



# SBM1045VSS

## LOW VF SCHOTTKY RECTIFIER

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

**DO-201AD**

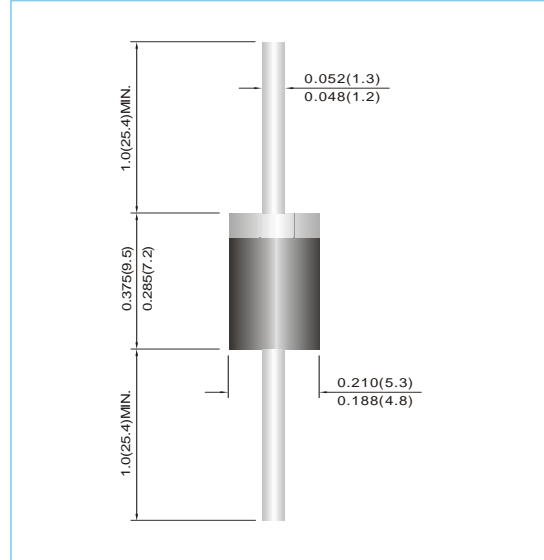
Unit : inch(mm)

### FEATURES

- Ideal for automated placement
- Low forward voltage drop, low power losses
- High efficiency operation
- Low thermal resistance
- Lead free in compliance with EU RoHS 2011/65/EU directive

### MECHANICAL DATA

- Case : DO-201AD Molded plastic
- Terminals : Axial leads, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode
- Weight: 0.0402 ounces, 1.142 grams



### 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>	200	A
Typical Thermal Resistance ,Junction to Ambient	R <sub>θJA</sub>	38	°C/W
Junction to Lead	R <sub>θJL</sub>	10	
Operating Junction Temperature Range And Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55 to + 150	°C

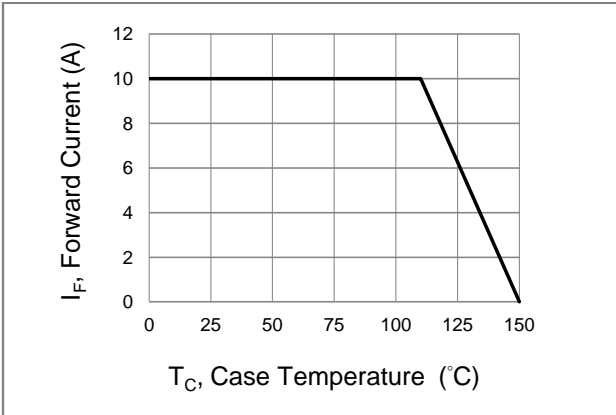
- Notes : 1. Test without heat heatsink.  
2. Mounted semi-infinite heatsink.

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

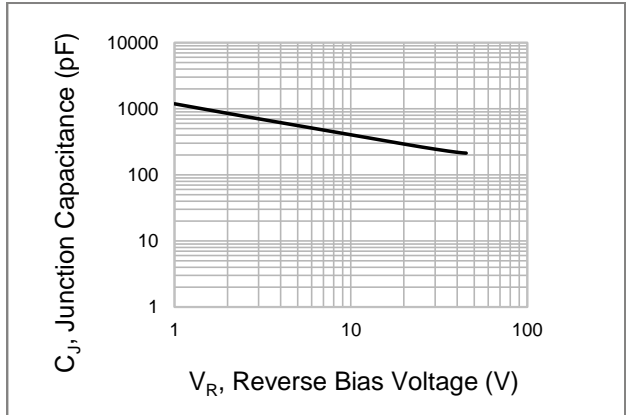
PARAMETER	SYMBOL	TEST CONDITIONS	MIN.	TYP.	MAX.	UNIT
Breakdown voltage	V <sub>BR</sub>	I <sub>R</sub> =0.5mA	45	-	-	V
Instantaneous forward voltage	V <sub>F</sub>	I <sub>F</sub> =3A I <sub>F</sub> =5A I <sub>F</sub> =10A T <sub>A</sub> =25°C	-	0.34 0.37 0.44	- - 0.47	V
		I <sub>F</sub> =3A I <sub>F</sub> =5A I <sub>F</sub> =10A T <sub>A</sub> =125°C	-	0.26 0.32 0.42	- - -	V
		Reverse current	I <sub>R</sub>	V <sub>R</sub> =36V T <sub>A</sub> =25°C	-	0.04
V <sub>R</sub> =45V T <sub>A</sub> =25°C T <sub>A</sub> =125°C	- -	0.06 13		0.3 -	mA mA	



