



# SVM1045V2B

## LOW VF SCHOTTKY RECTIFIER

**VOLTAGE** 45 Volts **CURRENT** 10 Amperes

**TO-277B**

Unit : inch(mm)

### FEATURES

- Ideal for automated placement
- Low forward voltage drop, low power losses
- High efficiency Operation
- Low thermal resistance
- Ultra thin profile package for space constrained utilization
- Package suitable for automated handling
- Lead free in comply with EU RoHS 2011/65/EU directives.
- Green molding compound as per IEC61249 Std. . (Halogen Free)

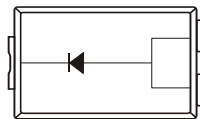
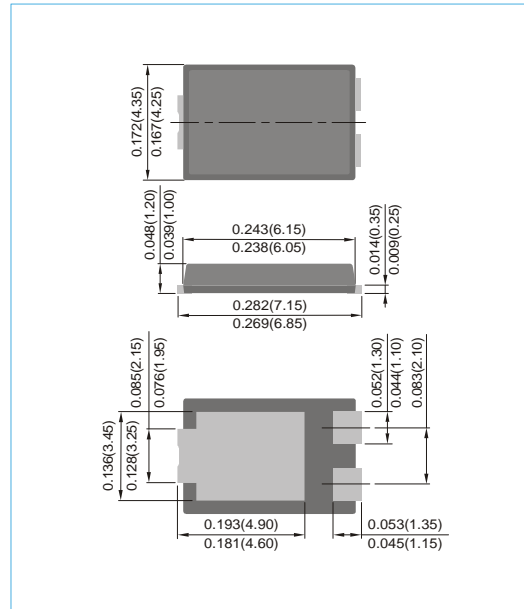
### MECHANICAL DATA

Case : TO-277B, Plastic

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

Weight: 0.0038 ounces, 0.1088 grams

Marking:SVM1045V2B



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

PARAMETER	SYMBOL	VALUE	UNIT
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	45	V
Maximum RMS Voltage	$V_{RMS}$	32	V
Maximum DC Blocking Voltage	$V_R$	45	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 (JEDEC method)	$I_{FSM}$	275	A
Typical Junction capacitance $V_R=4V, 1\text{MHz}$	$C_J$	860	pF
Typical Thermal Resistance ,Junction to Ambient (Note 2)	$R_{\theta JA}$	110	$^{\circ}\text{C/W}$
Junction to Case (Note 1)	$R_{\theta JC}$	13	$^{\circ}\text{C/W}$
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 100cm<sup>2</sup> copper pad area.
- 2.Mounted on an FR4 PCB, single-sided copper, mini pad.

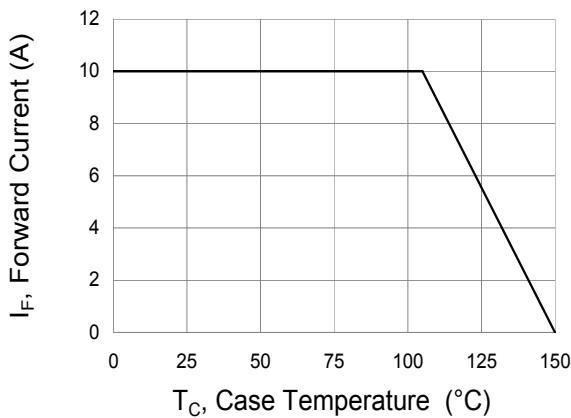


# SVM1045V2B

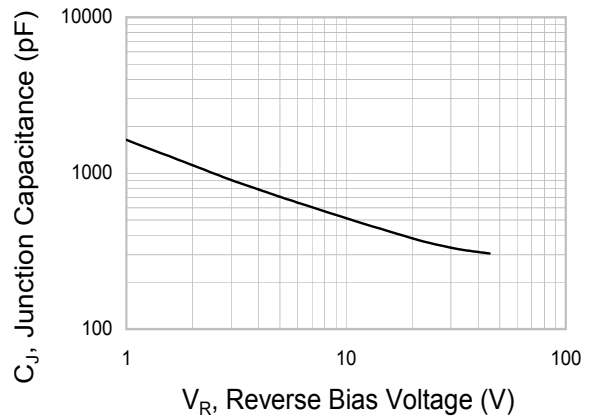
## ELECTRICAL CHARACTERISTICS (T<sub>A</sub>=25°C unless otherwise noted)

