



# SBT10100VCT

## ULTRA LOW VF SCHOTTKY RECTIFIER

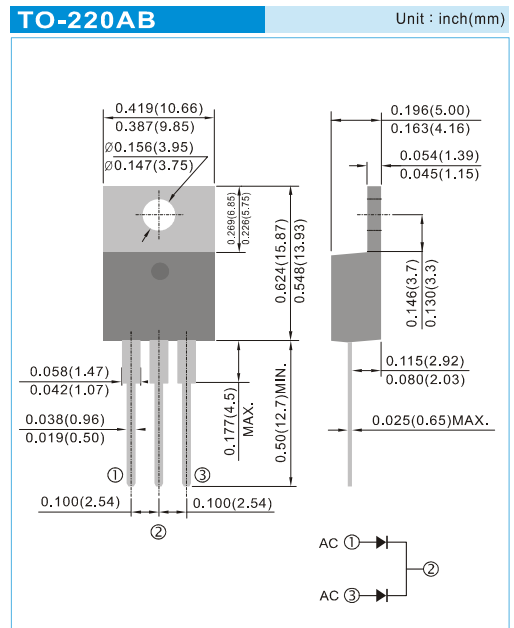
**VOLTAGE** 100 Volt **CURRENT** 10 Ampere

### 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	$V_{RRM}$	100	V
Maximum average forward rectified current	$I_{F(AV)}$	5 10	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	80	A
Typical thermal resistance per diode	$R_{\theta JC}$	4.5	$^{\circ}\text{C/W}$
Operating junction temperature range	$T_J$	-55 to + 150	$^{\circ}\text{C}$
Storage temperature range	$T_{STG}$	-55 to + 150	$^{\circ}\text{C}$

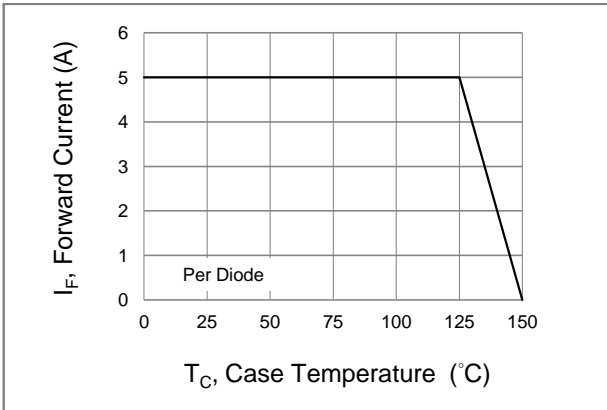
Note : 1. Mounted on infinite heatsink.

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

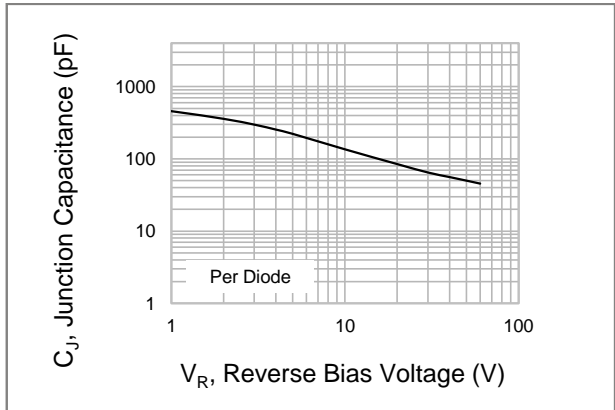
PARAMETER	SYMBOL	TEST CONDITIONS	MIN.	TYP.	MAX.	UNIT
Breakdown voltage per diode	$V_{BR}$	$I_R=0.5\text{mA}$	100	-	-	V
Instantaneous forward voltage per diode	$V_F$	$I_F=1\text{A}$ $T_J=25^{\circ}\text{C}$	-	0.45	-	V
		$I_F=2\text{A}$	-	0.51	-	V
		$I_F=5\text{A}$	-	0.68	0.74	V
Reverse current per diode	$I_R$	$V_R=1\text{A}$ $T_J=25^{\circ}\text{C}$	-	0.36	-	V
		$V_R=2\text{A}$ $T_J=125^{\circ}\text{C}$	-	0.46	-	V
		$V_R=5\text{A}$ $T_J=125^{\circ}\text{C}$	-	0.62	-	V
Reverse current per diode	$I_R$	$V_R=70\text{V}$ $T_J=25^{\circ}\text{C}$	-	1.8	-	$\mu\text{A}$
		$V_R=70\text{V}$ $T_J=125^{\circ}\text{C}$	-	1.7	-	mA
Reverse current per diode	$I_R$	$V_R=100\text{V}$ $T_J=25^{\circ}\text{C}$	-	-	60	$\mu\text{A}$
		$V_R=100\text{V}$ $T_J=125^{\circ}\text{C}$	-	3	-	mA



