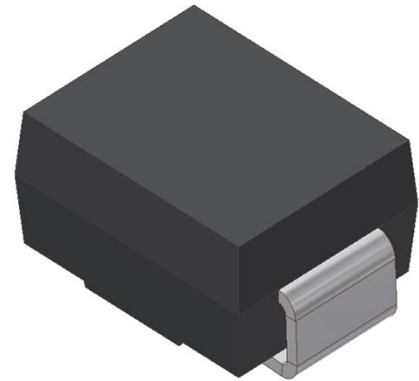


# SM5150B

Surface Mount Schottky Barrier Rectifiers  
Reverse Voltage 150V Forward Current 5.0A

## 1. FEATURES

- We declare that the material of product compliance with RoHS requirements and Halogen Free.
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0.
- Low power loss,high efficiency.
- For use in low voltage high frequency inverters,free wheeling, and polarity protection applications.
- High temperature soldering guaranteed:260°C/10 seconds.
- Weight: 0.088g



## 2. DEVICE MARKING AND ORDERING INFORMATION

| Device  | Marking | Shipping       |
|---------|---------|----------------|
| SM5150B | S515    | 3500/Tape&Reel |

## 3. MAXIMUM RATINGS(Ta = 25°C)

| Parameter                                                                                           | 0 | Symbol   | Limits    | Unit |
|-----------------------------------------------------------------------------------------------------|---|----------|-----------|------|
| Maximum repetitive peak reverse voltage                                                             |   | VRRM     | 150       | V    |
| Maximum RMS voltage                                                                                 |   | VRMS     | 105       | V    |
| Maximum DC blocking voltage                                                                         |   | VDC      | 150       | V    |
| Maximum average forward rectified current<br>0.375" (9.5mm) lead length at TC = 75°C                |   | IF(AV)   | 5         | A    |
| Peak forward surge current 8.3ms single half sine-wave<br>superimposed on rated load (JEDEC Method) |   | IFSM     | 150       | A    |
| Typical thermal resistance (Note 1)                                                                 |   | RθJA     | 160       | °C/W |
|                                                                                                     |   | RθJL     | 30        |      |
|                                                                                                     |   | RθJC     | 50        |      |
| Operating junction and storage temperature range                                                    |   | TJ, TSTG | -50 ~+150 | °C   |

## 4. ELECTRICAL CHARACTERISTICS (Ta= 25°C)

| Characteristic                                                                  | Symbol | Min. | Typ. | Max.      | Unit |
|---------------------------------------------------------------------------------|--------|------|------|-----------|------|
| Maximum instantaneous forward voltage at 5.0A                                   | VF     | -    | -    | 0.87      | V    |
| Maximum DC reverse current TA = 25°C<br>at rated DC blocking voltage TJ = 125°C | IR     | -    | -    | 5<br>1000 | uA   |
| Typical junction capacitance at 4.0V, 1MHz                                      | CJ     | -    | 160  | -         | PF   |

