



# SBM2045VCT

## ULTRA LOW VF SCHOTTKY RECTIFIER

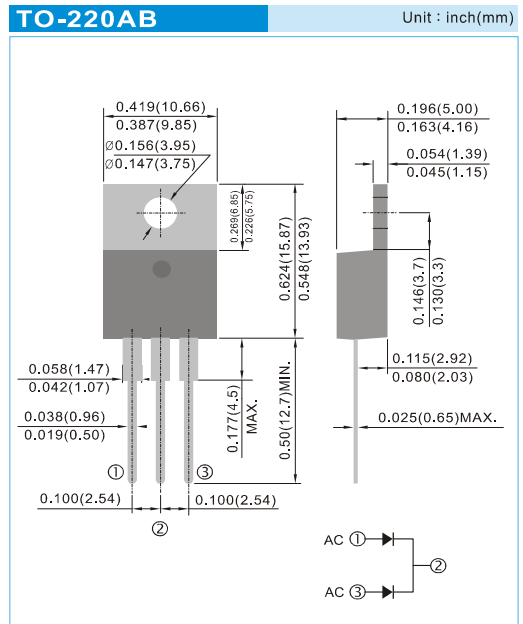
**VOLTAGE** 45 Volt **CURRENT** 20 Ampere

### FEATURES

- Ultra Low forward voltage drop, low power loss
- High efficiency operation
- Lead free in compliance with EU RoHS 2011/65/EU directive
- Green molding compound as per IEC61249 Std. . (Halogen Free)

### MECHANICAL DATA

- Case : TO-220AB, Plastic
- Terminals : Solderable per MIL-STD-750, Method 2026
- Weight: 0.067 ounces, 1.89 grams



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

PARAMETER	SYMBOL	VALUE	UNIT
Maximum repetitive peak reverse voltage	$V_{RRM}$	45	V
Maximum average forward rectified current	$I_{F(AV)}$	20 10	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	280	A
Typical junction capacitance ( $V_R=4V$ , $f=1\text{MHz}$ )	$C_J$	860	pF
Typical thermal resistance per diode (Note 1)	$R_{\theta JC}$	2	$^\circ\text{C/W}$
Operating junction temperature range	$T_J$	-55 to + 150	$^\circ\text{C}$
Storage temperature range	$T_{STG}$	-55 to + 150	$^\circ\text{C}$

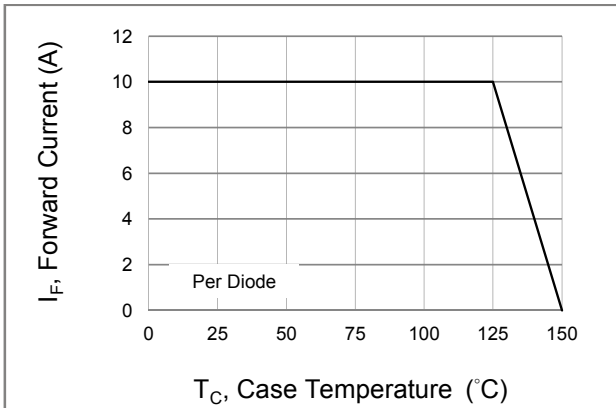
Note : 1. Mounted on infinite heatsink.

