



SBT40100UCT

EXTREME LOW VF SCHOTTKY BARRIER RECTIFIER

Voltage 100 V **Current** 40 A

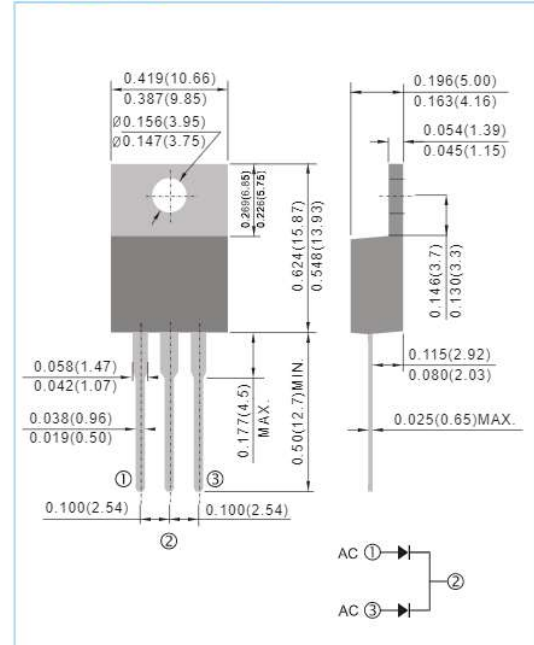
TO-220AB Unit : inch(mm)

Features

- Ideal for automated placement
- Extreme low forward voltage drop, low power loss
- High efficiency operation
- Low thermal resistance
- Easy pick and place package suitable for automated handling
- Lead free in compliance with EU RoHS 2011/65/EU directive

Mechanical Data

- Case: Molded plastic, TO-220AB
- Terminals: solder plated, solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.067 ounces, 1.89 grams.
- Marking: Part number



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

PARAMETER		SYMBOL	LIMIT	UNIT
Maximum repetitive peak reverse voltage		V_{RRM}	100	V
Maximum rms voltage		V_{RMS}	70	V
Maximum dc blocking voltage		V_R	100	V
Maximum average forward rectified current	per diode	$I_{F(AV)}$	20	A
	per device		40	
Peak forward surge current : 8.3ms single half sine-wave superimposed on rated load per diode		I_{FSM}	250	A
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. Device mounted on a infinite heatsink , then measured the center of the marking side.



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Electrical Characteristics ($T_A=25^\circ\text{C}$ unless otherwise noted)

PARAMETER	SYMBOL	TEST CONDITION		MIN.	TYP.	MAX.	UNITS
Breakdown voltage per diode	V_{BR}	$I_R=0.5\text{mA}$	$T_J=25^\circ\text{C}$	100	-	-	V
Instantaneous forward voltage per diode	V_F	$I_F=5\text{A}$	$T_J=25^\circ\text{C}$	-	0.45	-	V
		$I_F=10\text{A}$		-	0.52	-	
Instantaneous forward voltage per diode	V_F	$I_F=20\text{A}$	$T_J=125^\circ\text{C}$	-	0.65	0.7	V
		$I_F=5\text{A}$		-	0.37	-	
Reverse current per diode	I_R	$V_R=70\text{V}$	$T_J=25^\circ\text{C}$	-	12	-	μA
			$T_J=125^\circ\text{C}$	-	7.7	-	mA
Reverse current per diode	I_R	$V_R=100\text{V}$	$T_J=25^\circ\text{C}$	-	-	120	μA
			$T_J=125^\circ\text{C}$	-	15	-	mA

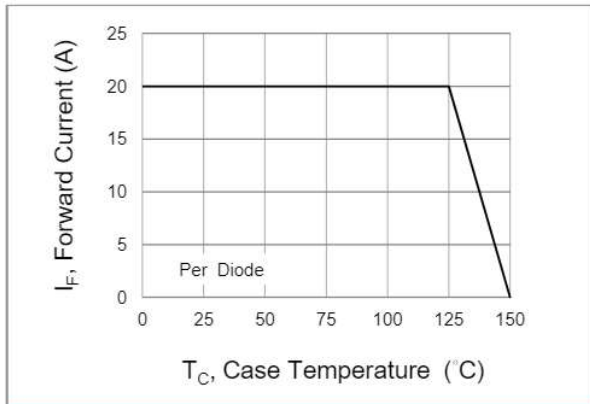


Fig.1 Forward Current Derating Curve

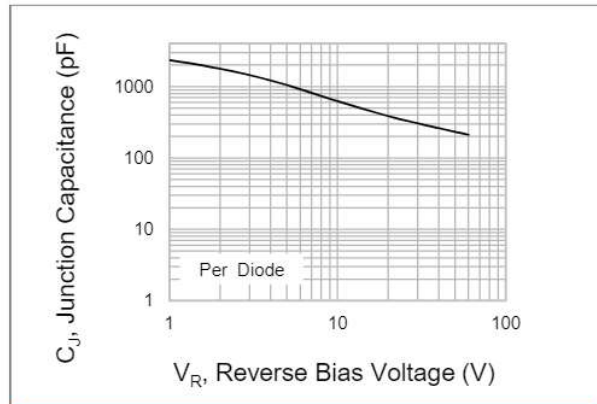


Fig.2 Typical Junction Capacitance

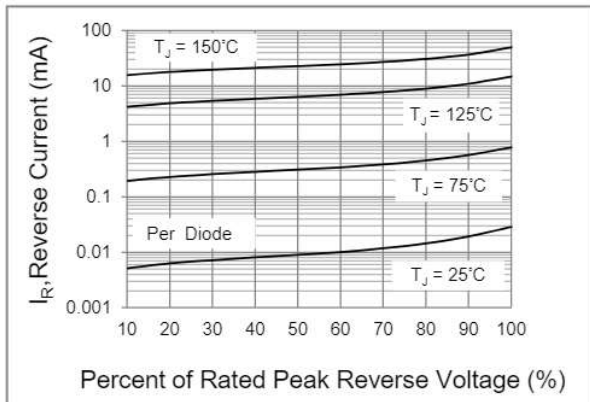


Fig.3 Typical Reverse Characteristics

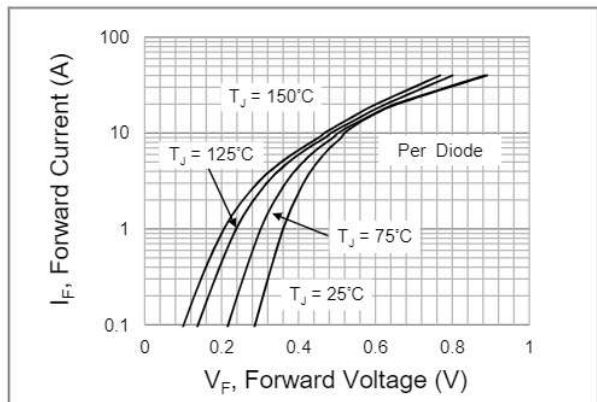


Fig.4 Typical Forward Characteristics



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Part No_packing code_Version

SBT40100UCT_T0_00001

SBT40100UCT_T0_10001

For example :

RB500V-40_R2_00001



Packing Code XX				Version Code XXXXX		
Packing type	1 st Code	Packing size code	2 nd Code	HF or RoHS	1 st Code	2 nd ~5 th 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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