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	45	-	-	V
Instantaneous forward voltage	V <sub>F</sub>	I <sub>F</sub> =1A T <sub>A</sub> =25°C	-	0.28	-	V
		I <sub>F</sub> =5A T <sub>A</sub> =25°C	-	0.36	-	V
		I <sub>F</sub> =10A T <sub>A</sub> =25°C	-	0.41	0.44	V
Reverse current	I <sub>R</sub>	I <sub>F</sub> =1A T <sub>A</sub> =125°C	-	0.18	-	V
		I <sub>F</sub> =5A T <sub>A</sub> =125°C	-	0.28	-	V
		I <sub>F</sub> =10A T <sub>A</sub> =125°C	-	0.36	-	V
Reverse current	I <sub>R</sub>	V <sub>R</sub> =36V T <sub>A</sub> =25°C	-	70	-	μA
		V <sub>R</sub> =45V T <sub>A</sub> =25°C T <sub>A</sub> =125°C	-	-	220	μA mA

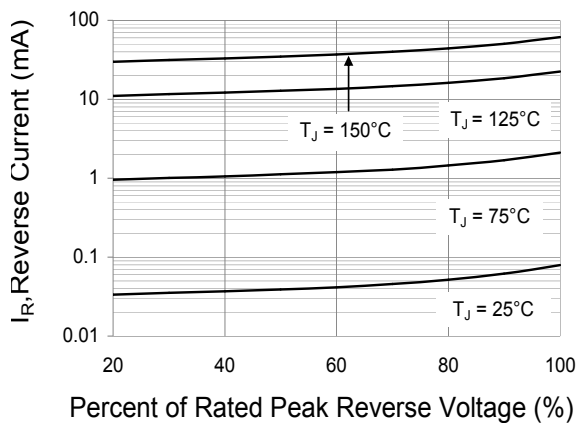
### RATING AND CHARACTERISTIC CURVES



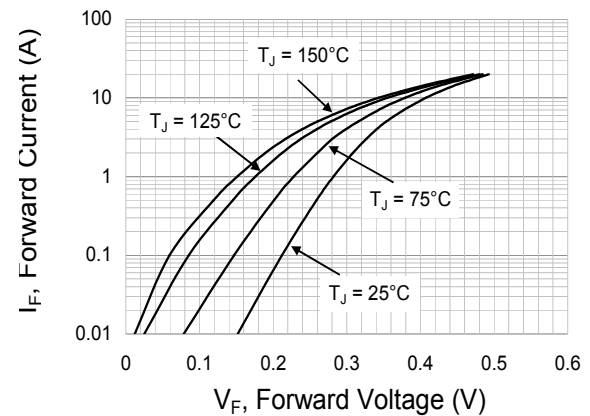
**Fig.1 Forward Current Derating Curve**



