



# SVC12120VB

## ULTRA LOW VF SCHOTTKY RECTIFIER

**VOLTAGE** 120 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)

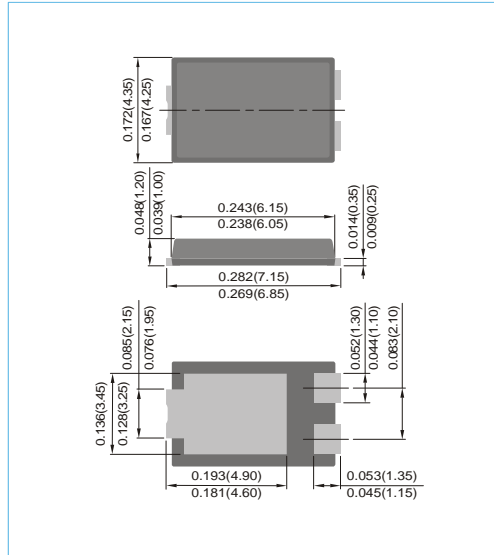
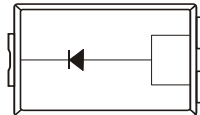
### MECHANICAL DATA

Case : TO-277B, Plastic

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

Weight : 0.0038 ounces, 0.1088 grams

Marking : 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	$I_{F(AV)}$	12	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)	$R_{\theta JC}$	3	
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



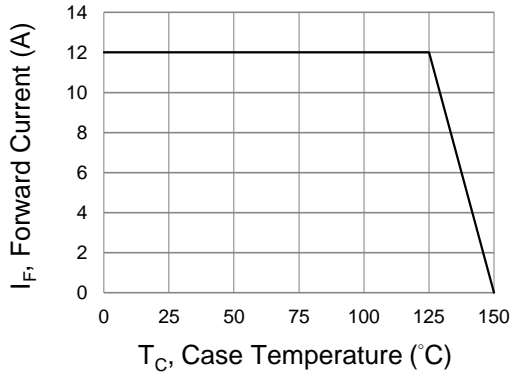
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## ELECTRICAL CHARACTERISTICS (T<sub>A</sub>=25°C unless otherwise noted)

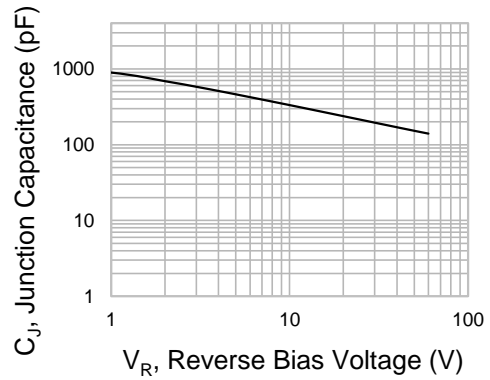
PARAMETER	SYMBOL	TEST CONDITIONS	MIN.	TYP.	MAX.	UNIT
Breakdown voltage	V <sub>BR</sub>	I <sub>R</sub> =0.5mA T <sub>A</sub> =25°C	120	-	-	V
Instantaneous forward voltage	V <sub>F</sub>	I <sub>F</sub> =1A T <sub>A</sub> =25°C	-	0.4	-	V
		I <sub>F</sub> =6A T <sub>A</sub> =25°C	-	0.59	-	
		I <sub>F</sub> =12A T <sub>A</sub> =25°C	-	0.71	0.77	
		I <sub>F</sub> =1A T <sub>A</sub> =125°C	-	0.29	-	V
I <sub>F</sub> =6A T <sub>A</sub> =125°C	-	0.51	-			
Reverse current	I <sub>R</sub>	V <sub>R</sub> =96V T <sub>A</sub> =25°C	-	10	-	μA
		V <sub>R</sub> =120V T <sub>A</sub> =25°C T <sub>A</sub> =125°C	- -	- 35	100 -	μA mA



