



# SVT2080U \ SVT2080UB

## EXTREME LOW VF SCHOTTKY BARRIER RECTIFIER

**Voltage**

**80 V**

**Current**

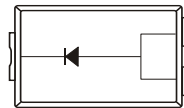
**20 A**

### Features

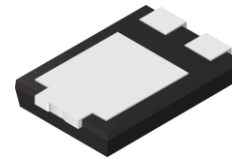
- Ideal for automated placement
- Extreme low forward voltage drop, low power loss
- High efficiency operation
- Low thermal resistance
- Ultra thin profile package for space constrained utilization
- Easy pick and place package suitable for automated handling
- Lead free in compliance with EU RoHS 2011/65/EU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

### Mechanical Data

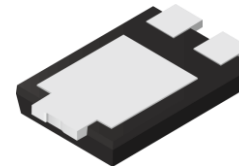
- Case: TO-277, TO-277B package
- Terminals: solder plated, solderable per MIL-STD-750, Method 2026
- TO-277 Weight: 0.00379 ounces, 0.1073 grams.
- TO-277B Weight: 0.0038 ounces, 0.1088 grams.
- Marking: Part number



SVT2080U TO-277



SVT2080UB TO-277B



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

| PARAMETER   | SYMBOL                   | LIMIT       | UNIT                 |
|---|--------------------------|-------------|----------------------|
| Maximum repetitive peak reverse voltage   | $V_{RRM}$                | 80          | V                    |
| Maximum rms voltage   | $V_{RMS}$                | 56          | V                    |
| Maximum dc blocking voltage   | $V_R$                    | 80          | V                    |
| Maximum average forward rectified current   | $I_{F(AV)}$              | 20          | A                    |
| Peak forward surge current : 8.3ms single half sine-wave superimposed on rated load | $I_{FSM}$                | 300         | A                    |
| Typical thermal resistance  | (Note 1) $R_{\theta JA}$ | 110         | $^{\circ}\text{C/W}$ |
|   | (Note 2) $R_{\theta JC}$ | 5           |                      |
| 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.

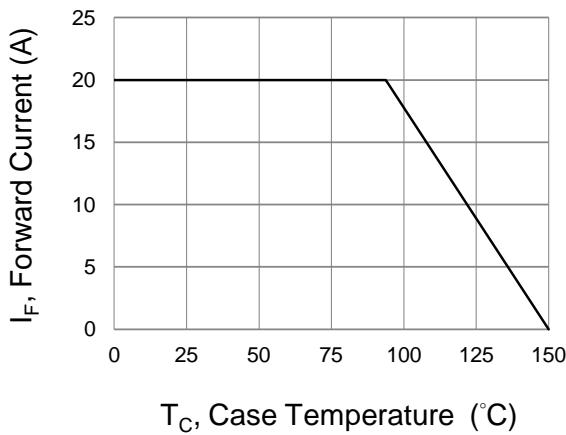
2. Mounted on a 10cm\*10cm\*1mm copper pad area



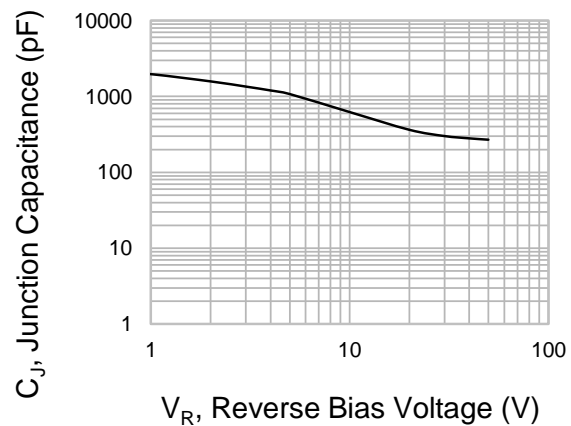
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Electrical Characteristics ( $T_A=25^\circ\text{C}$  unless otherwise noted)