**Fig.2 Typical Junction Capacitance**



**Fig.3 Typical Reverse Characteristics**

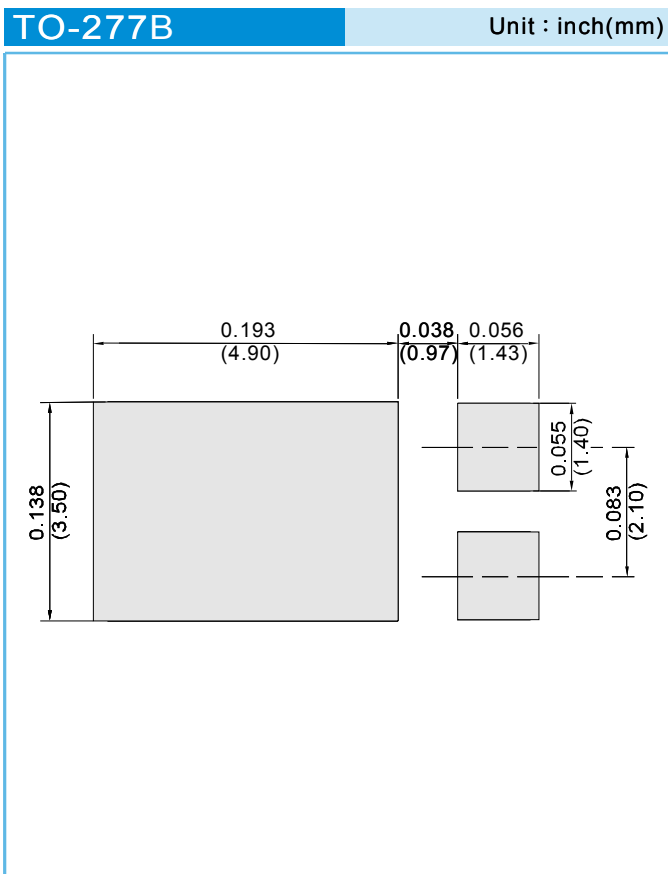


**Fig.4 Typical Forward Characteristics**



# SVM1045V2B

## MOUNTING PAD LAYOUT



## ORDER INFORMATION

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



# SVM1045V2B

## Part No\_packing code\_Version

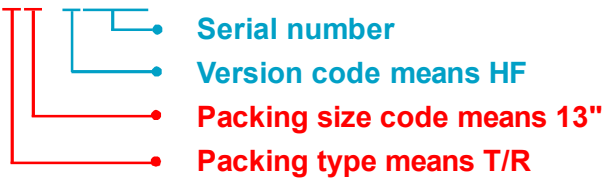
SVM1045V2B\_R2\_00001

SVM1045V2B\_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)	<b>A</b>	N/A	<b>0</b>	<b>HF</b>	<b>0</b>	serial number
Tape and Reel (T/R)	<b>R</b>	7"	<b>1</b>	<b>RoHS</b>	<b>1</b>	serial number
Bulk Packing (B/P)	<b>B</b>	13"	<b>2</b>			
Tube Packing (T/P)	<b>T</b>	26mm	<b>X</b>			
Tape and Reel (Right Oriented) (TRR)	<b>S</b>	52mm	<b>Y</b>			
Tape and Reel (Left Oriented) (TRL)	<b>L</b>	PANASERT T/B CATHODE UP (PBCU)	<b>U</b>			
FORMING	<b>F</b>	PANASERT T/B CATHODE DOWN (PBCD)	<b>D</b>			



## SVM1045V2B

---

### Disclaimer

- Reproducing and modifying information of the document is prohibited without permission from Panjit International Inc..
- Panjit International Inc. reserves the rights to make changes of the content herein the document anytime without notification. Please refer to our website for the latest document.
- Panjit International Inc. disclaims any and all liability arising out of the application or use of any product including damages incidentally and consequentially occurred.
- Panjit International Inc. does not assume any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.
- Applications shown on the herein document are examples of standard use and operation. Customers are responsible in comprehending the suitable use in particular applications. Panjit International Inc. makes no representation or warranty that such applications will be suitable for the specified use without further testing or modification.
- The products shown herein are not designed and authorized for equipments requiring high level of reliability or relating to human life and for any applications concerning life-saving or life-sustaining, such as medical instruments, transportation equipment, aerospace machinery et cetera. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify Panjit International Inc. for any damages resulting from such improper use or sale.
- Since Panjit uses lot number as the tracking base, please provide the lot number for tracking when complaining.