



# SBT10100UYT

## ULTRA LOW VF SCHOTTKY BARRIER RECTIFIER

**Voltage**

**100 V**

**Current**

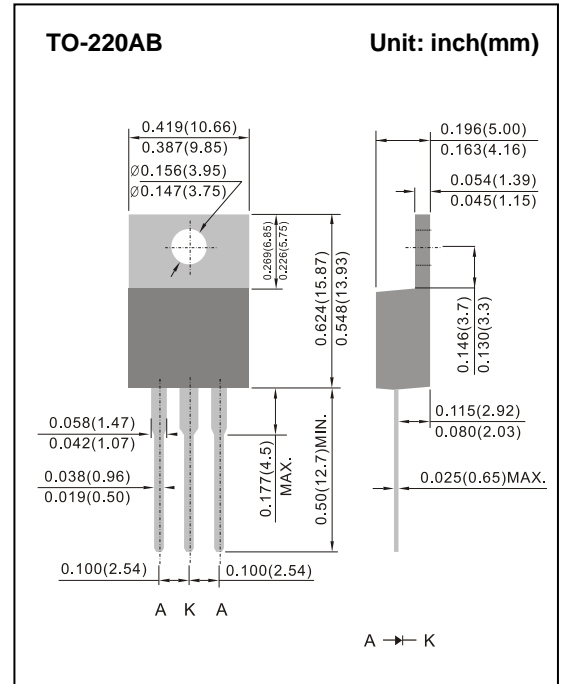
**10 A**

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



### 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	$I_{F(AV)}$	10	A
Peak forward surge current : 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	150	A
Typical junction capacitance ( $V_R=4V, f=1\text{MHz}$ )	$C_J$	620	pF
Typical thermal resistance (Note 1)	$R_{\theta JC}$	3	$^{\circ}\text{C/W}$
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.



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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	$V_{BR}$	$I_R=0.5\text{mA}$	$T_J=25^{\circ}\text{C}$	100	-	-	V
Instantaneous forward voltage	$V_F$	$I_F=3\text{A}$	$T_J=25^{\circ}\text{C}$	-	0.47	-	V
		$I_F=5\text{A}$		-	0.53	-	
		$I_F=10\text{A}$		-	-	0.71	
		$I_F=3\text{A}$	$T_J=125^{\circ}\text{C}$	-	0.40	-	V
		$I_F=5\text{A}$		-	0.49	-	
		$I_F=10\text{A}$		-	0.61	-	
Reverse current	$I_R$	$V_R=70\text{V}$	$T_J=25^{\circ}\text{C}$	-	5	-	$\mu\text{A}$
		$V_R=100\text{V}$	$T_J=25^{\circ}\text{C}$	-	-	80	$\mu\text{A}$
			$T_J=125^{\circ}\text{C}$	-	7.2	-	mA



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## TYPICAL CHARACTERISTIC CURVES