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

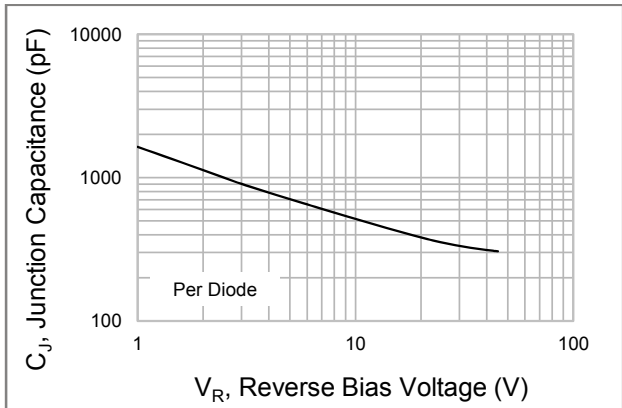
PARAMETER	SYMBOL	TEST CONDITIONS	MIN.	TYP.	MAX.	UNIT
Breakdown voltage per diode	$V_{BR}$	$I_R=0.5\text{mA}$	45	-	-	V
Instantaneous forward voltage per diode	$V_F$	$I_F=1\text{A}$	-	0.28	-	V
		$I_F=5\text{A}$	-	0.36	-	V
		$I_F=10\text{A}$	-	0.41	0.45	V
		$I_F=1\text{A}$	-	0.18	-	V
Reverse current per diode	$I_R$	$V_R=36\text{V}$	-	100	-	$\mu\text{A}$
		$V_R=45\text{V}$	-	-	320	$\mu\text{A}$
		$T_J=25^\circ\text{C}$	-	35	-	$\mu\text{A}$
		$T_J=125^\circ\text{C}$	-	-	-	mA



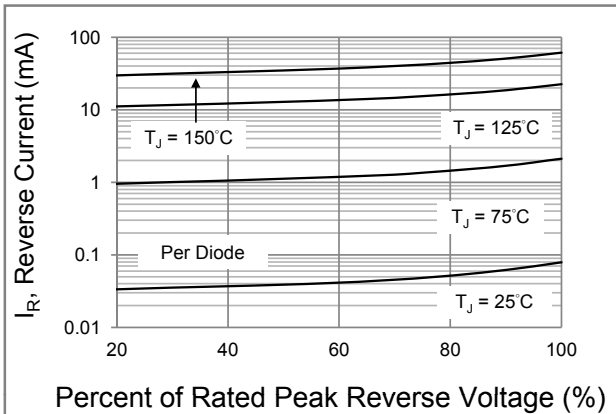
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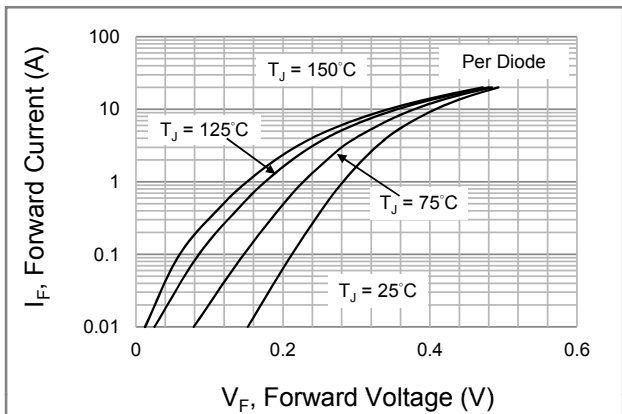
**Fig.1 Forward Current Derating Curve**



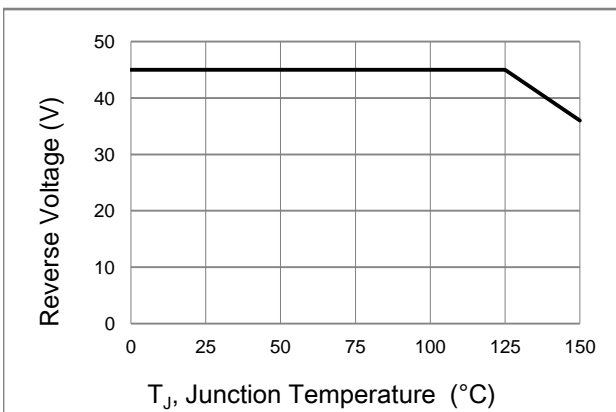
**Fig.2 Typical Junction Capacitance**



**Fig.3 Typical Reverse Characteristics**



**Fig.4 Typical Forward Characteristics**



**Fig.5 Operating Temperature Derating Curve**



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Part No\_packing code\_Version

SBM2045VCT\_T0\_00001

For example :

RB500V-40\_R2\_00001



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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