

# SVT15100UB

## EXTREME LOW VF SCHOTTKY BARRIER RECTIFIER

**Voltage**

**100 V**

**Current**

**15 A**

**TO-277B**

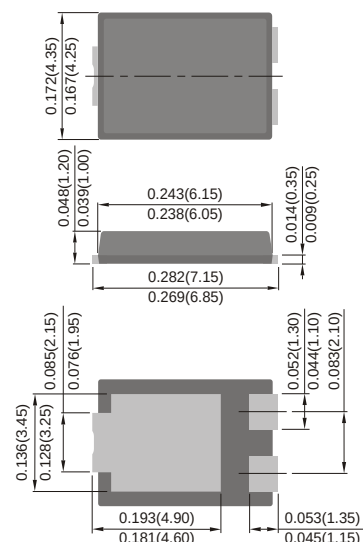
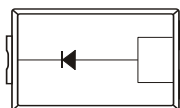
Unit : inch(mm)

### Features

- Ideal for automated placement
- Extreme low forward voltage drop, low power loss
- High efficiency operation
- Low thermal resistance
- Ultra thin profile package for space constrained utilization
- Easy pick and place package suitable for automated handling
- Lead free in compliance with EU RoHS 2011/65/EU directive
- Green molding compound as per IEC61249 Std. . (Halogen Free)

### Mechanical Data

- Case: TO-277B package
- Terminals: solder plated, solderable per MIL-STD-750, Method 2026
- Weight: 0.0038 ounces, 0.1088 grams.
- Marking: Part number



### Maximum Ratings And Electrical Characteristics ( $T_A=25^{\circ}\text{C}$ unless otherwise noted)

| PARAMETER                                                                           |          | SYMBOL          | LIMIT       | UNIT                 |
|-------------------------------------------------------------------------------------|----------|-----------------|-------------|----------------------|
| Maximum repetitive peak reverse voltage                                             |          | $V_{RRM}$       | 100         | V                    |
| Maximum rms voltage                                                                 |          | $V_{RMS}$       | 70          | V                    |
| Maximum dc blocking voltage                                                         |          | $V_R$           | 100         | V                    |
| Maximum average forward rectified current                                           |          | $I_{F(AV)}$     | 15          | A                    |
| Peak forward surge current : 8.3ms single half sine-wave superimposed on rated load |          | $I_{FSM}$       | 250         | A                    |
| Typical thermal resistance                                                          | (Note 1) | $R_{\theta JA}$ | 110         | $^{\circ}\text{C/W}$ |
|                                                                                     | (Note 2) | $R_{\theta JC}$ | 3           |                      |
| Operating junction temperature range                                                |          | $T_J$           | -55 to +150 | $^{\circ}\text{C}$   |
| Storage temperature range                                                           |          | $T_{STG}$       | -55 to +150 | $^{\circ}\text{C}$   |

Note : 1. Mounted on a FR4 PCB, single-sided copper, mini pad.

2. Mounted on a 10cm\*10cm\*1mm copper pad area



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

| PARAMETER                     | SYMBOL   | TEST CONDITION     |                           | MIN. | TYP. | MAX. | UNITS         |
|-------------------------------|----------|--------------------|---------------------------|------|------|------|---------------|
| Breakdown voltage             | $V_{BR}$ | $I_R=0.5\text{mA}$ | $T_J=25^{\circ}\text{C}$  | 100  | -    | -    | V             |
| Instantaneous forward voltage | $V_F$    | $I_F=1\text{A}$    | $T_J=25^{\circ}\text{C}$  | -    | 0.38 | -    | V             |
|                               |          | $I_F=5\text{A}$    |                           | -    | 0.47 | -    |               |
|                               |          | $I_F=15\text{A}$   |                           | -    | 0.61 | 0.66 |               |
|                               |          | $I_F=1\text{A}$    | $T_J=125^{\circ}\text{C}$ | -    | 0.25 | -    | V             |
|                               |          | $I_F=5\text{A}$    |                           | -    | 0.4  | -    |               |
| Reverse current               | $I_R$    | $V_R=70\text{V}$   | $T_J=25^{\circ}\text{C}$  | -    | 15   | -    | $\mu\text{A}$ |
|                               |          | $V_R=100\text{V}$  | $T_J=25^{\circ}\text{C}$  | -    | -    | 80   | $\mu\text{A}$ |
|                               |          |                    | $T_J=125^{\circ}\text{C}$ | -    | 15   | -    | mA            |