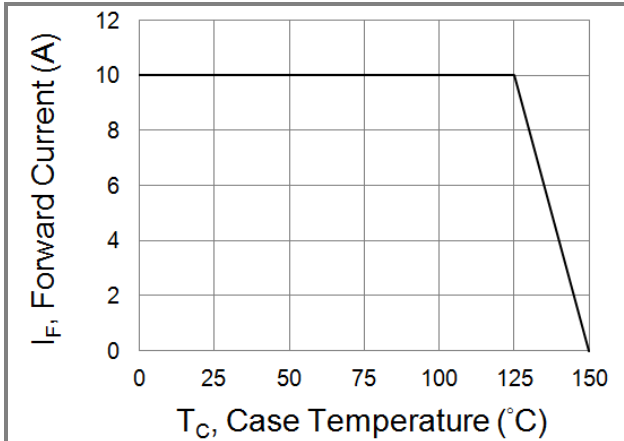


Fig.1 Forward Current Derating Curve

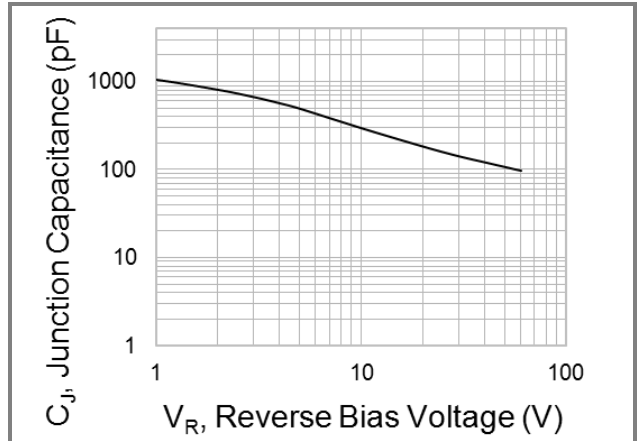


Fig.2 Typical Junction Capacitance

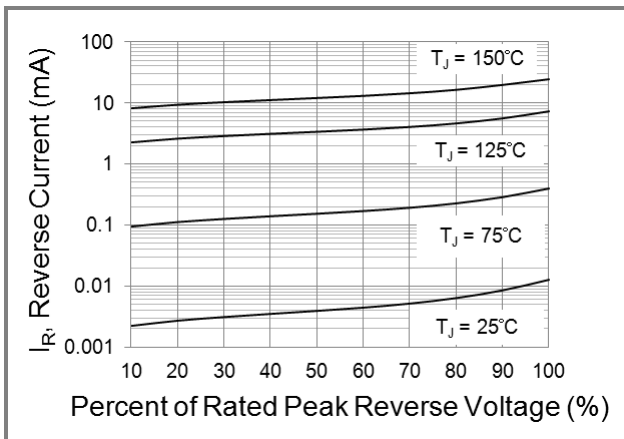


Fig.3 Typical Reverse Characteristics

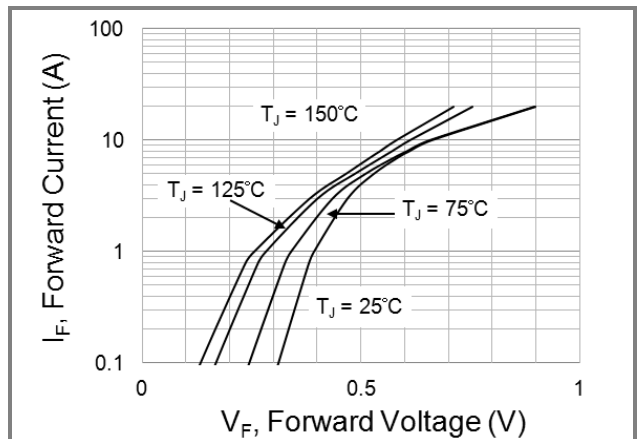


Fig.4 Typical Forward Characteristics

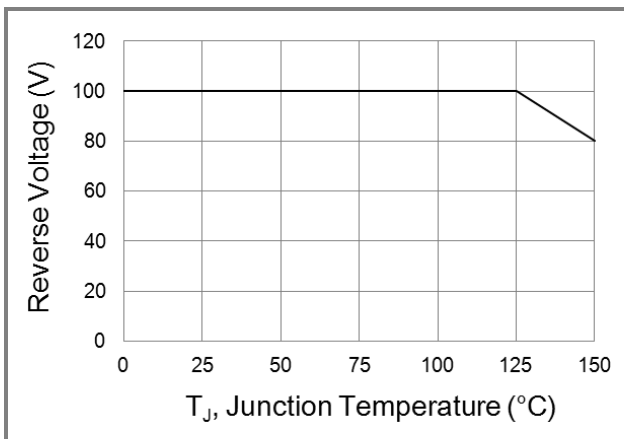


Fig.5 Operating Temperature Derating Curve



# SBT10100UYT

## Part No Packing Code Version

Part No Packing Code	Package Type	Packing Type	Marking	Version
SBT10100UYT_TO_00001	TO-220AB	50pcs / Tube	SBT10100UYT	Halogen free



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