



# SV1580VB

## ULTRA LOW VF SCHOTTKY BARRIER RECTIFIER

**Voltage**

**80 V**

**Current**

**15 A**

**TO-277B**

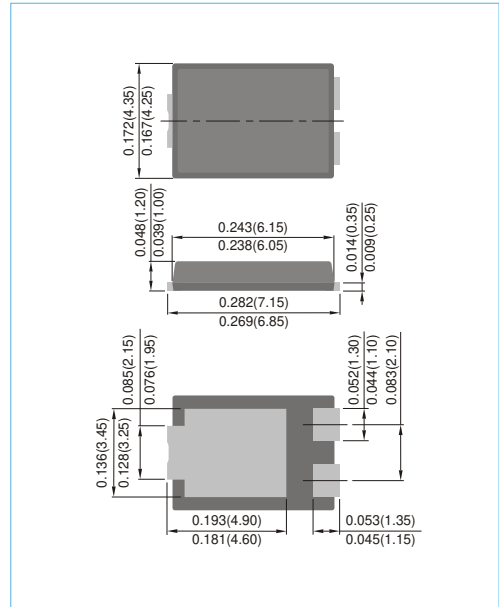
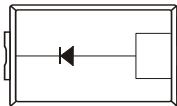
Unit : inch(mm)

### 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
- 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>	80	V
Maximum rms voltage	V <sub>RMS</sub>	56	V
Storage temperature range	V <sub>R</sub>	80	V
Maximum average forward rectified current	I <sub>F(AV)</sub>	15	A
Peak forward surge current : 8.3ms single half sine-wave superimposed on rated load	I <sub>FSM</sub>	250	A
Typical thermal resistance	(Note 1) R <sub>θJC</sub>	3.5	°C/W
	(Note 2) R <sub>θJA</sub>	110	
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 10cm\*10cm\*0.5mm copper pad area.  
2. Mounted on a FR4 PCB, single-sided copper, mini pad.



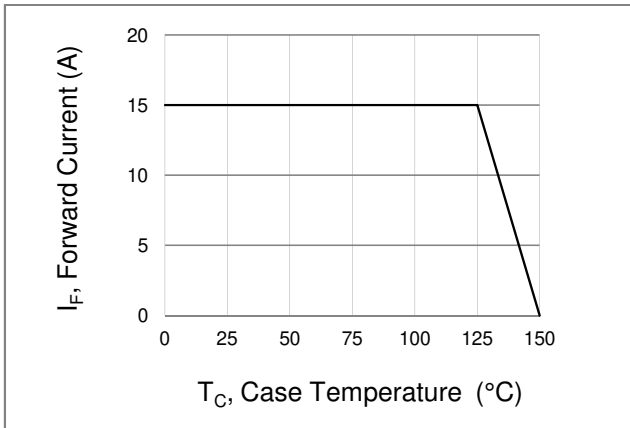
## SV1580VB

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

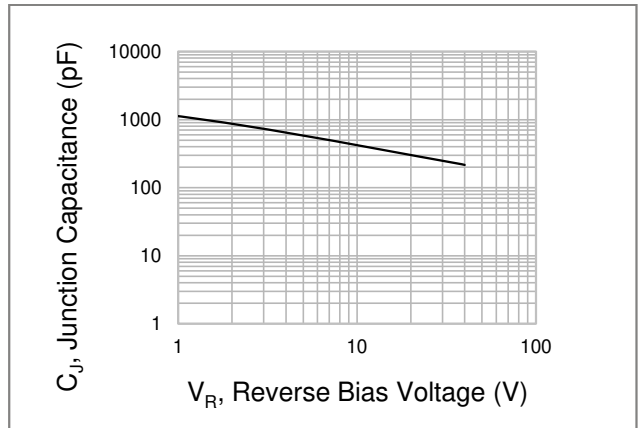
PARAMETER	SYMBOL	TEST CONDITION		MIN.	TYP.	MAX.	UNITS
Breakdown voltage	$V_{BR}$	$I_R=0.5\text{mA}$	$T_J=25^{\circ}\text{C}$	80	-	-	V
Instantaneous forward voltage	$V_F$	$I_F=1\text{A}$	$T_J=25^{\circ}\text{C}$	-	0.39	-	V
		$I_F=5\text{A}$		-	0.5	-	
		$I_F=10\text{A}$		-	0.58	-	
		$I_F=15\text{A}$		-	0.67	0.72	
		$I_F=1\text{A}$	$T_J=125^{\circ}\text{C}$	-	0.27	-	V
		$I_F=5\text{A}$		-	0.42	-	
$I_F=10\text{A}$	-	0.52		-			
Reverse current	$I_R$	$V_R=56\text{V}$	$T_J=25^{\circ}\text{C}$	-	7	-	$\mu\text{A}$
		$V_R=80\text{V}$	$T_J=25^{\circ}\text{C}$	-	-	100	$\mu\text{A}$
			$T_J=125^{\circ}\text{C}$	-	13	-	mA



