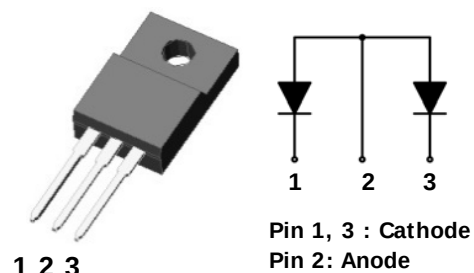


## Dual Common Anode Schottky Rectifier

### Features

- Low forward voltage drop and leakage current
- Low power loss and High efficiency
- High surge capability
- Dual common anode rectifier
- Full lead(Pb)-free component and RoHS compliant device

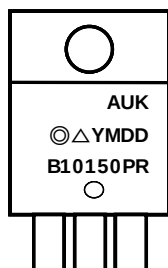


### Ordering Information

| Part Number | Marking  | Package    |
|-------------|----------|------------|
| SDB10150PR  | B10150PR | TO-220F-3L |

TO-220F-3L

### Marking Information



Column 1: Manufacturer

Column 2: Production Information

e.g.) ◎△YMDD

-. ◎△: Factory Management Code

-. YMDD: Date Code (Year, Month, Daily)

Column 3: Device Code

### Absolute maximum ratings ( $T_C=25^{\circ}\text{C}$ unless otherwise noted)

| Characteristic                                                                              |              | Symbol      | Rating  | Unit               |
|---------------------------------------------------------------------------------------------|--------------|-------------|---------|--------------------|
| Maximum repetitive reverse voltage                                                          |              | $V_{RRM}$   | 150     | V                  |
| Maximum working peak reverse voltage                                                        |              | $V_{RWM}$   |         |                    |
| Maximum DC blocking voltage                                                                 |              | $V_R$       |         |                    |
| Maximum average forward rectified current                                                   | Per diode    | $I_{F(AV)}$ | 5       | A                  |
|                                                                                             | Total device |             | 10      | A                  |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load per diode |              | $I_{FSM}$   | 120     | A                  |
| Power dissipation                                                                           |              | $P_D$       | 31      | W                  |
| Maximum operating junction temperature                                                      |              | $T_J$       | 150     | $^{\circ}\text{C}$ |
| Storage temperature range                                                                   |              | $T_{stg}$   | -45~150 | $^{\circ}\text{C}$ |

## Thermal Characteristics

| Characteristic                              |              | Symbol        | Value | Unit |
|---------------------------------------------|--------------|---------------|-------|------|
| Maximum thermal resistance junction to case | Per diode    | $R_{th(J-C)}$ | 4.0   | °C/W |
|                                             | Total device |               | 3.6   |      |

Electrical Characteristics ( $T_C=25^{\circ}\text{C}$  unless otherwise noted)

| Characteristic            | Symbol         | Test Condition                 |                           | Min. | Typ. | Max. | Unit |
|---------------------------|----------------|--------------------------------|---------------------------|------|------|------|------|
| Peak forward voltage drop | $V_{FM}^{(1)}$ | $I_{FM} = 5\text{A}$           | $T_J=25^{\circ}\text{C}$  | -    | -    | 0.88 | V    |
|                           |                |                                | $T_J=125^{\circ}\text{C}$ | -    | -    | 0.75 | V    |
| Reverse leakage current   | $I_{RM}^{(2)}$ | $V_R = V_{RRM}$                | $T_J=25^{\circ}\text{C}$  | -    | -    | 10   | uA   |
|                           |                |                                | $T_J=125^{\circ}\text{C}$ | -    | -    | 10   | mA   |
| Junction capacitance      | $C_J$          | $V_R = 4V_{DC}, f=1\text{MHz}$ |                           | -    | 80   | -    | pF   |

Note:

(1) Pulse test :  $t_p \leq 380\mu\text{s}$ , Duty cycle  $\leq 2\%$ (2) Pulse test :  $t_p \leq 20\text{ms}$ , Duty cycle  $\leq 2\%$

## Typical Electrical Characteristic Curves

Fig. 1) Typical Forward Characteristics (Per Diode)