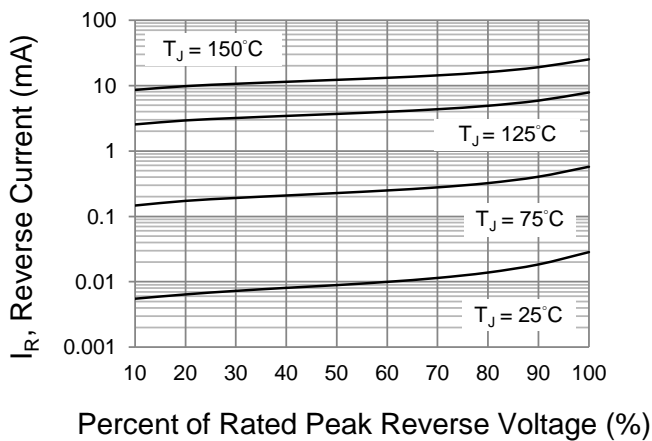
| PARAMETER                     | SYMBOL   | TEST CONDITION  | MIN. | TYP. | MAX. | UNITS               |
|-------------------------------|----------|---|------|------|------|---------------------|
| Breakdown voltage             | $V_{BR}$ | $I_R=0.5\text{mA}$ $T_J=25^\circ\text{C}$                       | 80   | -    | -    | V                   |
| Instantaneous forward voltage | $V_F$    | $I_F=1\text{A}$ $T_J=25^\circ\text{C}$                          | -    | 0.35 | -    | V                   |
|                               |          | $I_F=5\text{A}$ $T_J=25^\circ\text{C}$                          | -    | 0.44 | -    | V                   |
|                               |          | $I_F=20\text{A}$ $T_J=25^\circ\text{C}$                         | -    | -    | 0.66 | V                   |
|                               |          | $I_F=1\text{A}$ $T_J=125^\circ\text{C}$                         | -    | 0.24 | -    | V                   |
| Reverse current               | $I_R$    | $V_R=64\text{V}$ $T_J=25^\circ\text{C}$                         | -    | 15   | -    | $\mu\text{A}$       |
|                               |          | $V_R=80\text{V}$ $T_J=25^\circ\text{C}$ $T_J=125^\circ\text{C}$ | -    | -    | 150  | $\mu\text{A}$<br>mA |



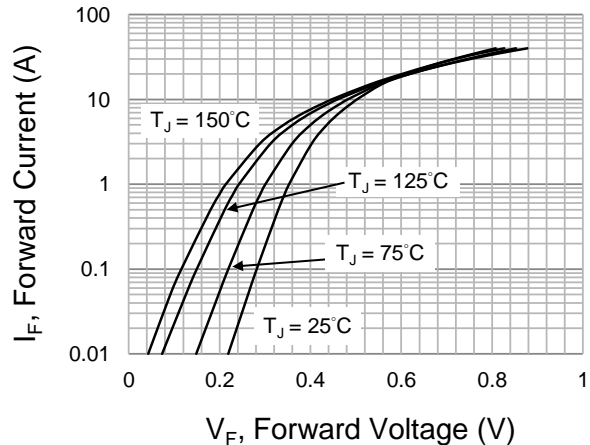
**Fig.1 Forward Current Derating Curve**



