

SBT20100YD

ULTRA LOW VF SCHOTTKY BARRIER RECTIFIER

Voltage

100 V

Current

20 A

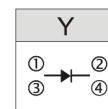
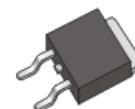
Features

- Low forward voltage drop
- Deal for automated placement
- Low power loss, high efficiency
- High surge current capability
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

Mechanical Data

- Case: TO-252AA Package
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.0105 ounces, 0.297 grams

TO-252AA



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

PARAMETER	SYMBOL	LIMIT	UNITS
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	100	V
Maximum Rms Voltage	V_{RMS}	70	V
Maximum Dc Blocking Voltage	V_{DC}	100	V
Maximum Average Forward Current	$I_{F(AV)}$	20	A
Peak Forward Surge Current: 8.3 ms Single Half Sine-Wave Superimposed On Rated Load	$I_{FSM}^{(3)}$	150	A
Typical Junction Capacitance Measured at 1 MHZ And Applied $V_R = 4\text{ V}$	C_J	400	pF
Typical Thermal Resistance	$R_{\theta JC}^{(1)}$	6	$^\circ\text{C/W}$
Operating Junction Temperature Range	T_J	-55~150	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55~150	$^\circ\text{C}$



SBT20100YD

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

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
Forward Voltage	V_F	$I_F = 1\text{ A}, T_J = 25^\circ\text{C}$	-	0.43	-	V
		$I_F = 5\text{ A}, T_J = 25^\circ\text{C}$	-	0.58	-	
		$I_F = 10\text{ A}, T_J = 25^\circ\text{C}$	-	-	0.77	
		$I_F = 1\text{ A}, T_J = 125^\circ\text{C}$	-	0.32	-	
		$I_F = 5\text{ A}, T_J = 125^\circ\text{C}$	-	0.53	-	
		$I_F = 10\text{ A}, T_J = 125^\circ\text{C}$	-	0.64	-	
Reverse Current	$I_R^{(2)}$	$V_R = 80\text{ V}, T_J = 25^\circ\text{C}$	-	2	-	uA
		$V_R = 100\text{ V}, T_J = 25^\circ\text{C}$	-	-	60	
		$V_R = 100\text{ V}, T_J = 125^\circ\text{C}$	-	3	-	mA

NOTES:

1. Mounted on a FR4 PCB, single-sided copper, with 100cm² copper pad area.
2. Short duration pulse test used to minimize self-heating effect.
3. Terminals 1 and 3 short circuited.

