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 RoHS 2.0
- Green molding compound as per IEC 61249 standard

TO-220AB

ITO-220AB

TO-263

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: 0.049 ounces, 1.38 grams

Maximum Ratings (T_A=25°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	per device per diode	$I_{F(AV)}$	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=4V, f=1MHz)		C_J	580	pF
Typical thermal resistance per diode (Note 1)	TO-220AB TO-263 ITO-220AB	$R_{\theta JC}$	2 2 7	°C/W
Operating junction temperature range		T_J	-55 to +150	°C
Storage temperature range		T_{STG}	-55 to +150	°C

Electrical Characteristics

PARAMETER	SYMBOL	TEST CONDITION		TYP.	MAX.	UNIT
Forward voltage per diode	V_F	I_F = 1A	T_J =25 °C	0.38	-	V
		I_F = 3A		0.45	-	
		I_F = 10A		-	0.63	
		I_F = 1A	T_J =125 °C	0.27	-	V
		I_F = 3A		0.37	-	
Reverse current per diode (Note 2)	I_R	V_R = 64V	T_J=25°C	6	-	μA
		V_R = 80V	T_J =125 °C	-	40	μA
				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

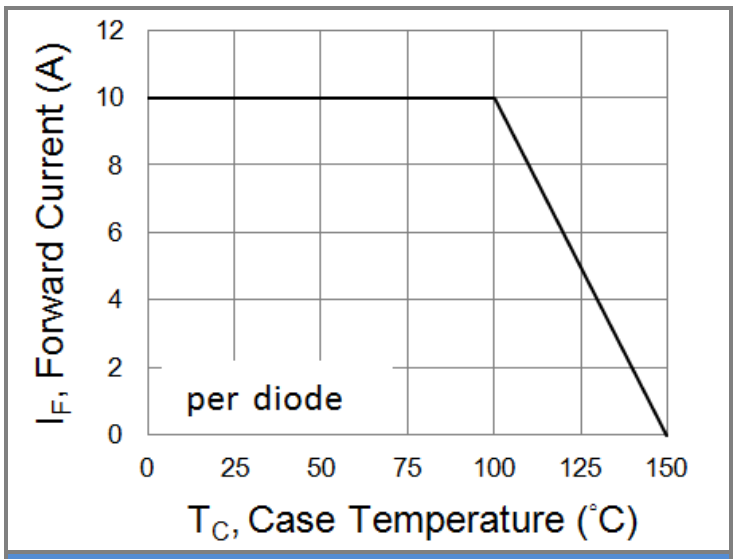

Fig.1 Forward Current Derating Curve

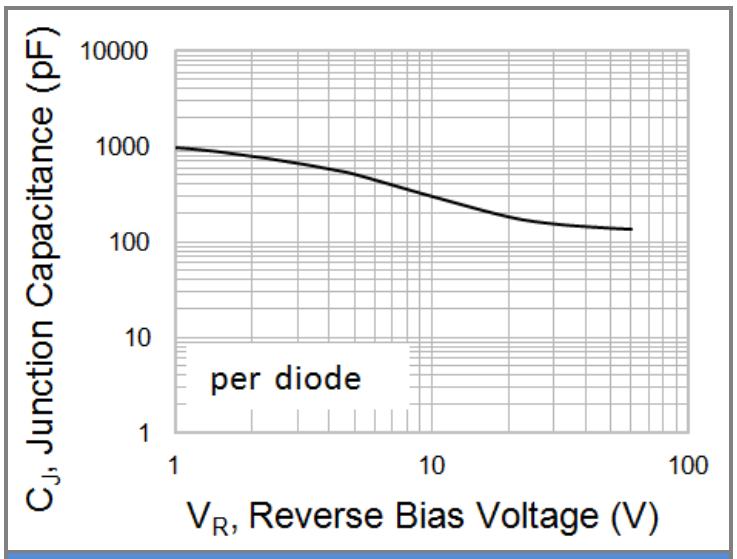