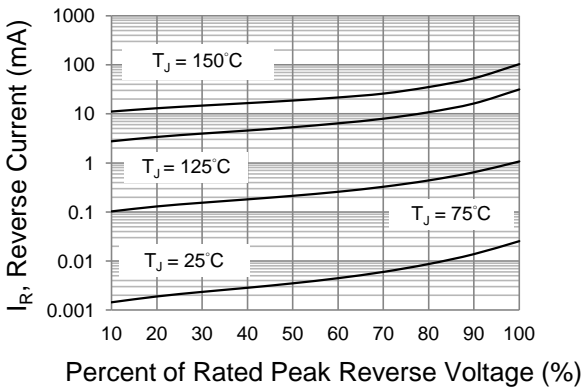
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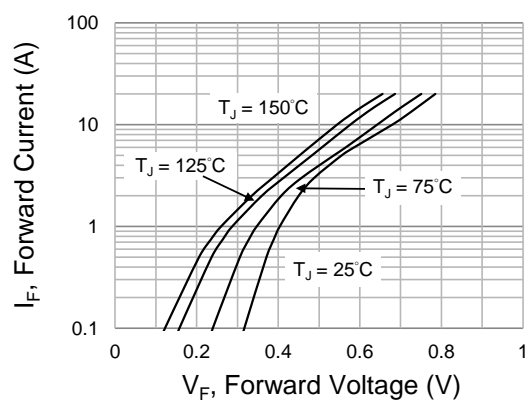
**Fig.1 Forward Current Derating Curve**



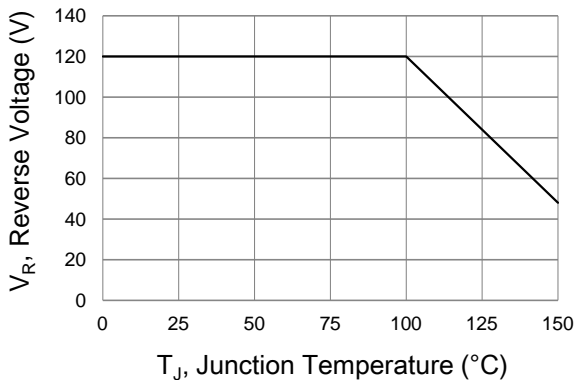
**Fig.2 Typical Junction Capacitance**



**Fig.3 Typical Reverse Characteristics**



**Fig.4 Typical Forward Characteristics**

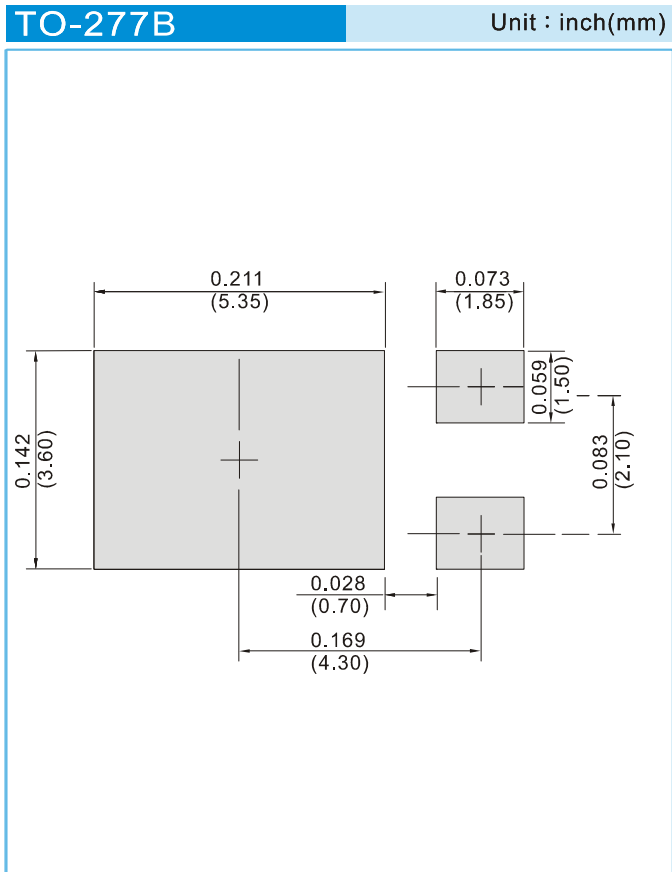


**Fig.5 Operating Temperature Derating Curve**



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## MOUNTING PAD LAYOUT



## ORDER INFORMATION

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



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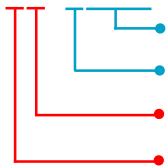
**Part No\_packing code\_Version**

SVC12120VB\_R2\_00001

**For example :**

**RB500V-40\_R2\_00001**

Part No.



Serial number

Version code means HF

Packing size code means 13"

Packing type means T/R

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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