



#### LOW VF SCHOTTKY RECTIFIER

VOLTAGE 45 Volt CURRENT 10 Ampere

#### **FEATURES**

- · Ideal for automated placement
- Low forward voltage drop, low power loss
- · High efficiency Operation
- · Low thermal resistance
- Lead free in compliance with EU RoHS 2011/65/EU directive
- Green molding compound as per IEC61249 Std. . (Halogen Free)

#### **MECHANICAL DATA**

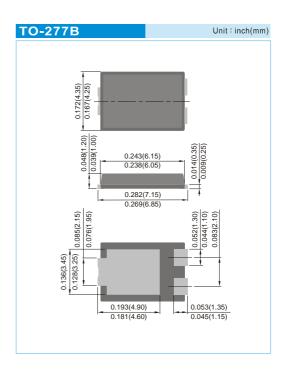
• Case: TO-277B, Plastic

• Terminals : Solderable per MIL-STD-750, Method 2026

• Weight: 0.0038 ounces, 0.1088 grams

Marking : Part number





#### MAXIMUM RATINGS(TA=25°C unless otherwise noted)

| PARAMETER   |                      |               | VALUE        | UNIT |
|---|----------------------|---------------|--------------|------|
| Maximum Recurrent Peak Reverse Voltage  |                      | VRRM          | 45           | V    |
| Maximum RMS Voltage   |                      | VRMS          | 32           | V    |
| Maximum DC Blocking Voltage   |                      | VR            | 45           | V    |
| Maximum Average Rectified Output Current  |                      | I F(AV)       | 10           | Α    |
| Peak Forward Surge Current:8.3ms single half sine-wave superimposed on rated load |                      | IFSM          | 275          | Α    |
| Typical Thermal Resistance ,Junction to Ambient Junction to Case                  | (Note 2)<br>(Note 1) | Reja<br>Rejic | 110<br>8     | °C/W |
| Operating junction temperature range and Storage temperature range                |                      | ТЈ,Тѕтс       | -55 to + 150 | °C   |

NOTES:1.Mounted on a FR4 PCB, single-sided copper, with 100cm<sup>2</sup> copper pad area. 2.Mounted on a FR4 PCB, single-sided copper, mini pad.

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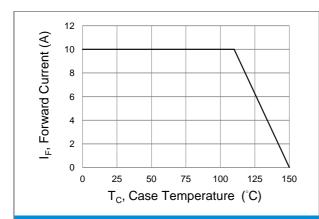


#### **ELECTRICAL CHARACTERISTICS(TA=25°C unless otherwise noted)**

| PARAMETER                     | SYMBOL | TEST CONDITIONS             |   | MIN.        | TYP.                 | MAX.           | UNIT     |
|-------------------------------|--------|-----------------------------|---|-------------|----------------------|----------------|----------|
| Breakdown voltage             | VBR    | I R=0.5mA                   | T <sub>A</sub> =25°C                          | 45          | -                    | -              | V        |
| Instantaneous forward voltage | VF     | I = 3A<br>I = 5A<br>I = 10A | Ta=25°C                                       | -<br>-<br>- | 0.34<br>0.38<br>0.44 | -<br>-<br>0.47 | V        |
|                               |        | I = 3A<br>I = 5A<br>I = 10A | T <sub>A</sub> =125°C                         | -<br>-<br>- | 0.27<br>0.32<br>0.41 | -<br>-<br>-    | V        |
| Reverse current               | l R    | VR=36V                      | T <sub>A</sub> =25°C                          | -           | 32                   | -              | μА       |
|                               |        | VR=45V                      | T <sub>A</sub> =25°C<br>T <sub>A</sub> =125°C | -           | -<br>8.6             | 0.25<br>-      | mA<br>mA |







**Fig.1 Forward Current Derating Curve** 

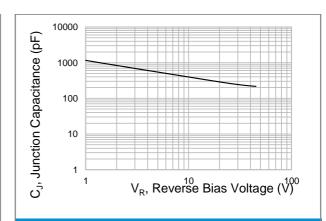
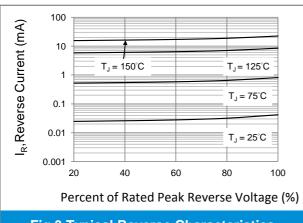
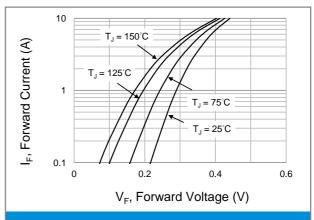


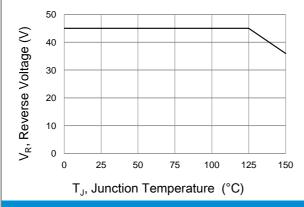
Fig.2 Typical Junction Capacitance



**Fig.3 Typical Reverse Characteristics** 



**Fig.4 Typical Forward Characteristics** 

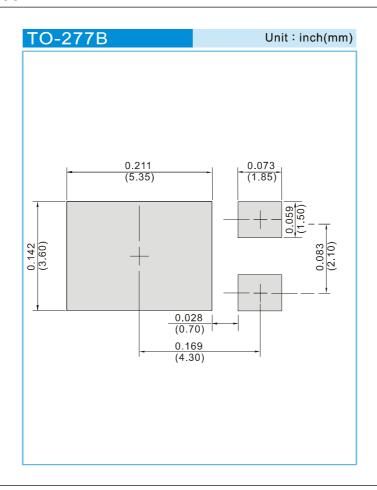


**Fig.5 Operating Temperature Derating Curve** 





#### **MOUNTING PAD LAYOUT**



#### **ORDER INFORMATION**

Packing information

T/R - 5K per 13" plastic Reel

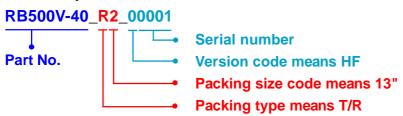




### Part No\_packing code\_Version

SVM1045VB\_R2\_00001

### For example:



| Packing Code XX                      |                      |                                   | Version Code XXXXX   |            |                      |                                       |
|--------------------------------------|----------------------|-----------------------------------|----------------------|------------|----------------------|---------------------------------------|
| 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)        | Α                    | N/A                               | 0                    | HF         | 0                    | serial number                         |
| Tape and Reel<br>(T/R)               | R                    | 7"                                | 1                    | RoHS       | 1                    | serial number                         |
| Bulk Packing<br>(B/P)                | В                    | 13"                               | 2                    |            |                      |                                       |
| Tube Packing<br>(T/P)                | Т                    | 26mm                              | X                    |            |                      |                                       |
| Tape and Reel (Right Oriented) (TRR) | s                    | 52mm                              | Y                    |            |                      |                                       |
| Tape and Reel (Left Oriented) (TRL)  | L                    | PANASERT T/B CATHODE UP<br>(PBCU) | U                    |            |                      |                                       |
| FORMING                              | F                    | PANASERT T/B CATHODE DOWN (PBCD)  | D                    |            |                      |                                       |





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