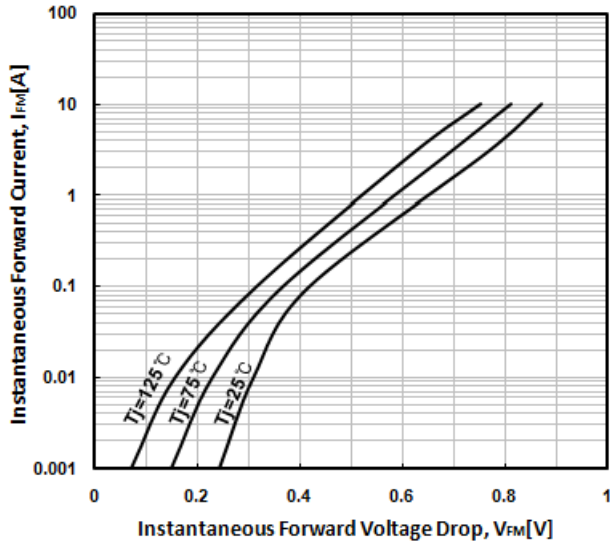


Fig. 2) Typical Reverse Characteristics (Per Diode)

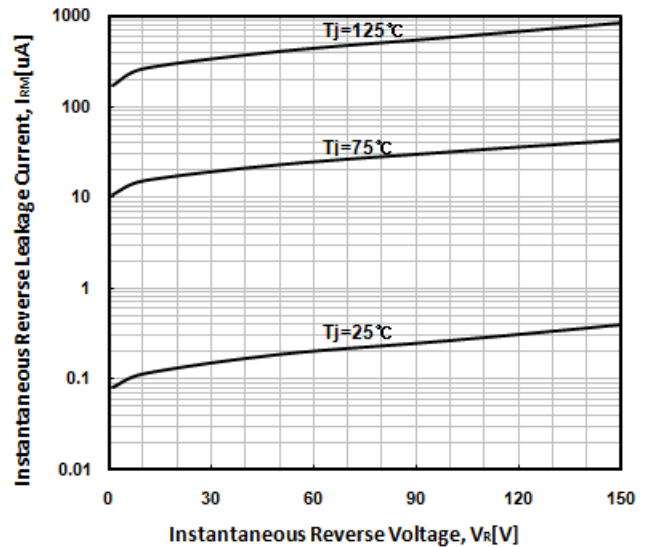


Fig. 3) Maximum Forward Derating Curve

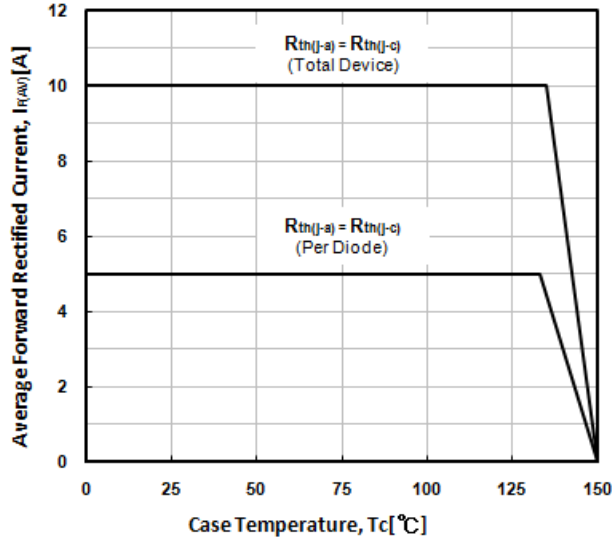


Fig. 4) Forward Power Dissipation (Per Diode)