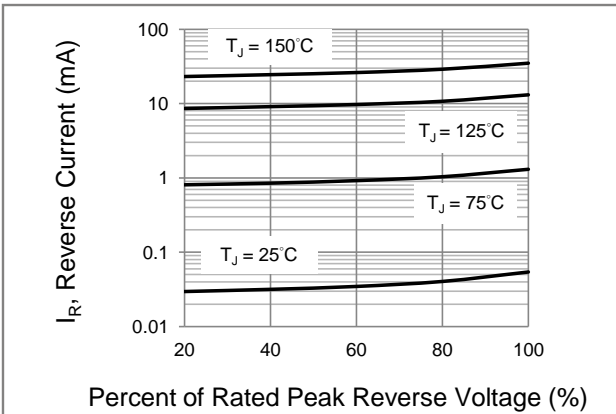
# SBM1045VSS



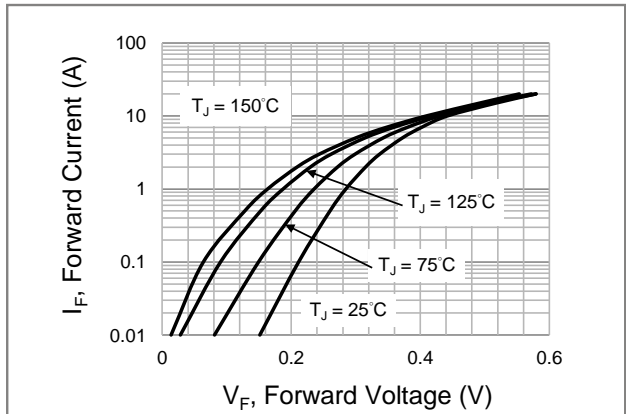
**Fig.1 Forward Current Derating Curve**



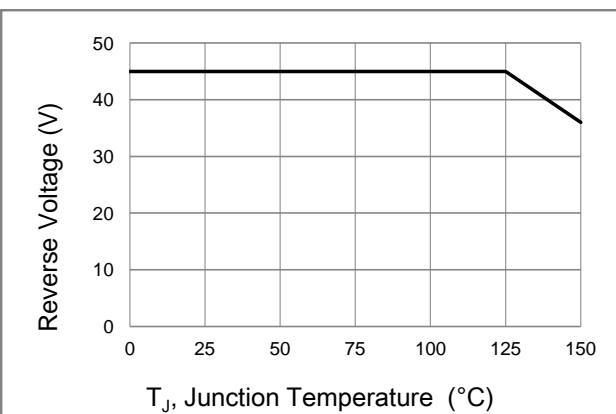
**Fig.2 Typical Junction Capacitance**



**Fig.3 Typical Reverse Characteristics**



**Fig.4 Typical Forward Characteristics**



**Fig.5 Operating Temperature Derating Curve**



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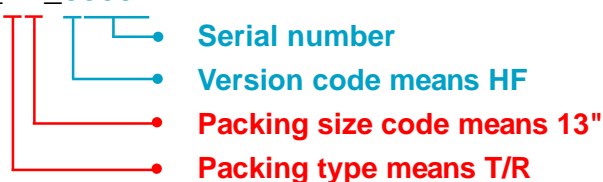
## Part No\_packing code\_Version

SBM1045VSS\_AY\_00001  
 SBM1045VSS\_AY\_10001  
 SBM1045VSS\_B0\_00001  
 SBM1045VSS\_B0\_10001  
 SBM1045VSS\_R2\_00001  
 SBM1045VSS\_R2\_10001

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>			



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