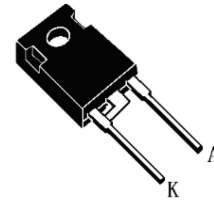


## Features

- Ultrafast Recovery Time
- Low Recovery Loss
- Soft Reverse Recovery Characteristics
- Low Leakage Current
- Low Forward Voltage
- High Surge Current Capability



TO-247L

## Applications

- UPS
- PFC
- Freewheeling, Snubber, Clamp
- Inversion Welder
- Plating Power Supply
- Ultrasonic Cleaner and Welder
- Converter & Chopper



## Absolute Maximum Ratings( $T_c=25^\circ\text{C}$ )

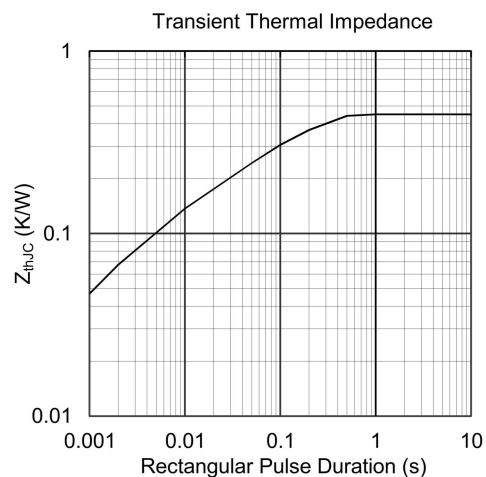
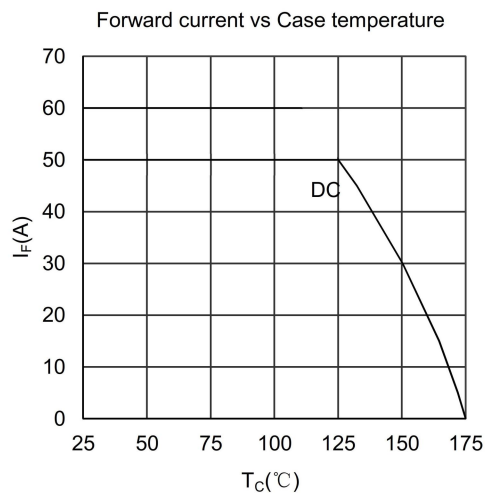
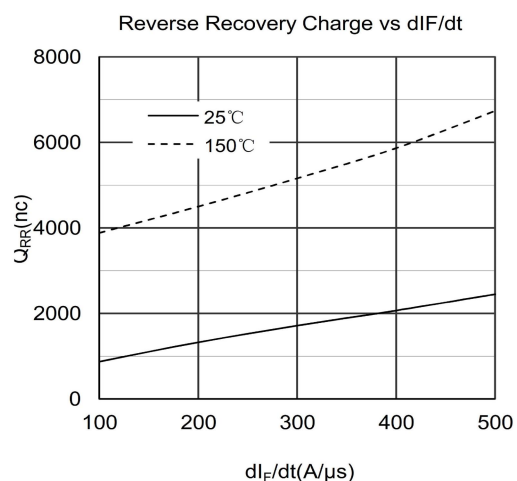
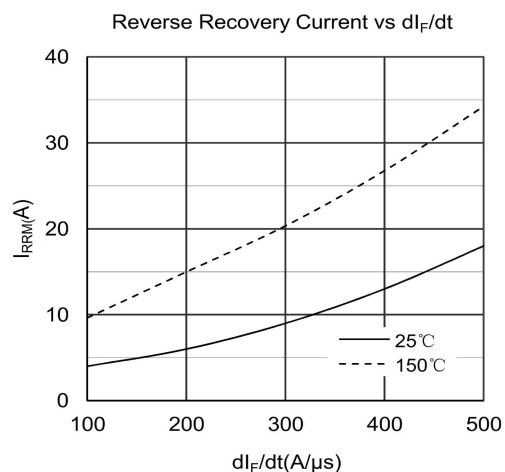
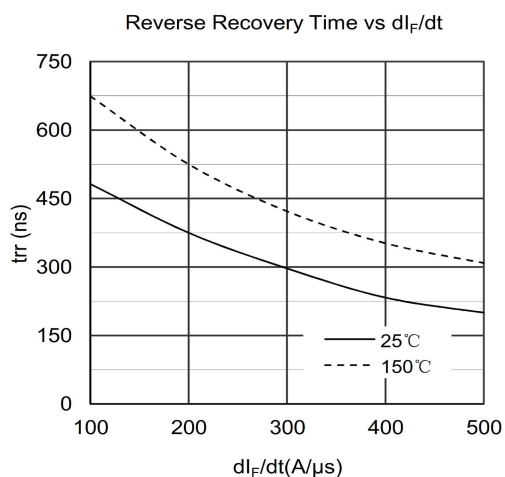
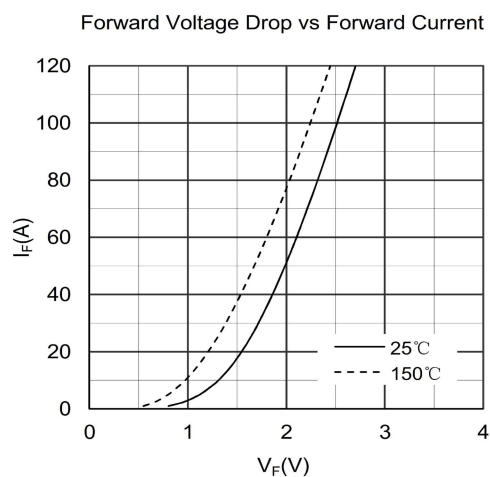
| Parameter                            | Symbol          | Test Conditions         | Values    | Unit                      |
|--------------------------------------|-----------------|-------------------------|-----------|---------------------------|
| Repetitive Peak Reverse Voltage      | $V_{RRM}$       |                         | 1350      | V                         |
| Average Output Current               | $I_{F(AV)}$     | $T_c=100^\circ\text{C}$ | 50        | A                         |
| Peak one Cycle Surge Forward Current | $I_{FSM}$       | Sine wave 10ms          | 540       | A                         |
| power dissipation                    | $P_D$           |                         | 334       | W                         |
| Junction Temperature                 | $T_J$           |                         | -50 ~ 150 | $^\circ\text{C}$          |
| Storage Temperature Range            | $T_{STG}$       |                         | -50 ~ 150 |                           |
| Thermal Resistance                   | $R_{\theta JC}$ | Junction-to-Case        | 0.45      | $^\circ\text{C}/\text{W}$ |
| To Heat Sink                         | Torque          | M3                      | 1.1       | N.m                       |
|                                      | Weight          |                         | 6         | g                         |

