



# SVC10120V

## ULTRA LOW VF SCHOTTKY RECTIFIER

**VOLTAGE** 120 Volt **CURRENT** 10 Ampere

**TO-277**

Unit : inch(mm)

### FEATURES

- Ideal for automated placement
- Ultra low forward voltage drop, low power loss
- High efficiency operation
- Low thermal resistance
- Ultra thin profile package for space constrained utilization
- 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)

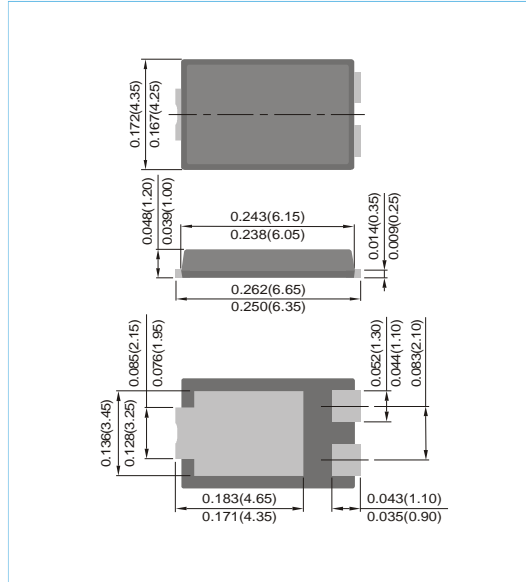
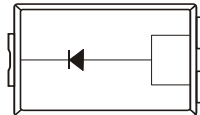
### MECHANICAL DATA

Case : TO-277, Plastic

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

Weight : 0.0037 ounces, 0.1073 grams

Marking : Part number



### MAXIMUM RATINGS( $T_A=25^{\circ}\text{C}$ unless otherwise noted)

| PARAMETER   | SYMBOL          | VALUE        | UNIT                 |
|---|-----------------|--------------|----------------------|
| Maximum Recurrent Peak Reverse Voltage  | $V_{RRM}$       | 120          | V                    |
| Maximum RMS Voltage   | $V_{RMS}$       | 85           | V                    |
| Maximum DC Blocking Voltage   | $V_R$           | 120          | V                    |
| Maximum Average Rectified Output Current  | $I_{F(AV)}$     | 10           | A                    |
| Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load | $I_{FSM}$       | 200          | A                    |
| Typical Thermal Resistance (Note 2)   | $R_{\theta JA}$ | 110          | $^{\circ}\text{C/W}$ |
| (Note 1)  | $R_{\theta JC}$ | 4            |                      |
| Operating Junction Temperature Range And Storage Temperature Range                  | $T_J, T_{STG}$  | -55 to + 150 | $^{\circ}\text{C}$   |

NOTES : 1.Mounted on a FR4 PCB, single-sided copper, mini pad.  
2.Mounted on 10cm\*10cm\*0.5mm copper pad area



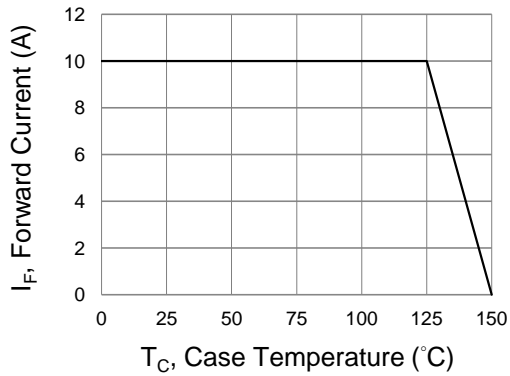
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## ELECTRICAL CHARACTERISTICS (T<sub>A</sub>=25°C unless otherwise noted)

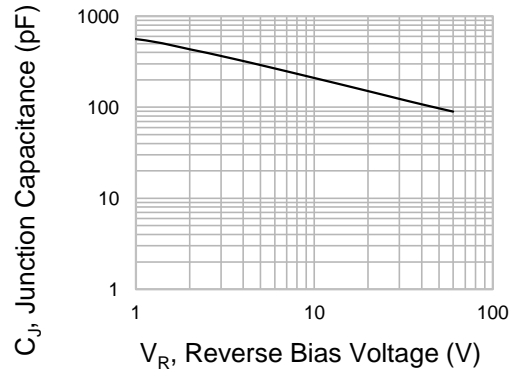
| PARAMETER                                   | SYMBOL          | TEST CONDITIONS   | MIN.   | TYP.    | MAX.     | UNIT     |
|---|-----------------|---|--------|---------|----------|----------|
| Breakdown voltage                           | V <sub>BR</sub> | I <sub>R</sub> =0.5mA<br>T <sub>A</sub> =25°C                         | 120    | -       | -        | V        |
| Instantaneous forward voltage               | V <sub>F</sub>  | I <sub>F</sub> =1A<br>T <sub>A</sub> =25°C                            | -      | 0.43    | -        | V        |
|   |                 | I <sub>F</sub> =5A<br>T <sub>A</sub> =25°C                            | -      | 0.63    | -        |          |
|   |                 | I <sub>F</sub> =10A<br>T <sub>A</sub> =25°C                           | -      | 0.74    | 0.79     |          |
|   |                 | I <sub>F</sub> =1A<br>T <sub>A</sub> =125°C                           | -      | 0.33    | -        | V        |
| I <sub>F</sub> =5A<br>T <sub>A</sub> =125°C | -               | 0.54  | -      |         |          |          |
| Reverse current                             | I <sub>R</sub>  | V <sub>R</sub> =96V<br>T <sub>A</sub> =25°C                           | -      | 10      | -        | μA       |
|   |                 | V <sub>R</sub> =120V<br>T <sub>A</sub> =25°C<br>T <sub>A</sub> =125°C | -<br>- | -<br>16 | 100<br>- | μA<br>mA |



