



# SVT12100VB

## ULTRA LOW VF SCHOTTKY RECTIFIER

**VOLTAGE** 100 Volt **CURRENT** 12 Ampere

**TO-277B**

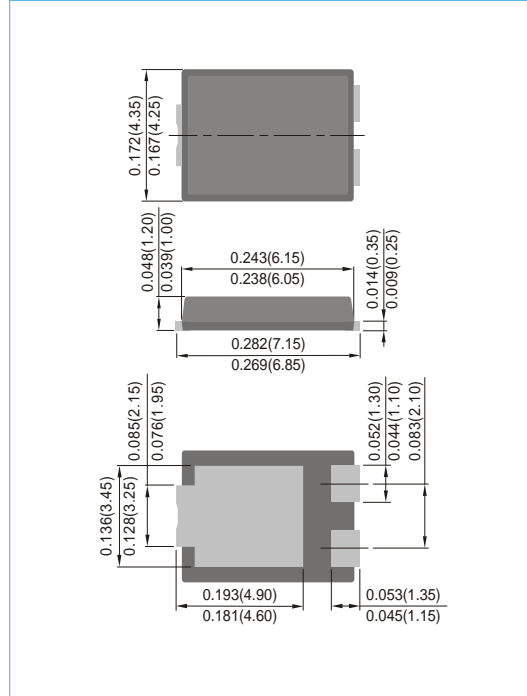
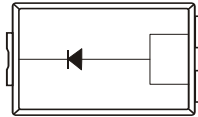
Unit : inch(mm)

### 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
- 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, Plastic
- Terminals : Solderable per MIL-STD-750, Method 2026
- Weight : 0.0038 ounces, 0.1088 grams
- Marking : SVT12100VB



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

PARAMETER	SYMBOL	VALUE	UNIT
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	100	V
Maximum RMS Voltage	$V_{RMS}$	70	V
Maximum DC Blocking Voltage	$V_R$	100	V
Maximum Average Rectified Output Current	$I_{F(AV)}$	12	A
Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	200	A
Typical Junction Capacitance ( $V_R=4V, f=1\text{MHz}$ )	$C_J$	1200	pF
Typical Thermal Resistance (Note 1)	$R_{\theta JC}$	3	$^{\circ}\text{C/W}$
(Note 2)	$R_{\theta JA}$	110	$^{\circ}\text{C/W}$
Operating Junction Temperature Range And Storage Temperature Range	$T_J, T_{STG}$	-55 to + 150	$^{\circ}\text{C}$

### NOTES :

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



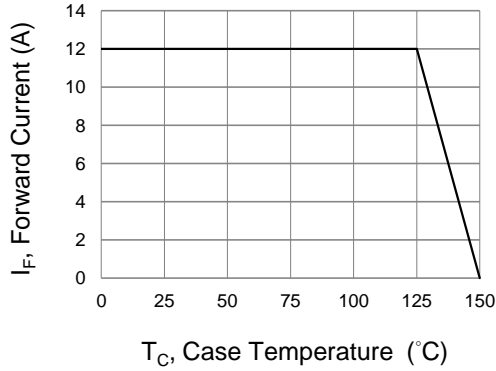
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## ELECTRICAL CHARACTERISTICS (T<sub>A</sub>=25°C unless otherwise noted)

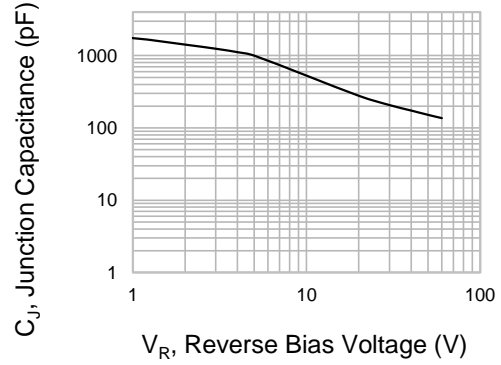
PARAMETER	SYMBOL	TEST CONDITIONS	MIN.	TYP.	MAX.	UNIT	
Breakdown voltage	V <sub>BR</sub>	I <sub>R</sub> =0.5mA	100	-	-	V	
Instantaneous forward voltage	V <sub>F</sub>	I <sub>F</sub> =1A	-	0.38	-	V	
		I <sub>F</sub> =5A	-	0.48	-		
		I <sub>F</sub> =12A	-	0.61	0.67		
		I <sub>F</sub> =1A	-	0.26	-	V	
I <sub>F</sub> =5A	-	0.42	-				
I <sub>F</sub> =12A	-	0.57	-				
Reverse current	I <sub>R</sub>	V <sub>R</sub> =70V	-	10.6	-	μA	
			T <sub>J</sub> =25°C	-	7.5	-	mA
		V <sub>R</sub> =100V	-	-	100	-	μA
			T <sub>J</sub> =25°C	-	-	-	mA
		T <sub>J</sub> =125°C	-	14	-	mA	



