

# SVM1045V

## LOW VF SCHOTTKY RECTIFIER

**VOLTAGE** 45 Volt **CURRENT** 10 Ampere

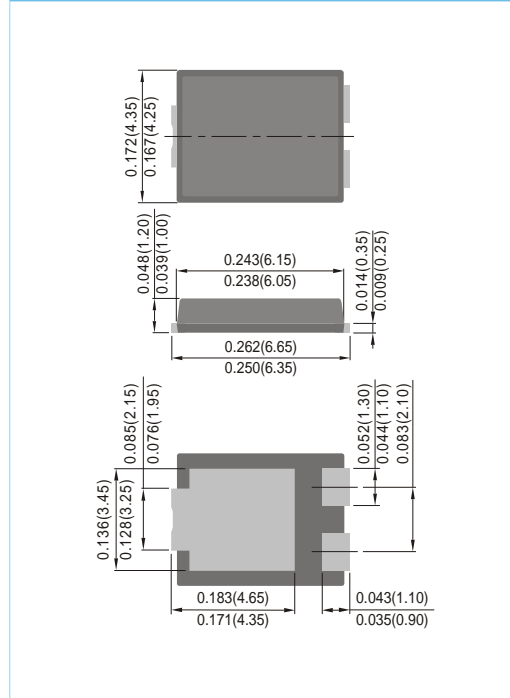
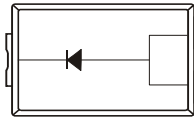
**TO-277** Unit : inch(mm)

### 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 : SVM1045V



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

PARAMETER	SYMBOL	VALUE	UNIT
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	45	V
Maximum RMS Voltage	V <sub>RMS</sub>	32	V
Maximum DC Blocking Voltage	V <sub>R</sub>	45	V
Maximum Average Rectified Output Current	I <sub>F(AV)</sub>	10	A
Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load	I <sub>FSM</sub>	275	A
Typical Thermal Resistance ,Junction to Ambient (Note 1)	R <sub>θJA</sub>	60	°C/W
Junction to Ambient (Note 2)	R <sub>θJA</sub>	110	
Junction to Case (Note 3)	R <sub>θJC</sub>	8	
Operating junction temperature range and Storage temperature range	T <sub>J</sub> ,T <sub>STG</sub>	-55 to + 150	°C

NOTE : 1.Mounted on 50cm<sup>2</sup> FR-4 PCB.

2.Mounted on an FR4 PCB, single-sided copper, mini pad.

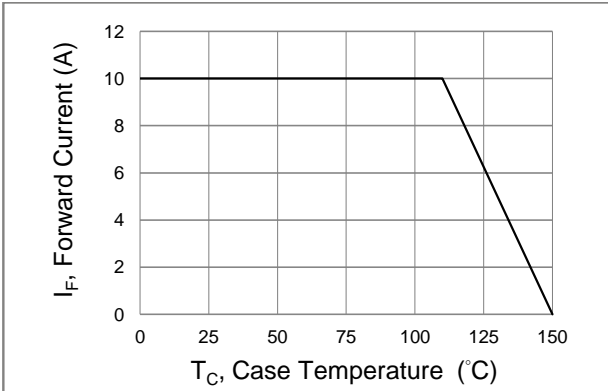
3.Mounted on an FR4 PCB, single-sided copper, with 100cm<sup>2</sup> copper pad area.

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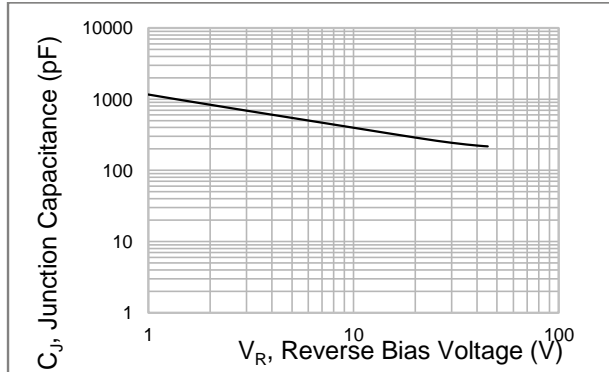
## ELECTRICAL CHARACTERISTICS(T<sub>A</sub>=25°C unless otherwise noted)

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	45	-	-	V
Instantaneous forward voltage	V <sub>F</sub>	I <sub>F</sub> =3A T <sub>A</sub> =25°C	-	0.34	-	V
		I <sub>F</sub> =5A T <sub>A</sub> =25°C	-	0.38	-	
		I <sub>F</sub> =10A T <sub>A</sub> =25°C	-	0.44	0.47	
		I <sub>F</sub> =3A T <sub>A</sub> =125°C	-	0.27	-	V
I <sub>F</sub> =5A T <sub>A</sub> =125°C	-	0.32	-			
I <sub>F</sub> =10A T <sub>A</sub> =125°C	-	0.41	-			
Reverse current	I <sub>R</sub>	V <sub>R</sub> =36V T <sub>A</sub> =25°C	-	32	-	μA
		V <sub>R</sub> =45V T <sub>A</sub> =25°C T <sub>A</sub> =125°C	- -	- 8.6	0.25 -	mA mA

