



# SVT10100UB

## EXTREME LOW VF SCHOTTKY BARRIER RECTIFIER

**Voltage**

**100 V**

**Current**

**10 A**

**TO-277B**

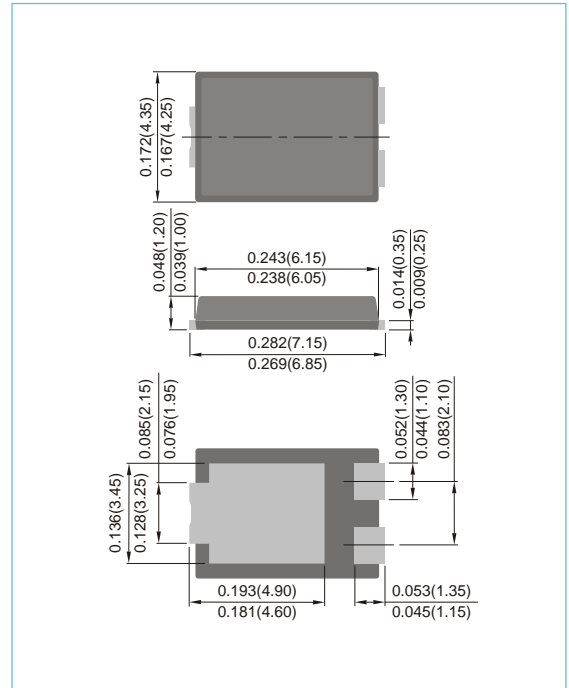
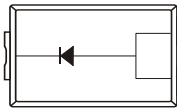
Unit : inch(mm)

### 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<sub>A</sub>=25°C unless otherwise noted)

| PARAMETER   | SYMBOL                    | LIMIT       | UNIT |
|---|---------------------------|-------------|------|
| Maximum repetitive peak reverse voltage   | V <sub>RRM</sub>          | 100         | V    |
| Maximum rms voltage   | V <sub>RMS</sub>          | 70          | V    |
| Maximum dc blocking voltage   | V <sub>R</sub>            | 100         | V    |
| Maximum average forward rectified current   | I <sub>F(AV)</sub>        | 10          | A    |
| Peak forward surge current : 8.3ms single half sine-wave superimposed on rated load | I <sub>FSM</sub>          | 150         | A    |
| Typical thermal resistance  | (Note 1) R <sub>θJA</sub> | 110         | °C/W |
|   | (Note 2) R <sub>θJC</sub> | 3           |      |
| Operating junction temperature range  | T <sub>J</sub>            | -55 to +150 | °C   |
| Storage temperature range   | T <sub>STG</sub>          | -55 to +150 | °C   |

Note : 1. Mounted on a FR4 PCB, single-sided copper, mini pad.  
2. Mounted on a 10cm\*10cm\*1mm copper pad area



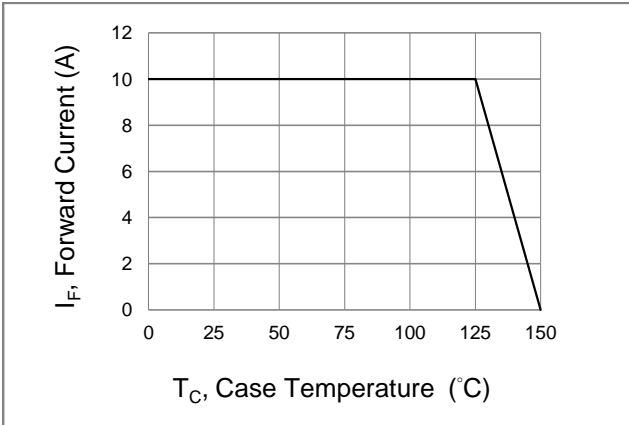
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Electrical Characteristics ( $T_A=25^{\circ}\text{C}$  unless otherwise noted)