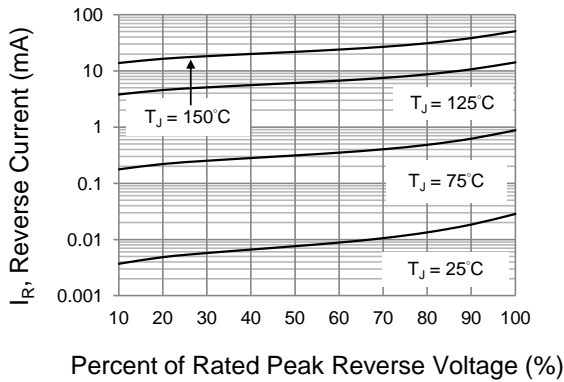
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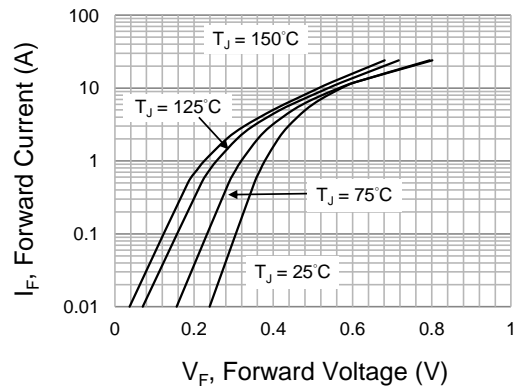
**Fig.1 Forward Current Derating Curve**



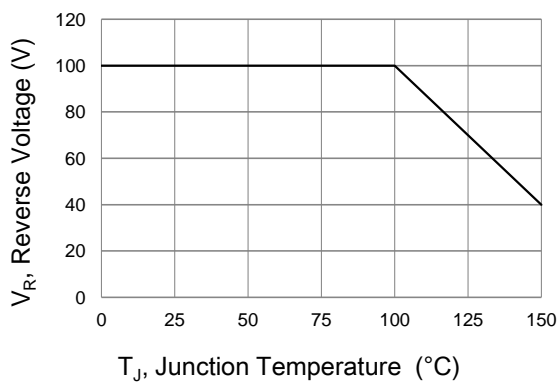
**Fig.2 Typical Junction Capacitance**



**Fig.3 Typical Reverse Characteristics**



**Fig.4 Typical Forward Characteristics**

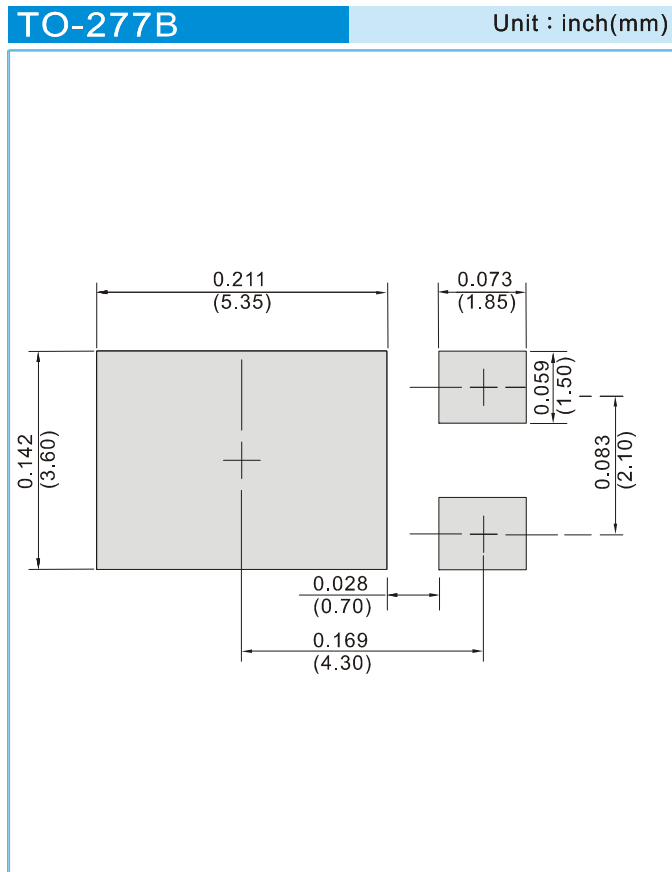


**Fig.5 Operating Temperature Derating Curve**



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## MOUNTING PAD LAYOUT



## ORDER INFORMATION

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



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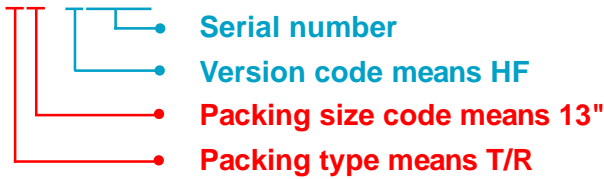
**Part No\_packing code\_Version**

SVT12100VB\_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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