

# SBT2080XCT~SBT2080XCB

## EXTREME LOW VF SCHOTTKY RECTIFIER

Voltage

80 V

Current

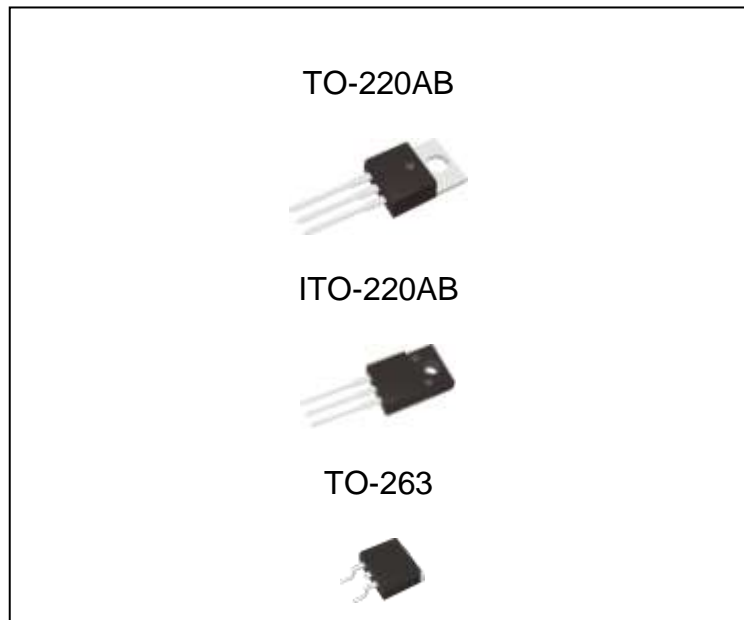
20 A

### Features

- Ultra low forward voltage, Low Power loss
- Surface mount package
- Ultra thin profile package for space constrained utilization
- Lead free in compliance with EU RoHS2.0 (2011/65/EU & 2015/865/EU directive)
- Green molding compound as per IEC61249 Std. . (Halogen Free)

### Mechanical Data

- Case: Molded plastic, TO-220AB, ITO-220AB, TO-263
- Terminals: solder plated, solderable per MIL-STD-750, Method 2026
- TO-220AB Weight: 0.067 ounces, 1.89 grams.
- ITO-220AB Weight: 0.056 ounces, 1.6 grams
- TO-263 Weight: 0.051 ounces, 1.46 grams



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

PARAMETER	SYMBOL	VALUE	UNIT
Maximum repetitive peak reverse voltage	$V_{RRM}$	80	V
Maximum rms voltage	$V_{RMS}$	56	V
Maximum dc blocking voltage	$V_R$	80	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 per diode	$I_{FSM}$	150	A
Typical junction capacitance ( $V_R=4\text{V}$ , $f=1\text{MHz}$ )	$C_J$	580	pF
Typical thermal resistance per diode (Note 1)	$R_{\theta JC}$	2 2 7	$^{\circ}\text{C/W}$
Operating junction temperature range	$T_J$	-55 to +150	$^{\circ}\text{C}$
Storage temperature range	$T_{STG}$	-55 to +150	$^{\circ}\text{C}$

### Electrical Characteristics

PARAMETER	SYMBOL	TEST CONDITION	TYP.	MAX.	UNIT
Forward voltage per diode	$V_F$	$I_F = 1\text{A}$	0.38	-	V
		$I_F = 3\text{A}$	0.45	-	
		$I_F = 10\text{A}$	-	0.63	
		$I_F = 1\text{A}$	0.27	-	V
Reverse current per diode (Note 2)	$I_R$	$V_R = 64\text{V}$	6	-	$\mu\text{A}$
		$V_R = 80\text{V}$	-	40	$\mu\text{A}$
		$V_R = 80\text{V}$	7	-	mA

Note : 1. Mounted on infinite heatsink.