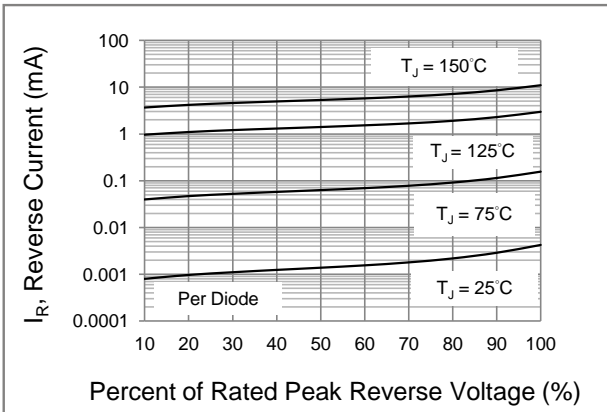
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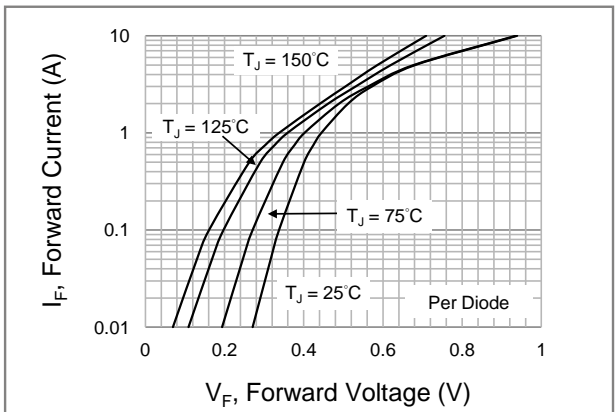
**Fig.1 Forward Current Derating Curve**



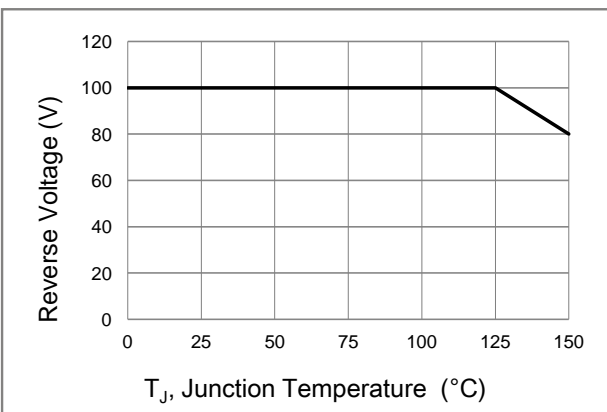
**Fig.2 Typical Junction Capacitance**



**Fig.3 Typical Reverse Characteristics**



**Fig.4 Typical Forward Characteristics**



**Fig.5 Operating Temperature Derating Curve**



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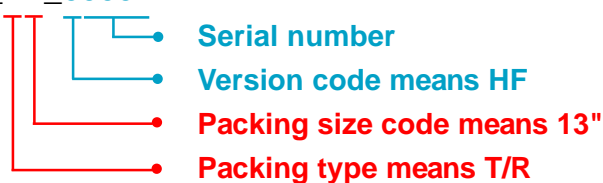
Part No\_packing code\_Version

SBT10100VCT\_T0\_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>			



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