SBT20100YD

TYPICAL CHARACTERISTIC CURVES

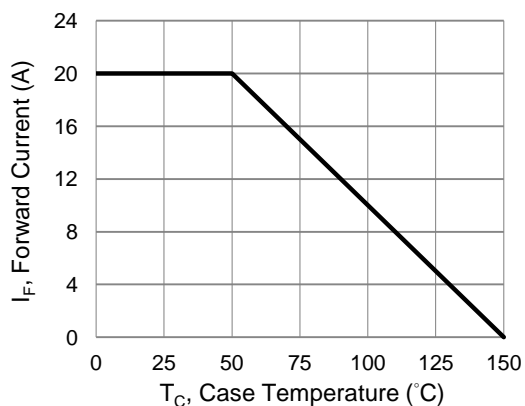


Fig.1 Forward Current Derating Curve

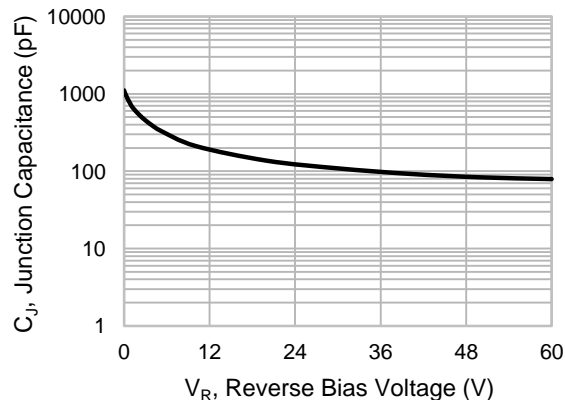


Fig.2 Typical Junction Capacitance

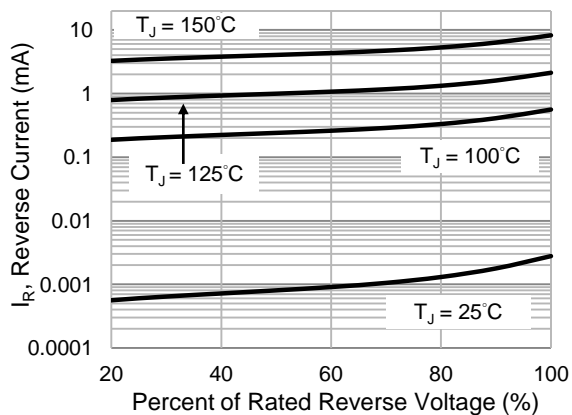


Fig.3 Typical Reverse Characteristics

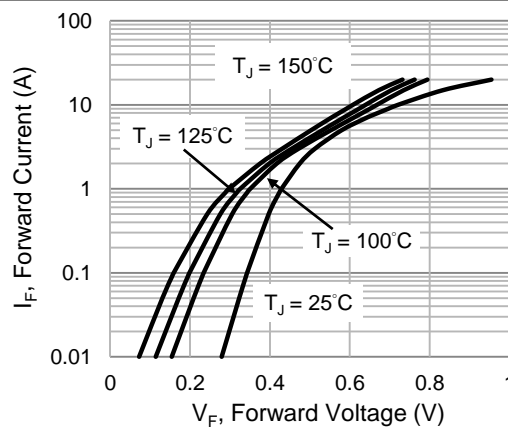


Fig.4 Typical Forward Characteristics

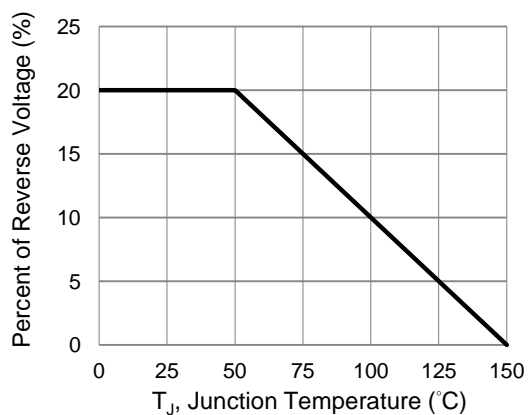
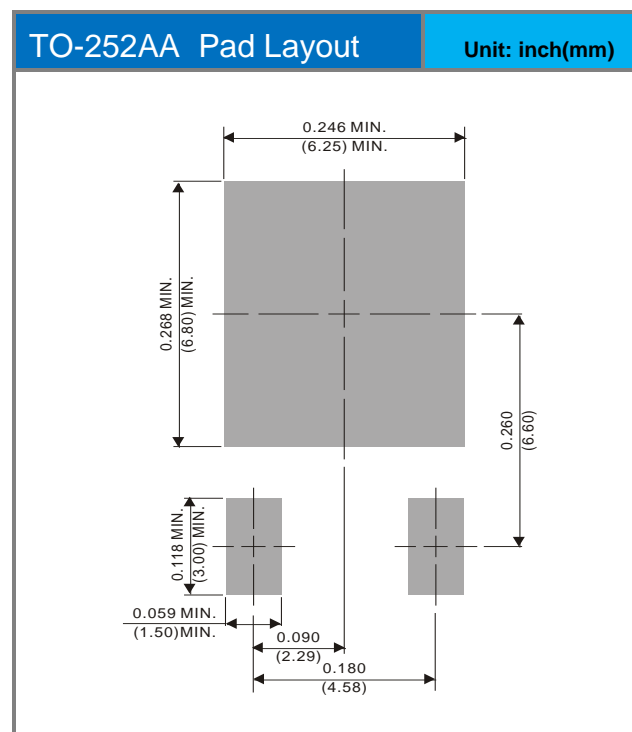
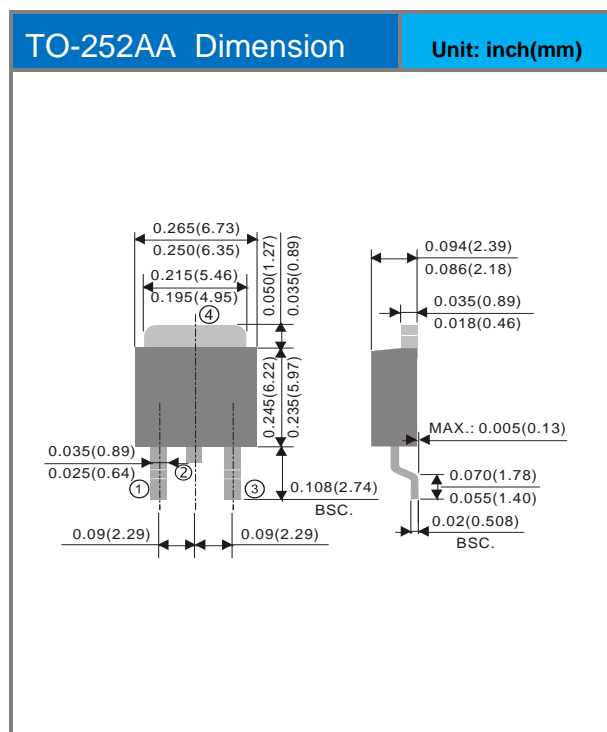


Fig.5 Operating Temperature Derating Curve

Part No Packing Code Version

Part No Packing Code	Package Type	Packing Type	Marking	Version
SBT20100YD_L2_00001	TO-252AA	3K / 13" Reel	T20100Y	Halogen free

Packaging Information & Mounting Pad Layout





SBT20100YD

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