**Fig.2 Typical Junction Capacitance**



**Fig.3 Typical Reverse Characteristics**

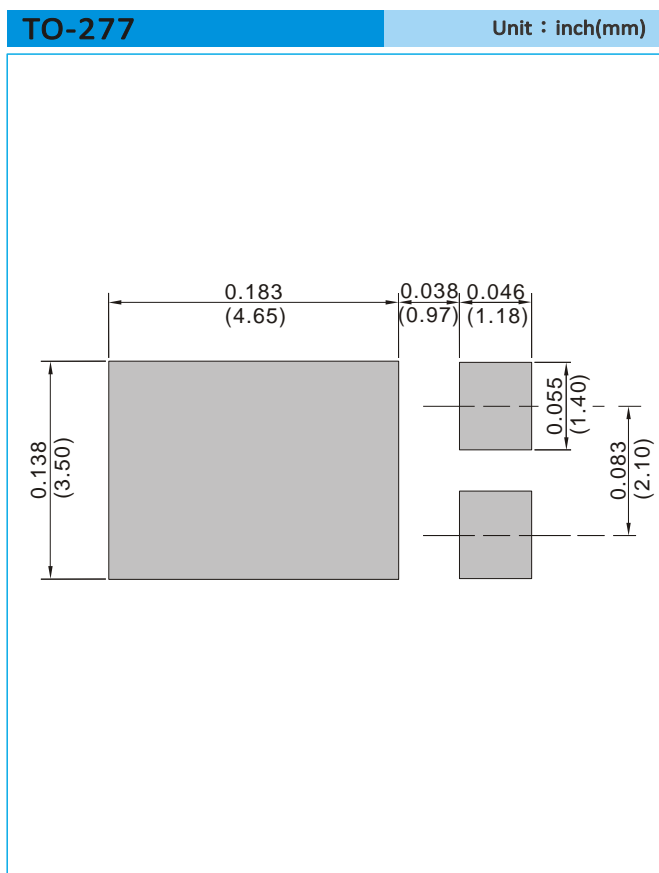


**Fig.4 Typical Forward Characteristics**



# SVT2080U \ SVT2080UB

## MOUNTING PAD LAYOUT



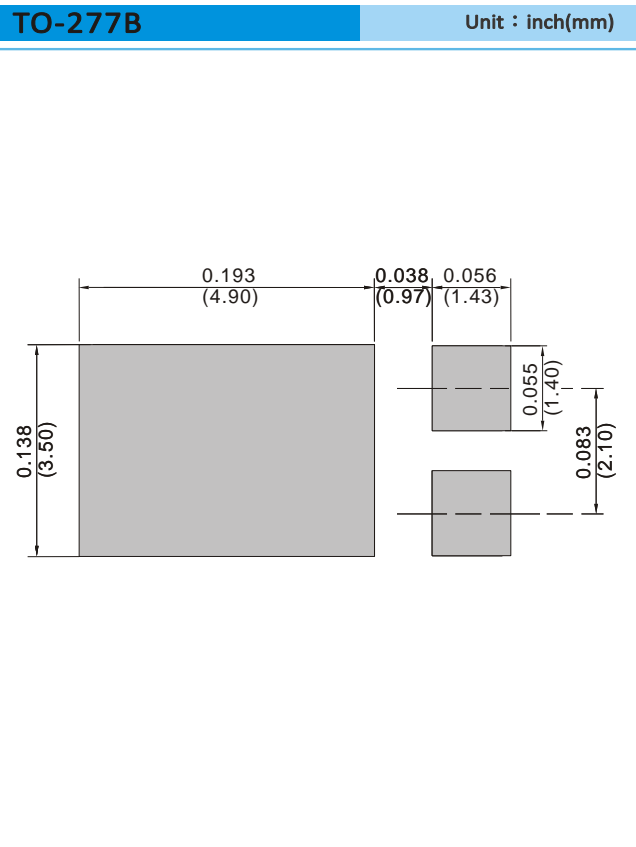
## ORDER INFORMATION

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



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## ORDER INFORMATION

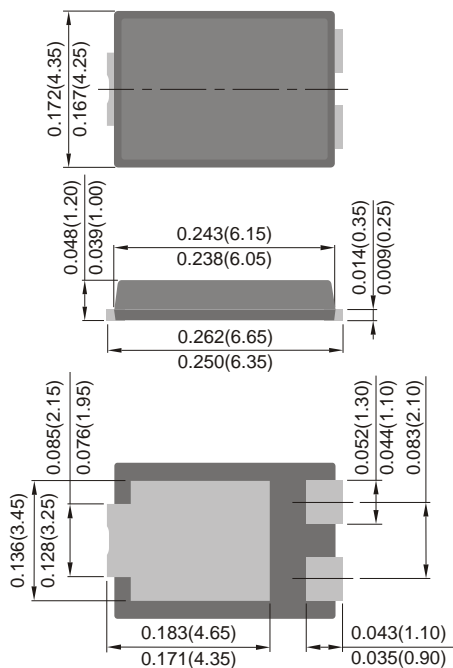
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T/R – 5K per 13" plastic Reel



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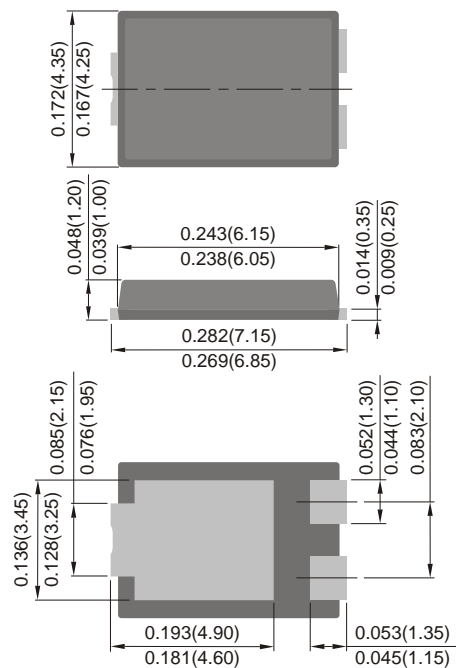
## TO-277

Unit : inch(mm)



## TO-277B

Unit : inch(mm)





## SVT2080U \ SVT2080UB

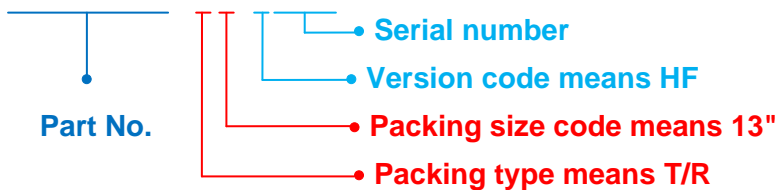
### Part No\_packing code\_Version

SVT2080U\_R2\_00001

SVT2080UB\_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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