2. Short duration pulse test used to minimize self-heating effect.



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## TYPICAL CHARACTERISTIC CURVES

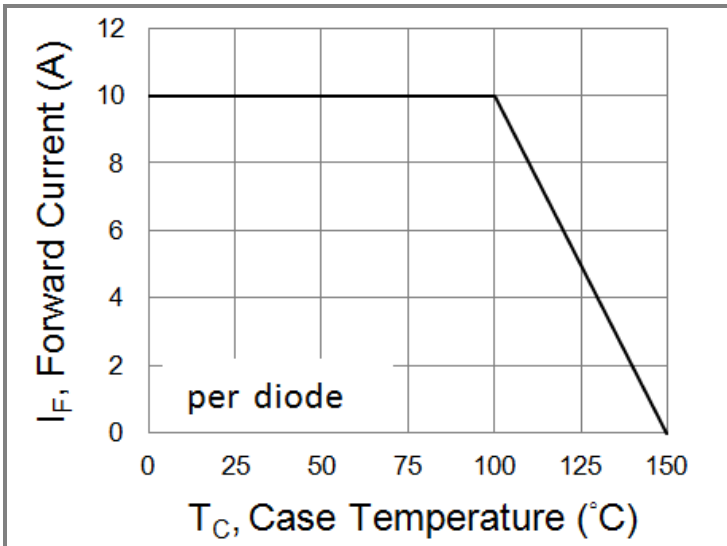


Fig.1 Forward Current Derating Curve

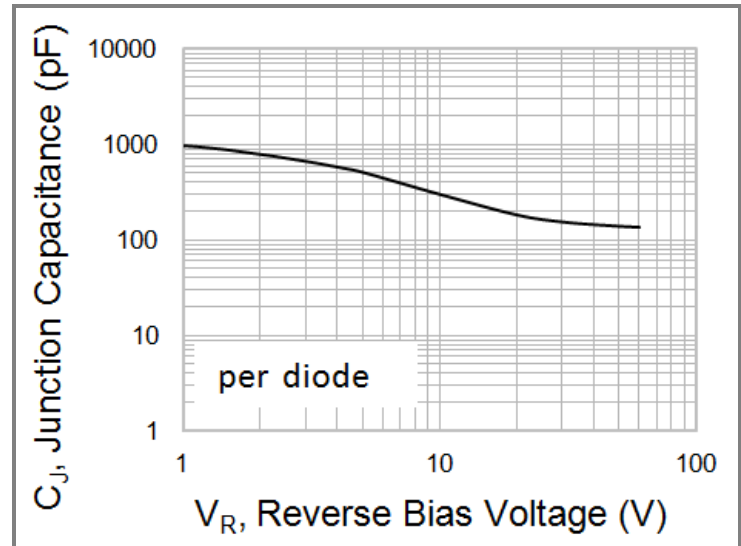


Fig. 2 Typical Junction Capacitance