## Electrical Characteristics( $T_c=25^\circ\text{C}$ unless otherwise specified)

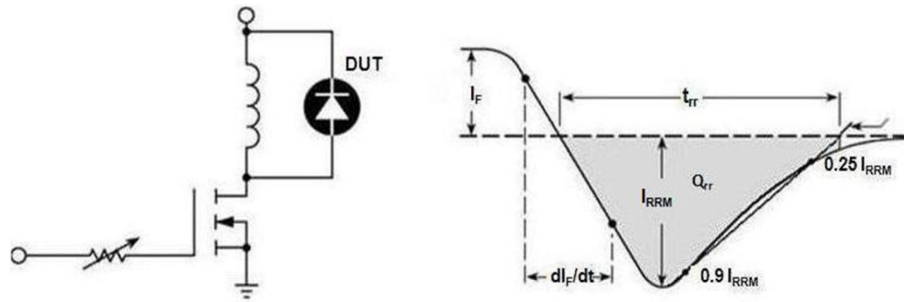
| Parameter            | Symbol    | Test Conditions       |                         | Min. | Typ. | Max. | Unit          |
|----------------------|-----------|-----------------------|-------------------------|------|------|------|---------------|
| Reverse Current      | $I_{RRM}$ | $V_R=V_{RRM}$         | $T_j=25^\circ\text{C}$  | -    | -    | 10   | $\mu\text{A}$ |
|                      |           |                       | $T_j=125^\circ\text{C}$ | -    | -    | 1    | mA            |
| Forward Voltage Drop | $V_{FM}$  | $I_{FM}=50.0\text{A}$ | $T_j=25^\circ\text{C}$  | -    | 2.1  | 2.6  | V             |
|                      |           |                       | $T_j=125^\circ\text{C}$ | -    | 1.8  | -    | V             |

|                       |          |                                            |   |    |    |    |
|-----------------------|----------|--------------------------------------------|---|----|----|----|
| Reverse Recovery Time | $t_{rr}$ | $I_F=1A, V_R=30V$<br>$di_F/dt=-200A/\mu s$ | - | 32 | 35 | ns |
| Reverse Recovery Time | $t_{rr}$ | $I_F=0.5A, I_R=1A, I_{RR}=0.25A$           |   | 70 | 80 | ns |

## Electrical characteristics(Curves)



Diode Reverse Recovery Test Circuit and Waveform



## Package outline dimension