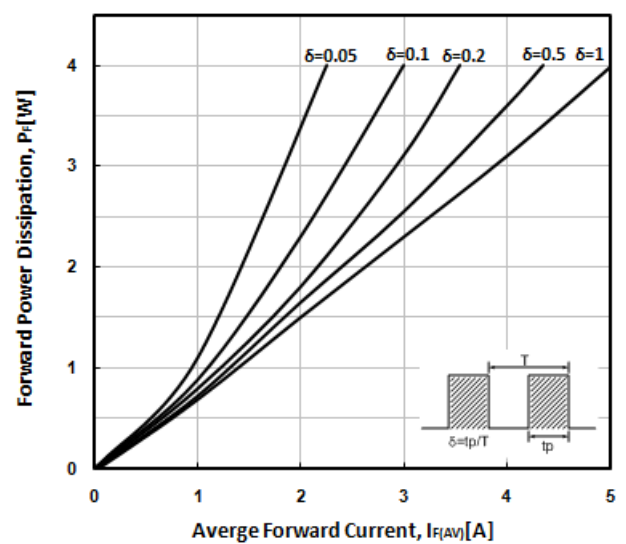


Fig. 5) Maximum Non-Repetitive Peak Forward Surge Current (Per Diode)

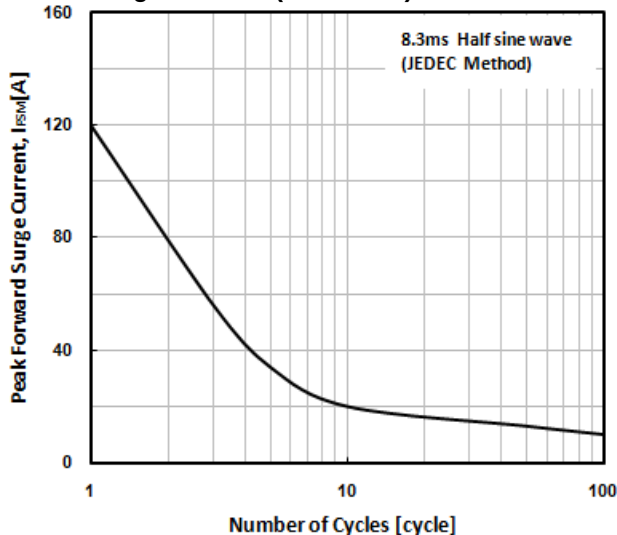
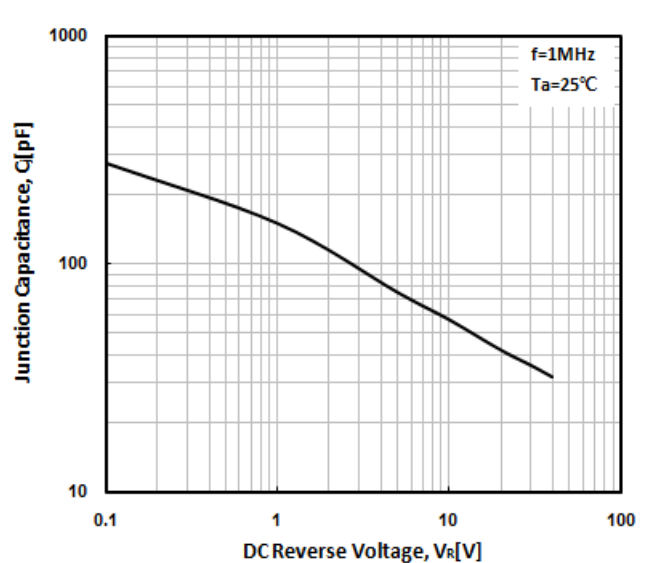
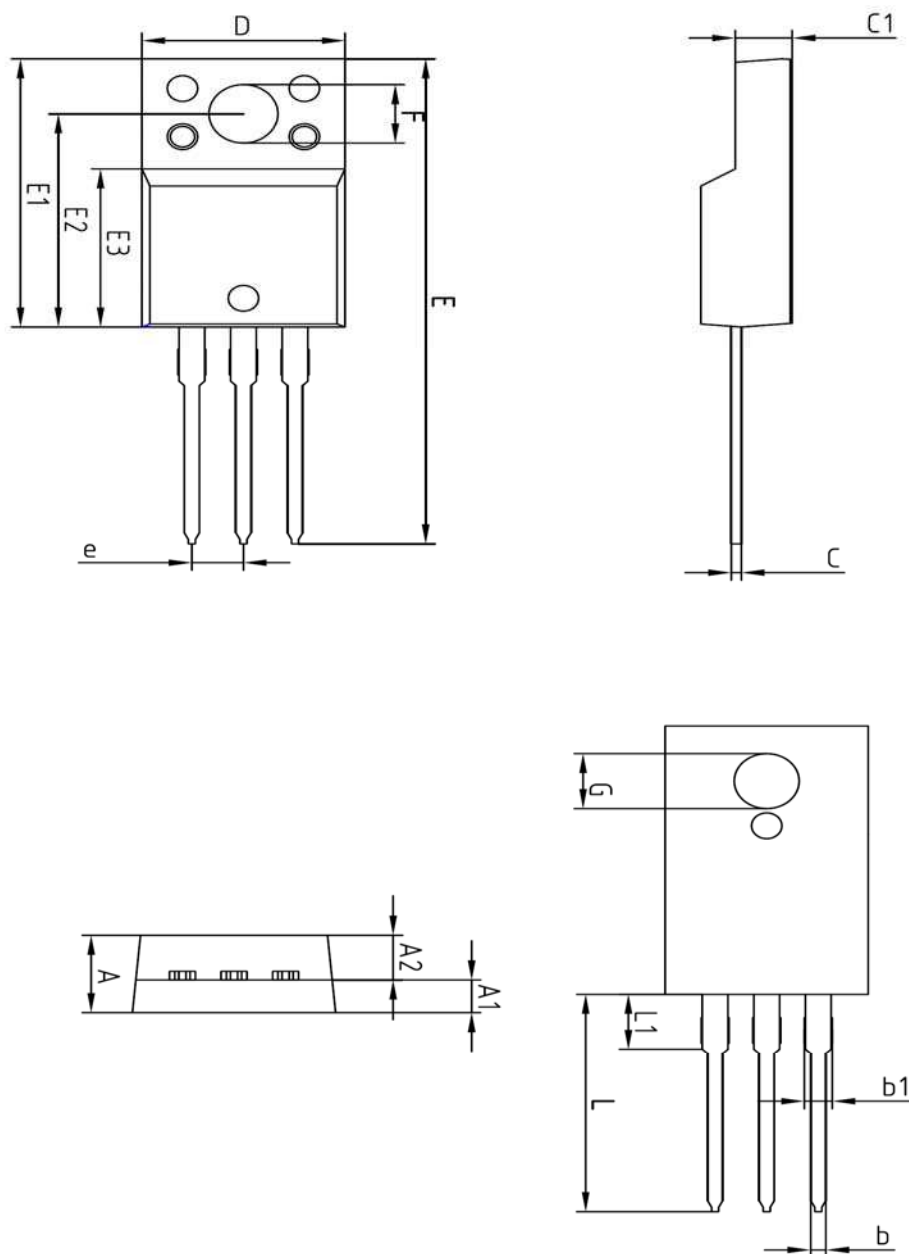