Fig. 2 Typical Junction Capacitance

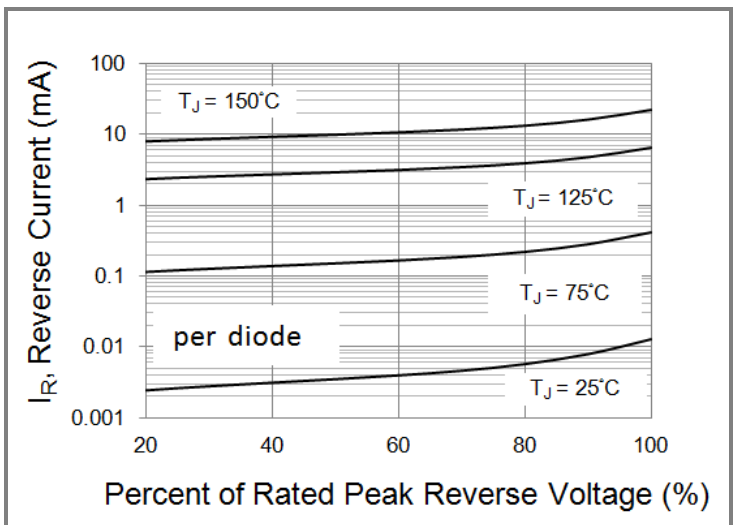

Fig.3 Typical Reverse Characteristics

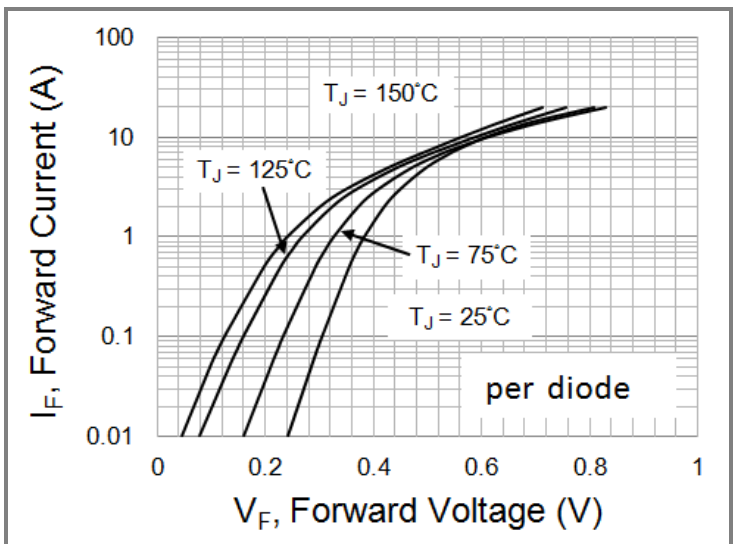

Fig.4 Typical Forward Characteristics

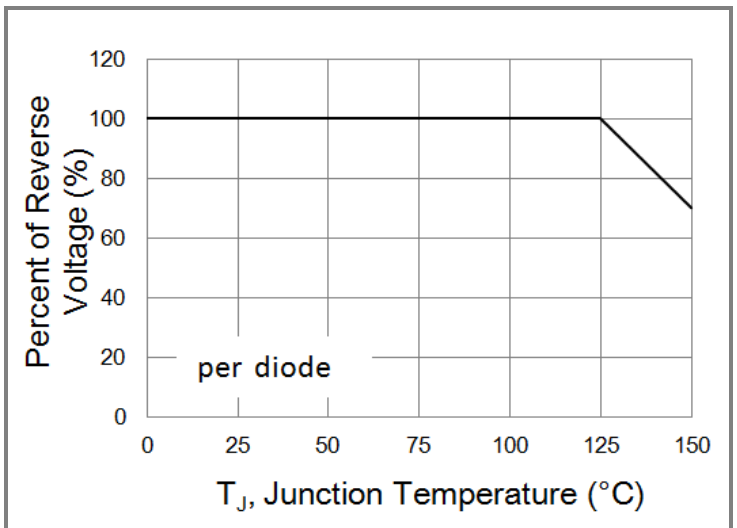

Fig.5 Operating Temperature Derating Curve

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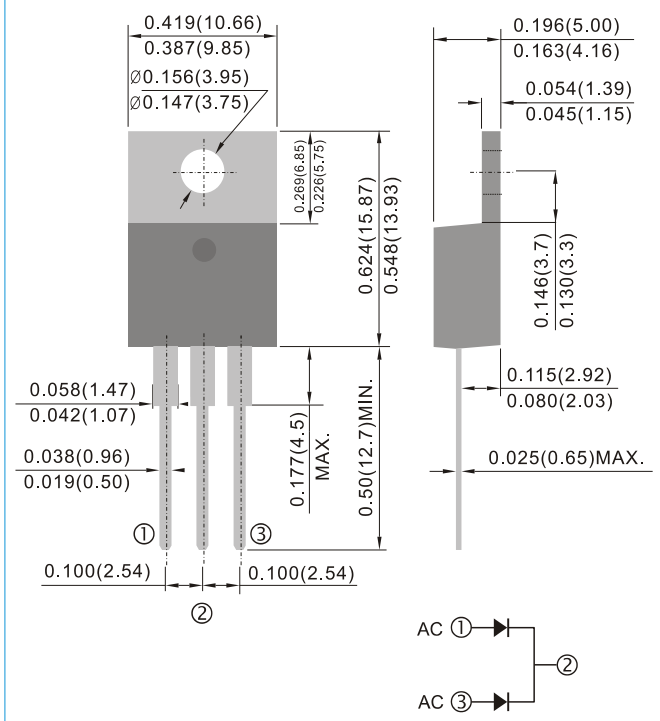
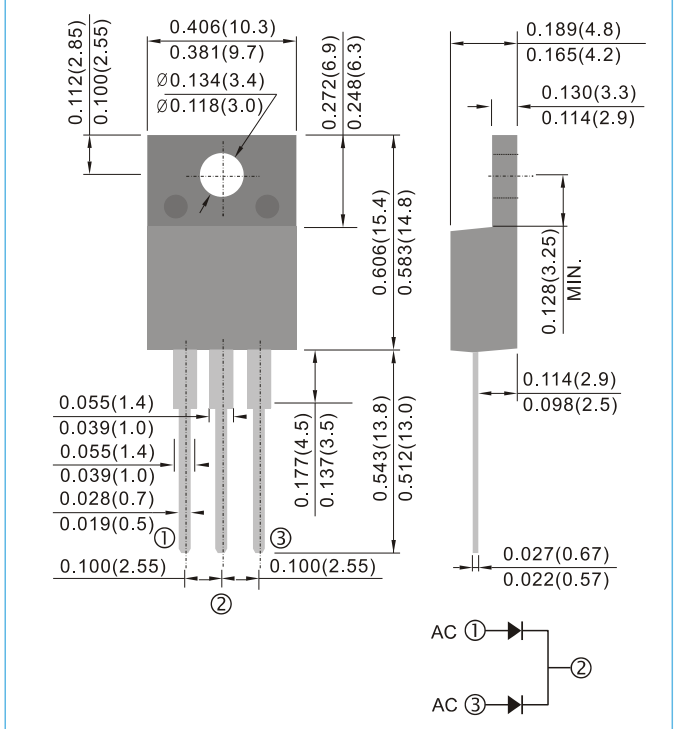
TO-220AB

Unit : inch(mm)



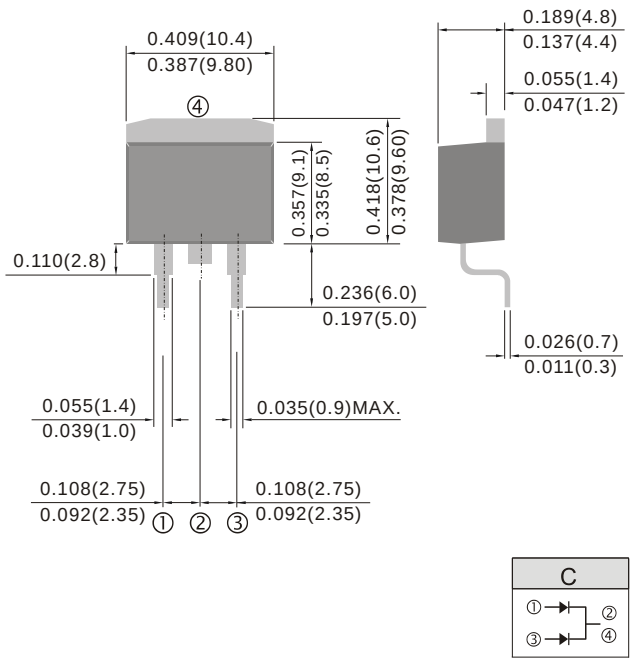
ITO-220AB

Unit : inch(mm)



TO-263 / D²PAK

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