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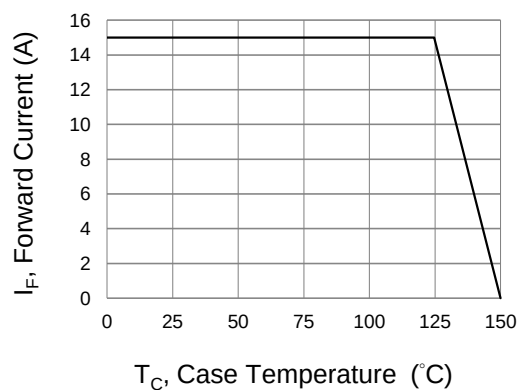


**Fig.1 Forward Current Derating Curve**

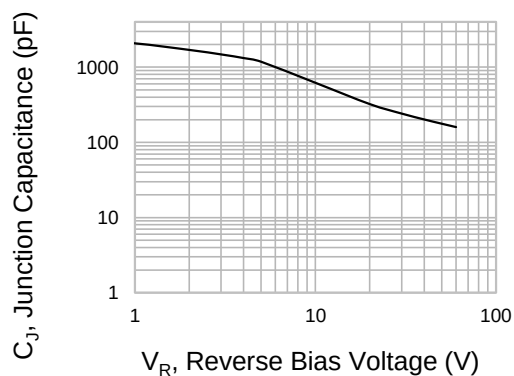


**Fig.2 Typical Junction Capacitance**

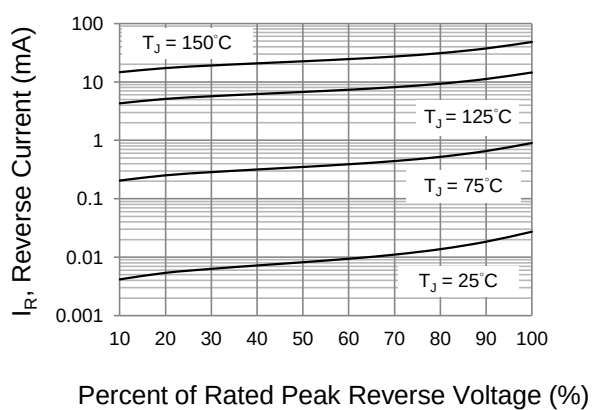


**Fig.3 Typical Reverse Characteristics**

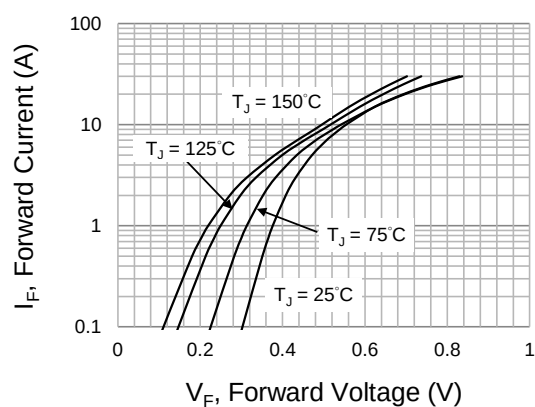


**Fig.4 Typical Forward Characteristics**

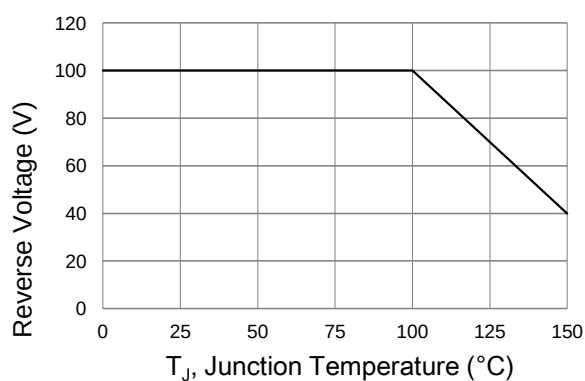


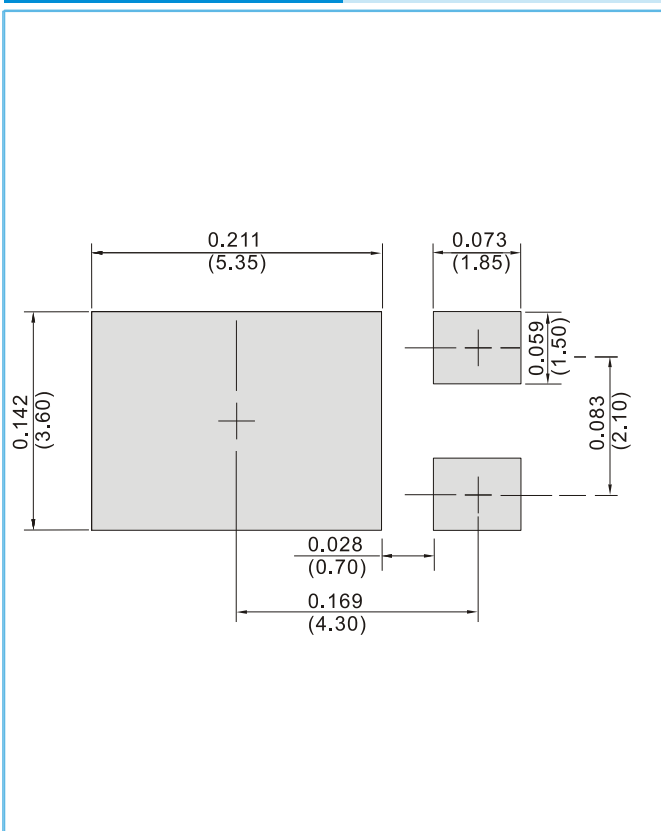
**Fig.5 Operating Temperature Derating Curve**

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## MOUNTING PAD LAYOUT

**TO-277B**

Unit : inch(mm)



## ORDER INFORMATION

- Packing information  
T/R – 5K per 13" plastic Reel



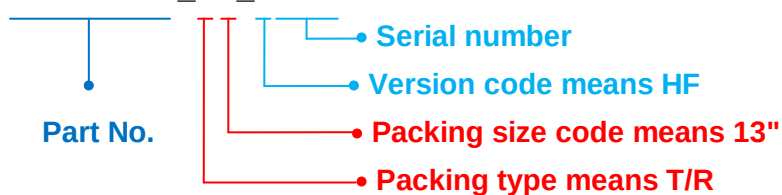
## SVT15100UB

Part No\_packing code\_Version

SVT15100UB\_R2\_00001

For example :

RB500V-40\_R2\_00001



| Packing Code <b>XX</b>               |                         |                                     |                         | Version Code <b>XXXXX</b> |                         |                                          |
|--------------------------------------|-------------------------|-------------------------------------|-------------------------|---------------------------|-------------------------|------------------------------------------|
| Packing type                         | 1 <sup>st</sup><br>Code | Packing size code                   | 2 <sup>nd</sup><br>Code | HF or<br>RoHS             | 1 <sup>st</sup><br>Code | 2 <sup>nd</sup> ~5 <sup>th</sup><br>Code |
| Tape and Ammunition Box (T/B)        | A                       | N/A                                 | 0                       | HF                        | 0                       | serial number                            |
| Tape and Reel (T/R)                  | R                       | 7"                                  | 1                       | RoHS                      | 1                       | serial number                            |
| Bulk Packing (B/P)                   | B                       | 13"                                 | 2                       |                           |                         |                                          |
| Tube Packing (T/P)                   | T                       | 26mm                                | X                       |                           |                         |                                          |
| Tape and Reel (Right Oriented) (TRR) | S                       | 52mm                                | Y                       |                           |                         |                                          |
| Tape and Reel (Left Oriented) (TRL)  | L                       | PANASERT T/B<br>CATHODE UP (PBCU)   | U                       |                           |                         |                                          |
| FORMING                              | F                       | PANASERT T/B<br>CATHODE DOWN (PBCD) | D                       |                           |                         |                                          |



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