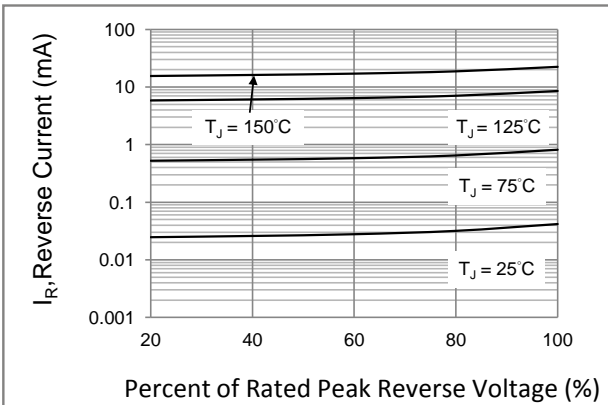
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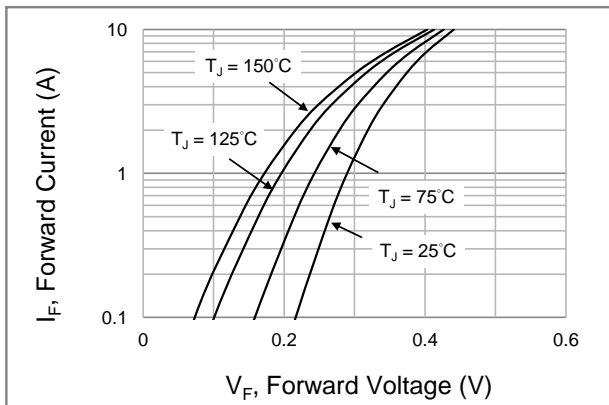
**Fig.1 Forward Current Derating Curve**



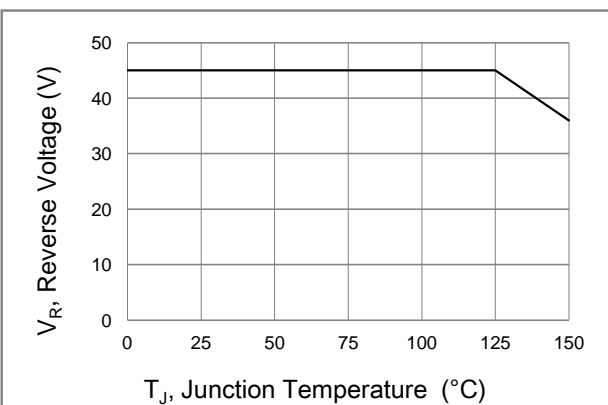
**Fig.2 Typical Junction Capacitance**



**Fig.3 Typical Reverse Characteristics**



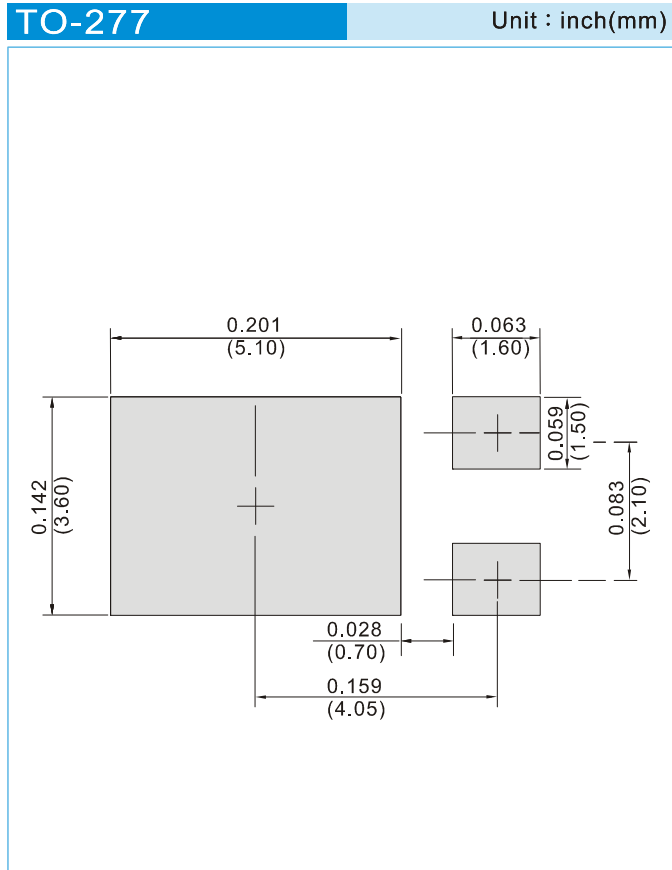
**Fig.4 Typical Forward Characteristics**



**Fig.5 Operating Temperature Derating Curve**

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## MOUNTING PAD LAYOUT



## ORDER INFORMATION

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

## **SVM1045V**

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