



SBT3045VCT / SBT3045VFCT

30A 45V Schottky Rectifier

Major ratings and characteristics

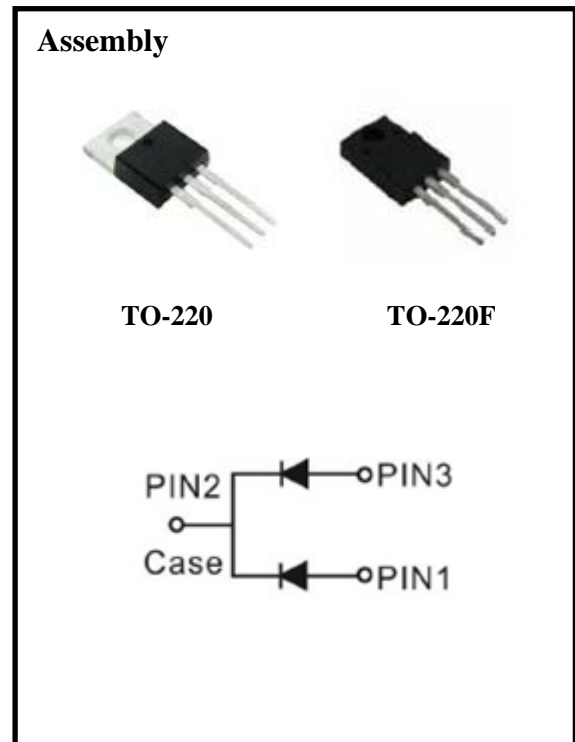
Characteristics	Values	Units
$I_{F(AV)}$ Rectangular Waveform	15×2	A
V_{RRM}	45	V
$V_F@ 15A, T_j=25^{\circ}C$	0.47	V, typ.
T_j Operating Junction Temperature	-40~150	$^{\circ}C$

Features

- Low Forward Voltage Drop
- Reliable High Temperature Operation
- Softest, Fast Switching Capability
- 150 $^{\circ}C$ Operating Junction Temperature
- Lead Free Finish, RoHS Compliant

Typical Applications

Device optimized for ultra-low forward voltage drop to maximize efficiency in Power Supply applications



1. Characteristics

Maximum Ratings Characteristics (T_A = 25°C unless otherwise specified)

Parameter	Symbol	Values	Units
DC Blocking Voltage	V _{RM}	45	Volts
Working Peak Reverse Voltage	V _{RWM}		
Peak Repetitive Reverse Voltage	V _{RRM}		
Average Rectified Forward Current Per device (Rated V _R -20Khz Square Wave) - 50% duty cycle	I _o	30	Amps
Peak Repetitive Reverse Surge Current (2uS-1Khz)	I _{RRM}	2	Amps
Typical Thermal Resistance (per leg) Package = TO-220 Package =TO-220F	R _{θjc}	2 4	°C/W
Human Body Model ESD Protection (TO-220)	ESD HBM	8	KV
Maximum Rate of Voltage Change (at Rated V _R)	dv/dt	10000	V/uS
Operating Junction Temperature	T _J	-40~150	°C
Storage Junction Temperature	T _{STG}	-40~150	°C

Electrical Characteristics - (per leg) (T_A = 25°C unless otherwise specified)

Parameter	Test Conditions	Symbol	Typ.	Max.	Units	
Instantaneous Forward Voltage	I _F =5 A	T _j =25°C	V _F *	0.33	-----	Volts
	I _F =15 A			0.47	0.49	
	I _F =5 A	T _j =125°C		0.29	-----	
	I _F =15 A			0.41	0.45	
Instantaneous Reverse Current	V _R =70 V	T _j =25°C	I _R *	8	-----	uA
	V _R =100 V			18	80	uA
	V _R =70 V	T _j =125°C		-----	-----	mA
	V _R =100 V			-----	5	mA

* Pulse width < 300 uS, Duty cycle < 2%

2. Characteristics Curves

Ratings and Characteristics Curves

($T_A = 25^\circ\text{C}$ unless otherwise specified)

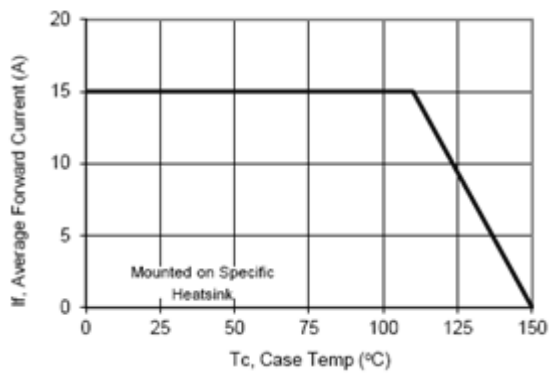


Figure 1: Current Derating, Case

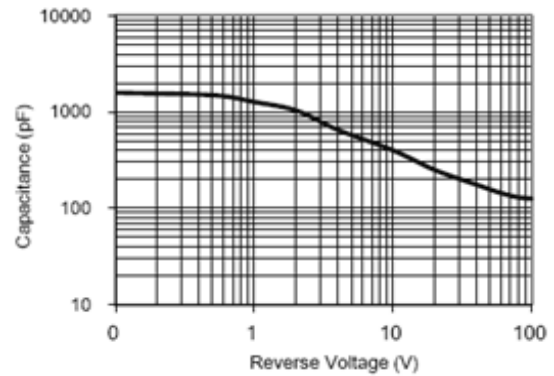


Figure 2: Typical Junction Capacitance

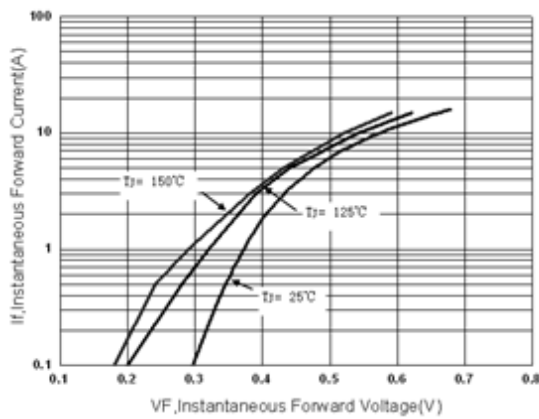


Figure 3: Typical Forward Voltage

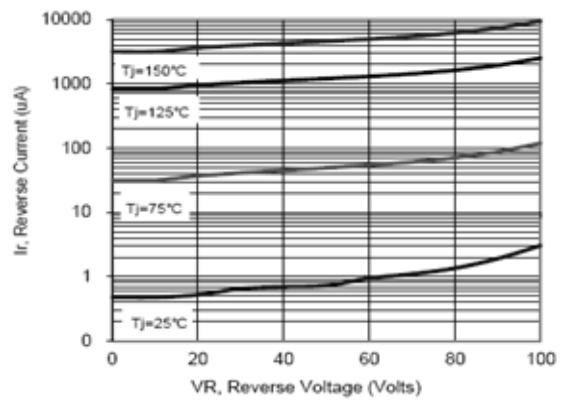


Figure 4: Typical Reverse Current

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