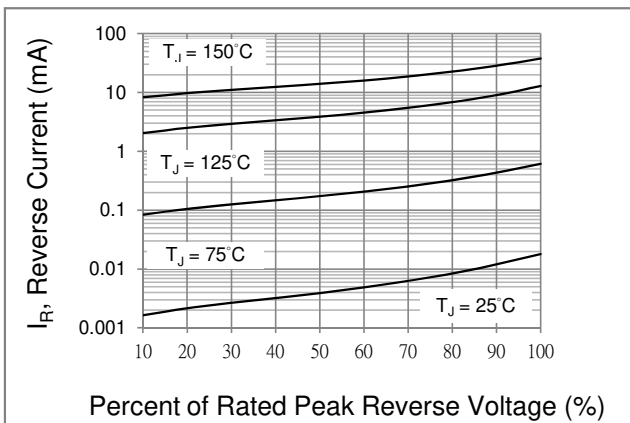
# SV1580VB



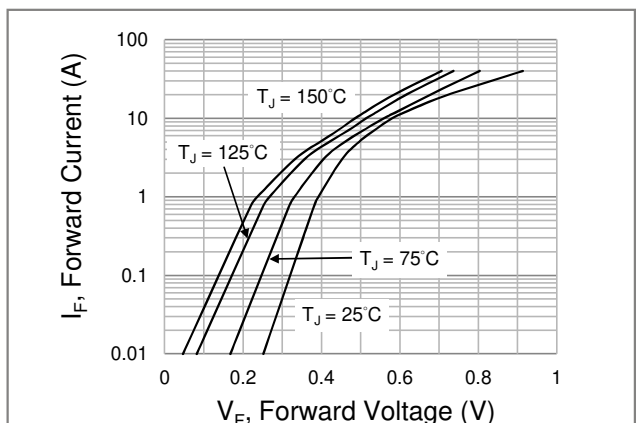
**Fig.1 Forward Current Derating Curve**



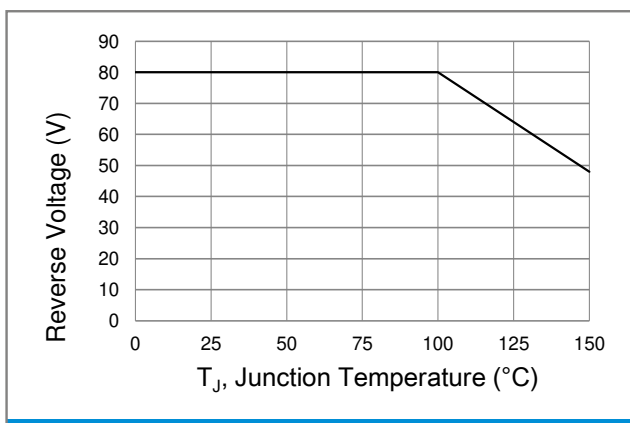
**Fig.2 Typical Junction Capacitance**



**Fig.3 Typical Reverse Characteristics**



**Fig.4 Typical Forward Characteristics**

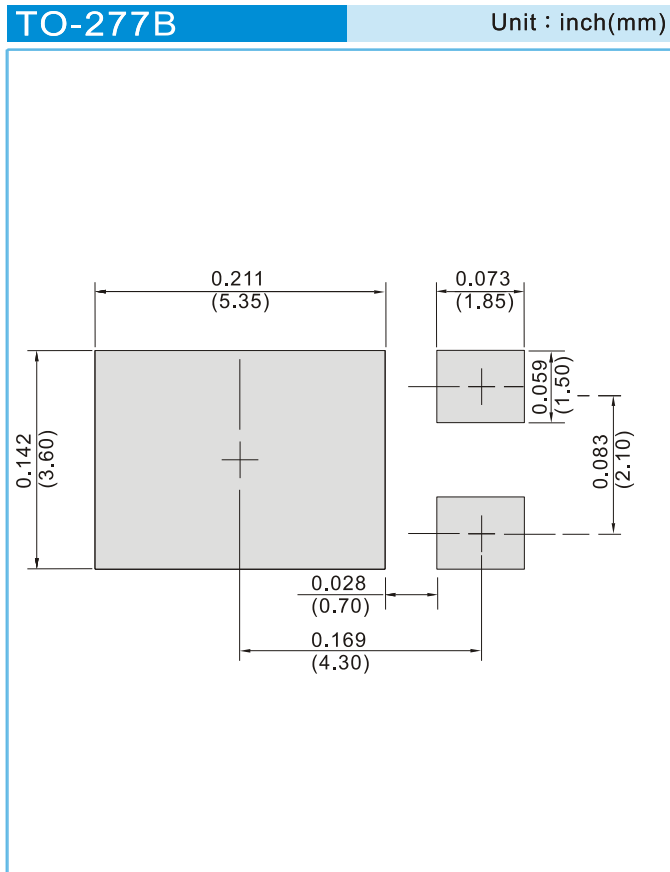


**Fig.5 Operating Temperature Derating Curve**



# SV1580VB

## MOUNTING PAD LAYOUT



## ORDER INFORMATION

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



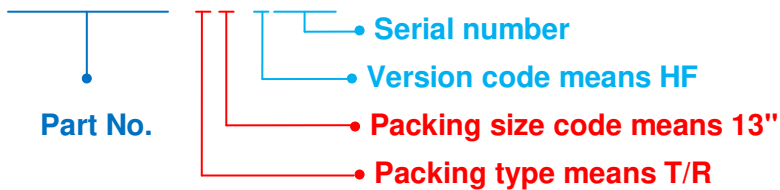
# SV1580VB

Part No\_packing code\_Version

SV1580VB\_R2\_00001

For example :

RB500V-40\_R2\_00001



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)	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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