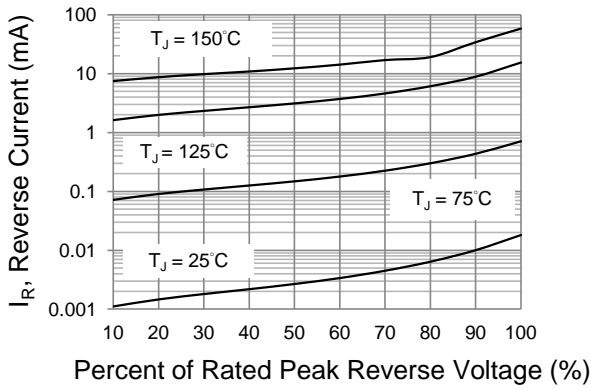
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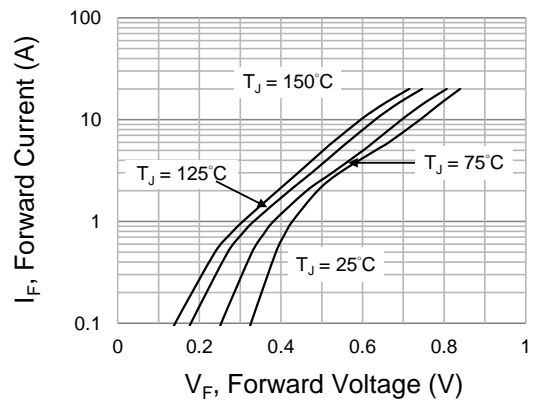
**Fig.1 Forward Current Derating Curve**



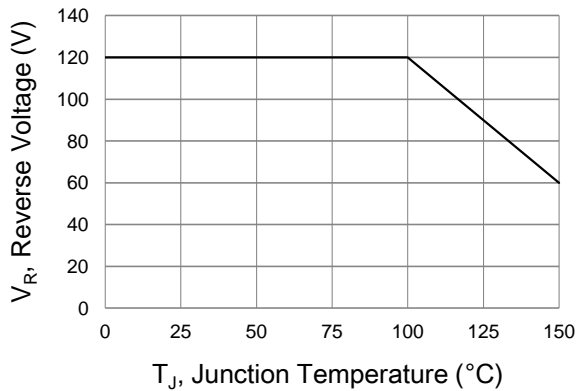
**Fig.2 Typical Junction Capacitance**



**Fig.3 Typical Reverse Characteristics**



**Fig.4 Typical Forward Characteristics**



**Fig.5 Operating Temperature Derating Curve**

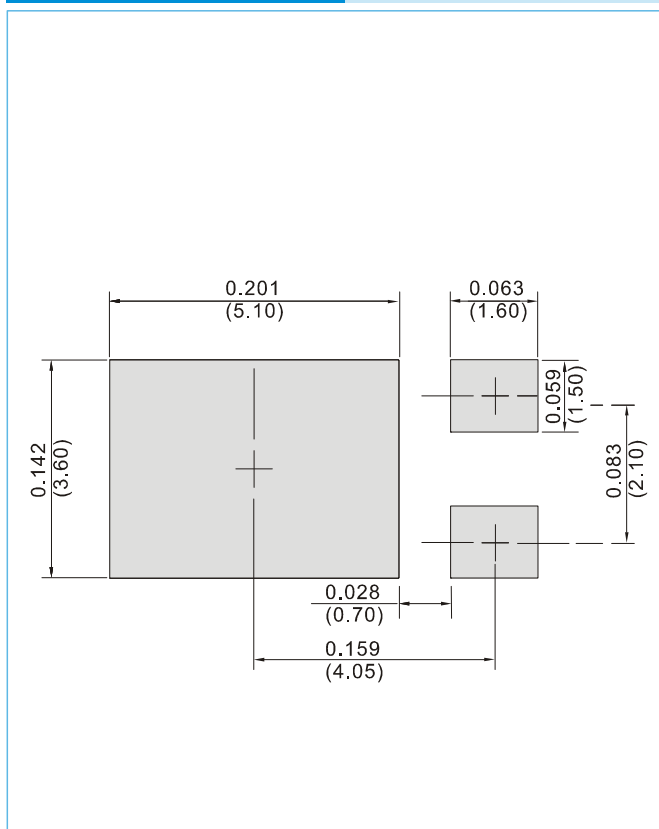


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## MOUNTING PAD LAYOUT

TO-277

Unit : inch(mm)



## ORDER INFORMATION

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



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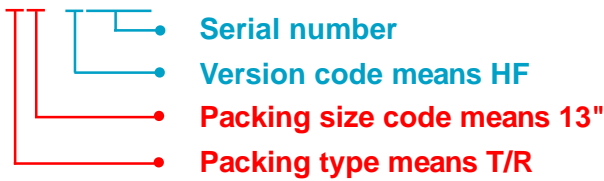
**Part No\_packing code\_Version**

SVC10120V\_R2\_00001

For example :

**RB500V-40\_R2\_00001**

Part No.



| 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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