Fig. 6) Typical Junction Capacitance (Per Diode)



## Package Outline Dimensions (Unit: mm)



| SYMBOL | MILLIMETERS |         |         | NOTE |
|--------|-------------|---------|---------|------|
|        | MINIMUM     | NOMINAL | MAXIMUM |      |
| A      | —           | —       | 4.60    |      |
| A1     | 2.45        | 2.50    | 2.55    |      |
| A2     | 1.95        | 2.00    | 2.05    |      |
| b      | 0.65        | 0.75    | 0.85    |      |
| b1     | 1.07        | 1.27    | 1.47    |      |
| C      | 0.40        | 0.50    | 0.60    |      |
| C1     | 2.70        | 2.80    | 2.90    |      |
| D      | 9.90        | 10.00   | 10.10   |      |
| E      | 28.00       | —       | 28.60   |      |
| E1     | 15.50       | 15.60   | 15.70   |      |
| E2     | 12.30       | 12.40   | 12.50   |      |
| E3     | 9.15        | 9.20    | 9.25    |      |
| F      | 3.30        | 3.40    | 3.50    |      |
| G      | 3.10        | 3.20    | 3.30    |      |
| e      | 2.54 BSC    |         |         |      |
| L      | 12.40       | —       | 13.00   |      |
| L1     | 3.46 BSC    |         |         |      |

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