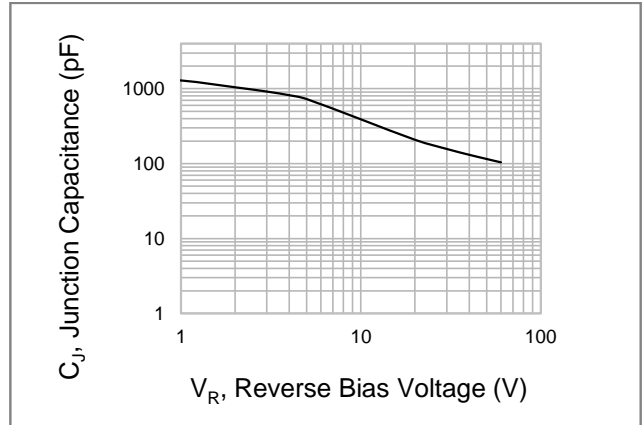
| PARAMETER                     | SYMBOL   | TEST CONDITION     |                           | MIN. | TYP. | MAX. | UNITS         |
|-------------------------------|----------|--------------------|---------------------------|------|------|------|---------------|
| Breakdown voltage             | $V_{BR}$ | $I_R=0.5\text{mA}$ | $T_J=25^{\circ}\text{C}$  | 100  | -    | -    | V             |
| Instantaneous forward voltage | $V_F$    | $I_F=1\text{A}$    | $T_J=25^{\circ}\text{C}$  | -    | 0.39 | -    | V             |
|                               |          | $I_F=5\text{A}$    |                           | -    | 0.52 | -    |               |
|                               |          | $I_F=10\text{A}$   |                           | -    | 0.63 | 0.67 |               |
|                               |          | $I_F=1\text{A}$    | $T_J=125^{\circ}\text{C}$ | -    | 0.28 | -    | V             |
| $I_F=5\text{A}$               | -        | 0.46               |                           | -    |      |      |               |
| Reverse current               | $I_R$    | $V_R=70\text{V}$   | $T_J=25^{\circ}\text{C}$  | -    | 10   | -    | $\mu\text{A}$ |
|                               |          | $V_R=100\text{V}$  | $T_J=25^{\circ}\text{C}$  | -    | -    | 60   | $\mu\text{A}$ |
|                               |          |                    | $T_J=125^{\circ}\text{C}$ | -    | 10   | -    | mA            |



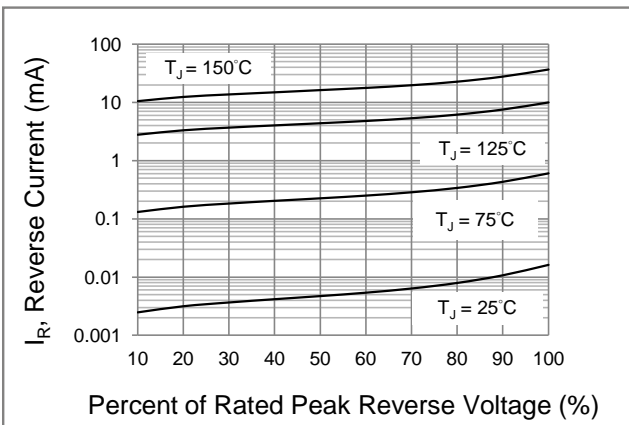
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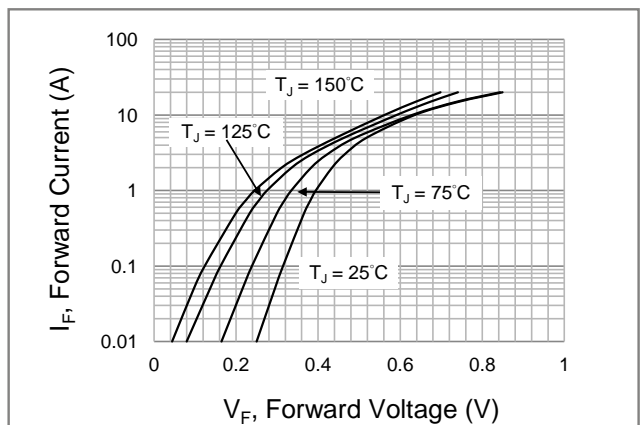
**Fig.1 Forward Current Derating Curve**