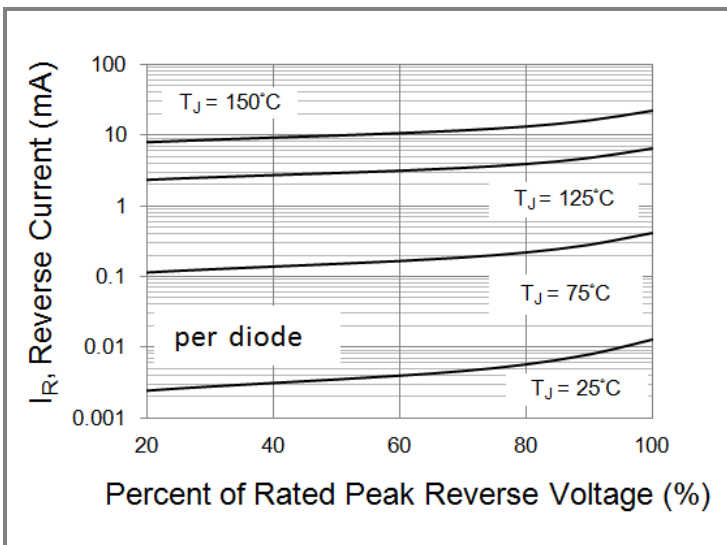


Fig.3 Typical Reverse Characteristics

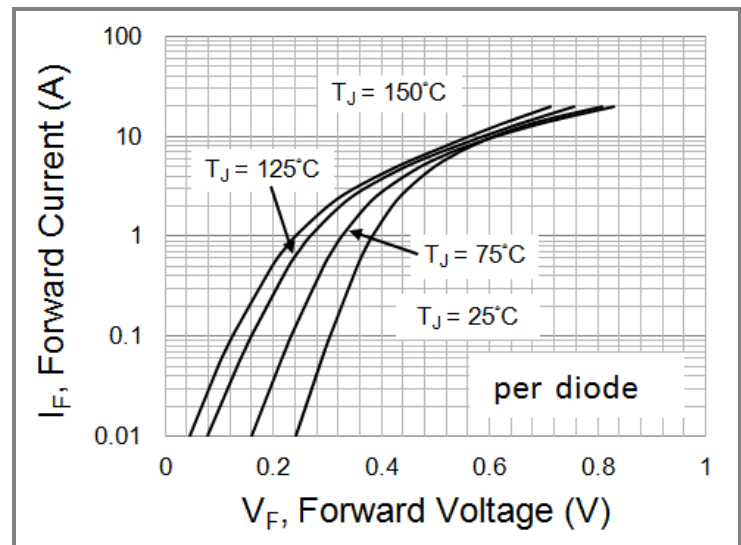


Fig.4 Typical Forward Characteristics

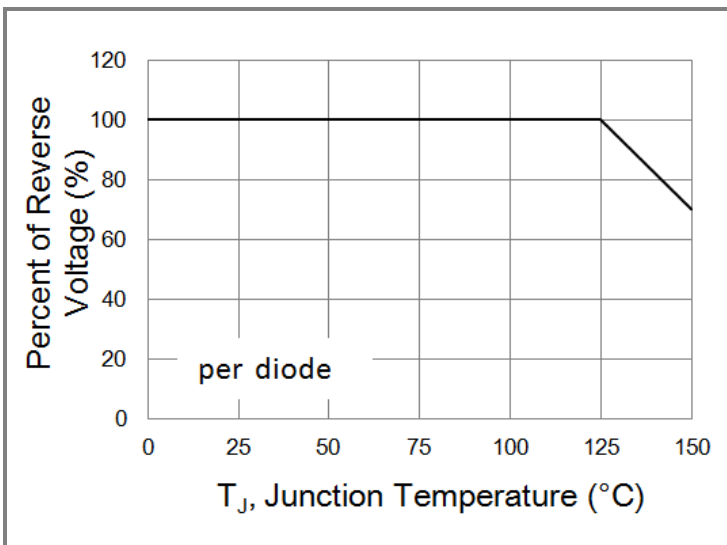


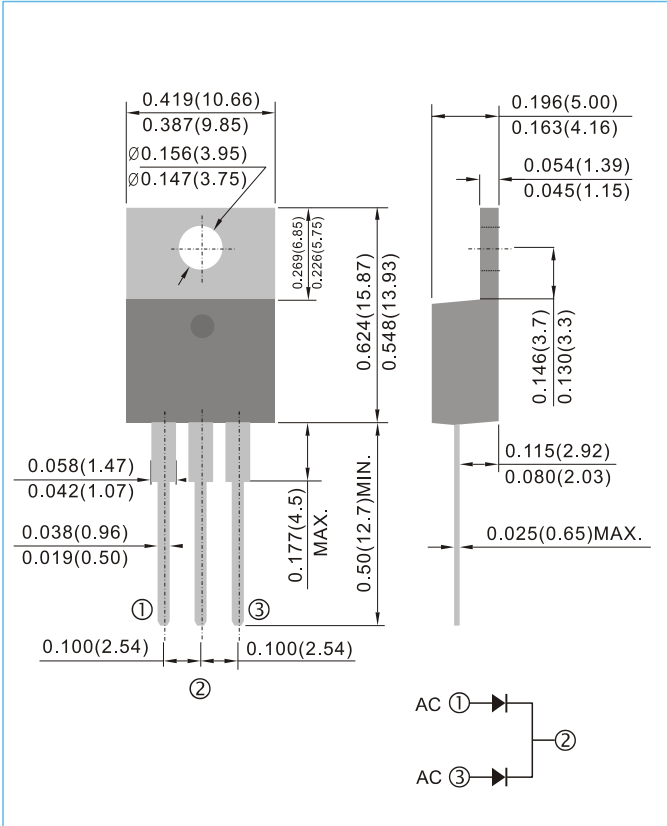
Fig.5 Operating Temperature Derating Curve



