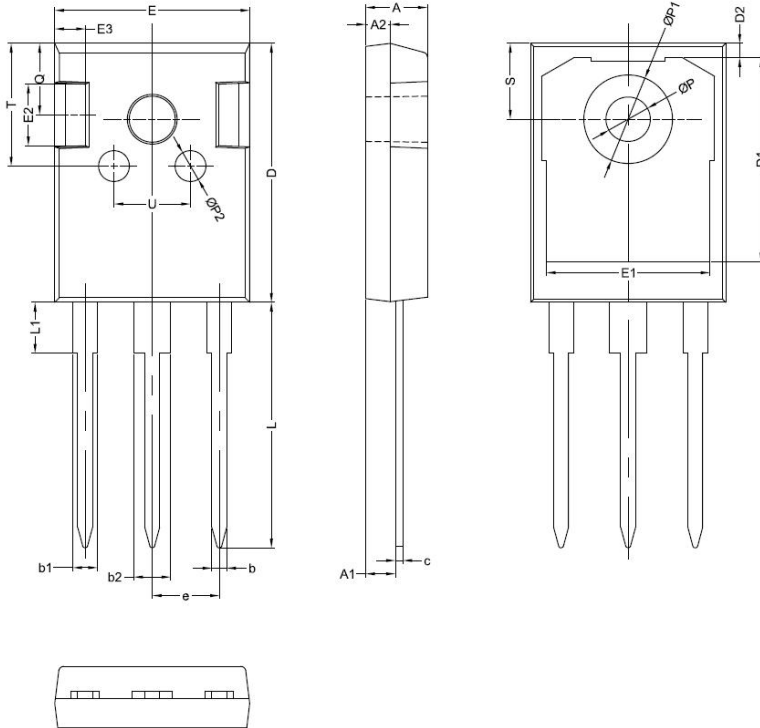
**Thermal-Mechanical Specifications:**

| Characteristics                             | Symbol          | Condition    | Specification | Units |
|---|-----------------|--------------|---------------|-------|
| Junction Temperature                        | $T_J$           | -            | -55 to +150   | °C    |
| Storage Temperature                         | $T_{stg}$       | -            | -55 to +150   | °C    |
| Typical Thermal Resistance Junction to Case | $R_{\theta JC}$ | DC operation | 1.6           | °C/W  |
| Approximate Weight                          | wt              | -            | 6.28          | g     |
| Case Style                                  | TO-247AD        |              |               |       |

**Ratings and Characteristics Curves**



**Mechanical Dimensions TO-247AD**



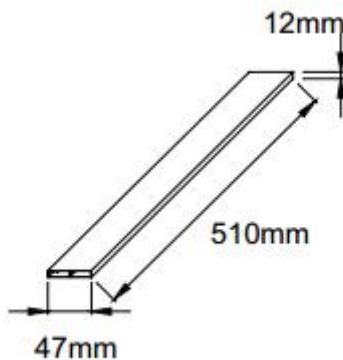
| SYMBOL | Millimeters |       |       |
|--------|-------------|-------|-------|
|        | MIN.        | TYP.  | MAX.  |
| A      | 4.80        | 5.00  | 5.20  |
| A1     | 2.20        | 2.41  | 2.61  |
| A2     | 1.90        | 2.00  | 2.10  |
| b      | 1.10        | 1.20  | 1.40  |
| b1     | 1.80        | 2.00  | 2.20  |
| b2     | 2.80        | 3.00  | 3.20  |
| c      | 0.50        | 0.60  | 0.75  |
| D      | 20.30       | 21.00 | 21.20 |
| D1     |             | 16.55 |       |
| D2     |             | 1.20  |       |
| E      | 15.45       | 15.80 | 16.00 |
| E1     |             | 13.30 |       |
| E2     |             | 5.00  |       |
| E3     |             | 2.50  |       |
| e      |             | 5.44  |       |
| L      | 19.42       | 19.92 | 20.70 |
| L1     |             | 4.13  |       |
| P      | 3.50        | 3.60  | 3.70  |
| P1     | 7.1         |       | 7.40  |
| P2     |             | 2.50  |       |
| Q      |             | 5.80  |       |
| S      | 6.05        | 6.15  | 6.25  |
| T      |             | 10.00 |       |
| U      |             | 6.20  |       |

**Ordering Information:**

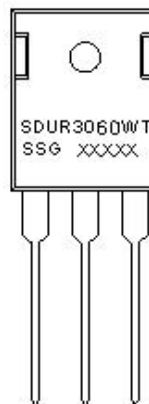
| Device     | Package           | Shipping     |
|------------|-------------------|--------------|
| SDUR3060WT | TO-247AD(Pb-Free) | 25pcs / tube |

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specification.

**Tube Specification**



**Marking Diagram**



Where XXXXX is YYWWL

- SDUR = Device Type
- 30 = Forward Current (30A)
- 60 = Reverse Voltage (600V)
- WT = Configuration
- SSG = SSG
- YY = Year
- WW = Week
- L = Lot Number

**Cautions:** Molding resin  
Epoxy resin UL:94V-0

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