1. 8.0mm<sup>2</sup> (.013mm thick) land areas

## 5. ELECTRICAL CHARACTERISTICS CURVES

Fig. 1 - Forward Current Derating Curve

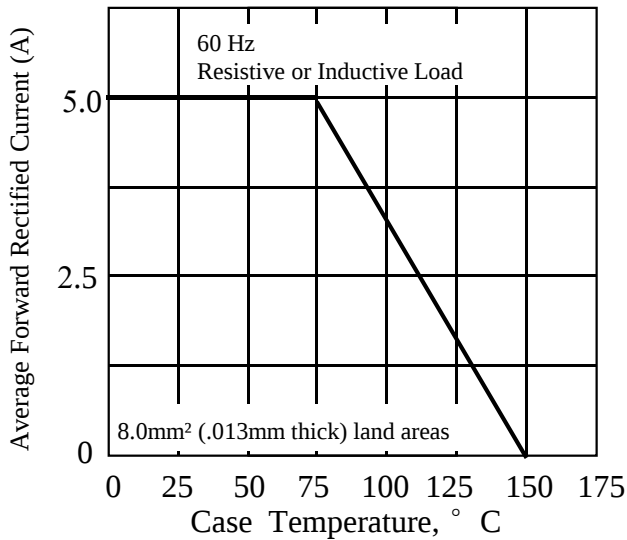


Fig. 2 - Maximum Non-repetitive Peak Forward Surge Current

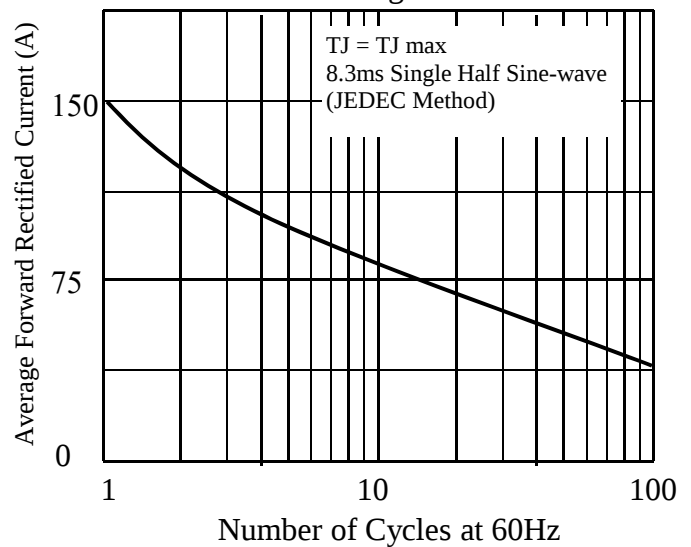


Fig 3. - Typical Instantaneous Forward Characteristics

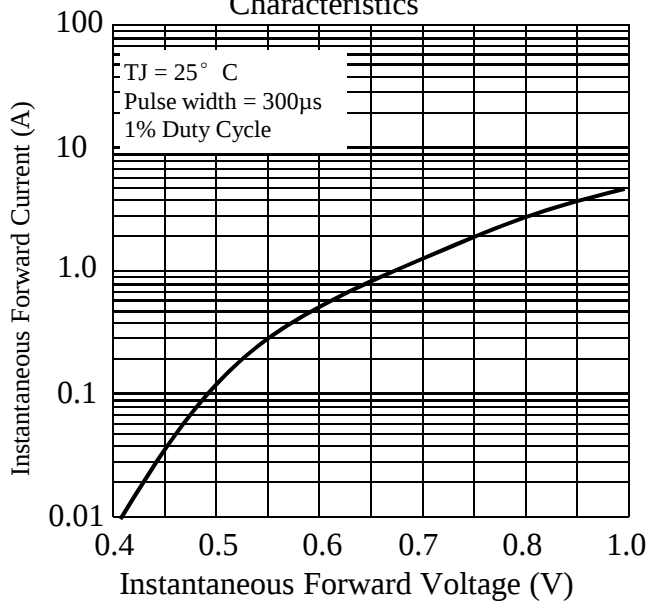


Fig 4. - Typical Reverse Characteristics

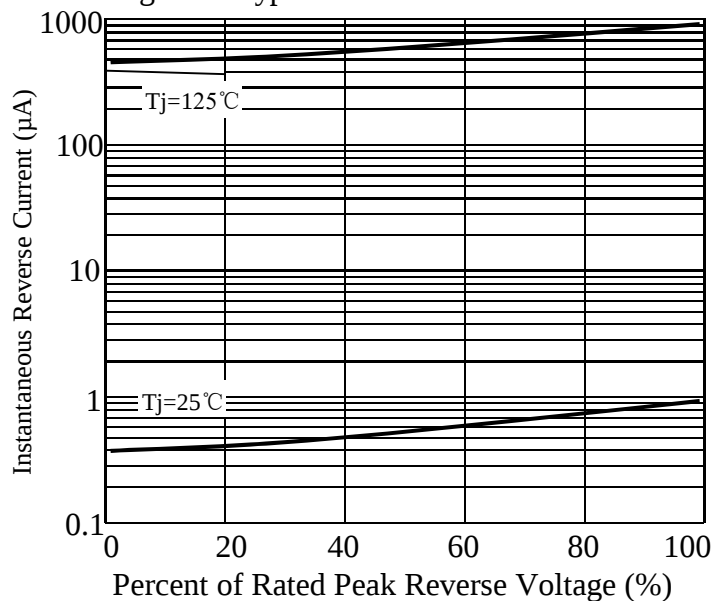
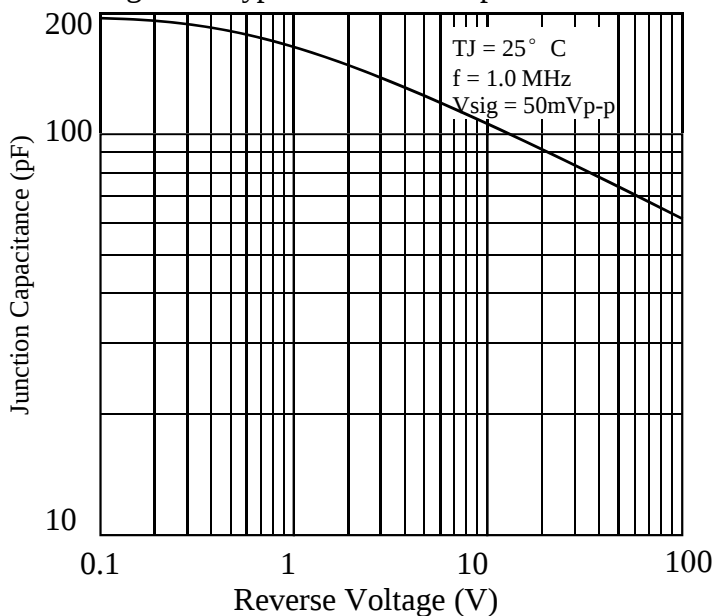
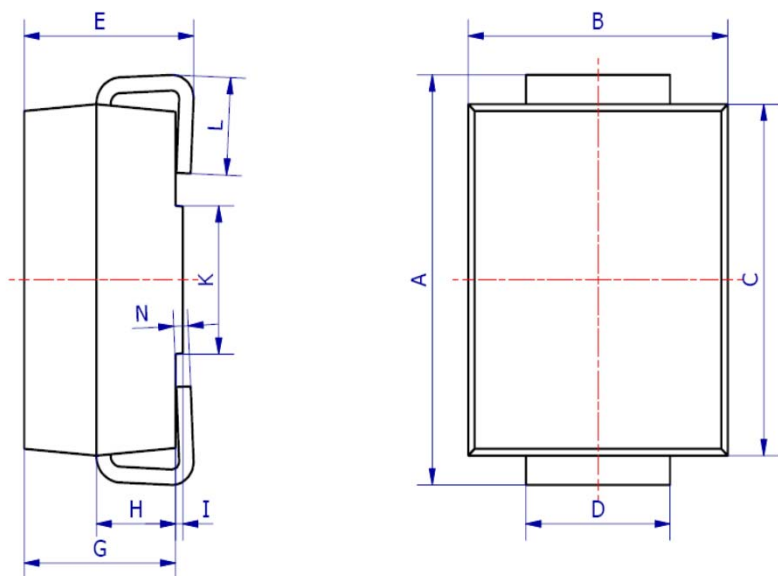


Fig 5. - Typical Junction Capacitance

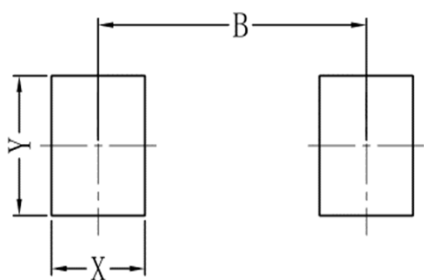


## 6.OUTLINE AND DIMENSIONS



| SMB                  |      |      |      |
|----------------------|------|------|------|
| DIM                  | Min  | Max  | Typ. |
| A                    | 5.00 | 5.45 | 5.25 |
| B                    | 3.20 | 4.00 | 3.60 |
| C                    | 4.30 | 4.70 | 4.50 |
| D                    | 1.80 | 2.20 | 2.00 |
| E                    | 2.20 | 2.50 | 2.35 |
| G                    | 1.90 | 2.30 | 2.10 |
| H                    | 0.95 | 1.25 | 1.10 |
| I                    | 0.05 | 0.15 | 0.10 |
| K                    | 1.70 | 2.10 | 1.90 |
| L                    | 0.90 | 1.50 | 1.20 |
| N                    | 0.10 | 0.30 | 0.20 |
| All Dimensions in mm |      |      |      |

## 7.SOLDERING FOOTPRINT



| SMB |      |
|-----|------|
| DIM | (mm) |
| X   | 1.60 |
| Y   | 2.20 |
| B   | 4.60 |