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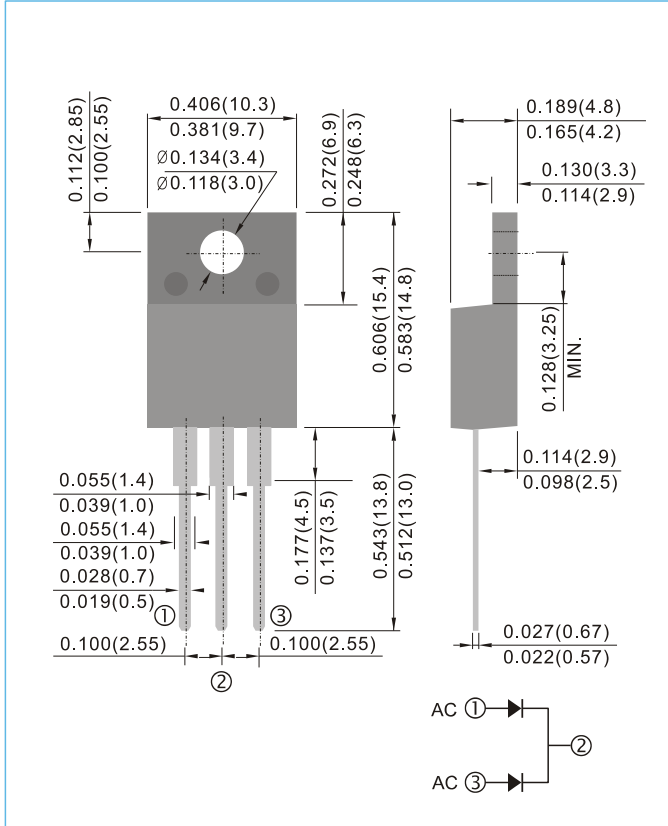
**TO-220AB**

Unit : inch(mm)



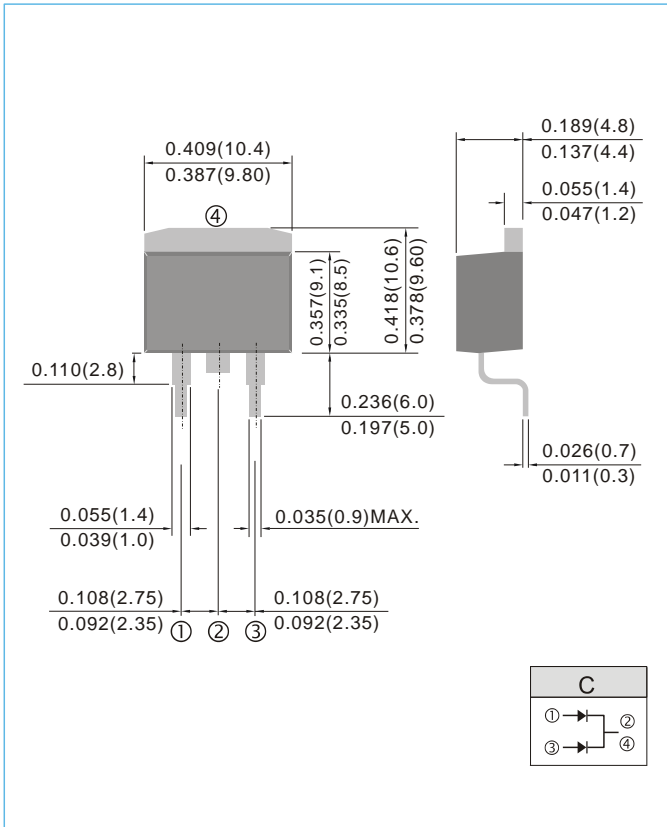
**ITO-220AB**

Unit : inch(mm)



**TO-263 / D<sup>2</sup>PAK**

Unit : inch(mm)





## SBT2080XCT~SBT2080XCB

### Part No Packing Code Version

Part No Packing Code	Package Type	Packing Type	Marking	Version
SBT2080XCT_T0_00001	TO-220AB	50pcs / Tube	SBT2080XCT	Halogen free
SBT2080XFCT_T0_00001	ITO-220AB	50pcs / Tube	SBT2080XFCT	Halogen free
SBT2080XCB_R2_00001	TO-263	800 pcs / 13" reel	SBT2080XCB	Halogen free

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