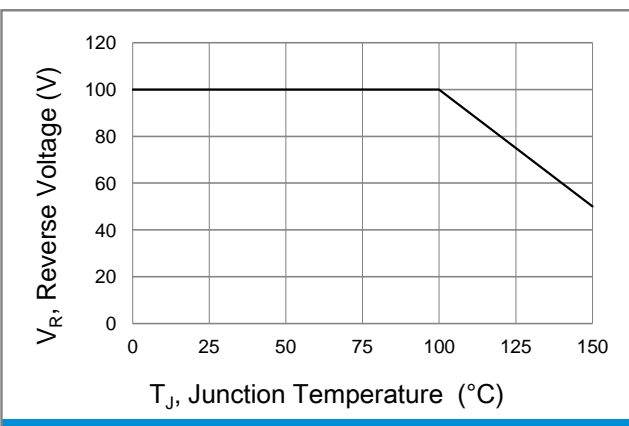
**Fig.2 Typical Junction Capacitance**



**Fig.3 Typical Reverse Characteristics**



**Fig.4 Typical Forward Characteristics**

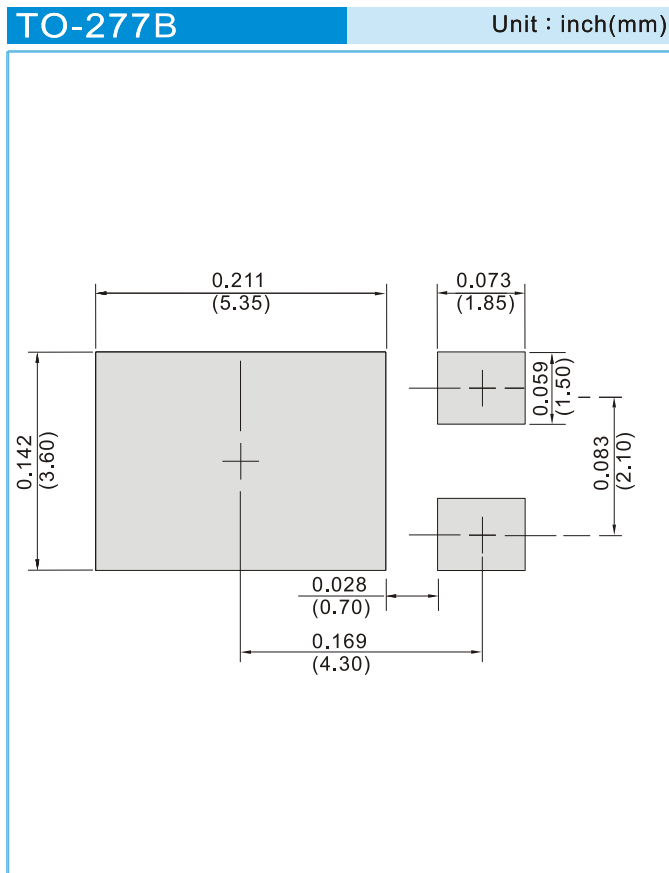


**Fig.5 Operating Temperature Derating Curve**



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## MOUNTING PAD LAYOUT



## ORDER INFORMATION

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



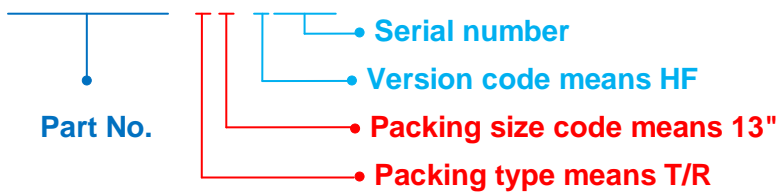
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Part No\_packing code\_Version

SVT10100UB\_R2\_00001

For example :

RB500V-40\_R2\_00001



| Packing Code <b>XX</b>               |                      |                                  |                      | Version Code <b>XXXXX</b> |                      |                                       |
|--------------------------------------|----------------------|----------------------------------|----------------------|---------------------------|----------------------|---------------------------------------|
| Packing type                         | 1 <sup>st</sup> Code | Packing size code                | 2 <sup>nd</sup> Code | HF or RoHS                | 1 <sup>st</sup> Code | 2 <sup>nd</sup> -5 <sup>th</sup> 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 CATHODE UP (PBCU)   | U                    |                           |                      |                                       |
| FORMING                              | F                    | PANASERT T/B CATHODE DOWN (PBCD) | D                    |                           |                      |                                       |



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