

SB540YD

Surface Mount Schottky Barrier Rectifier

Voltage

40 V

Current

5 A

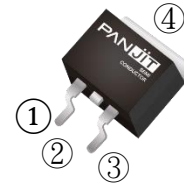
Features

- 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 : 0.3217 grams

TO-252AA



Maximum Ratings and Thermal Characteristics (T_A = 25 °C unless otherwise noted)

PARAMETER	SYMBOL	LIMIT	UNITS
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	40	V
Maximum RMS Voltage	V _{RMS}	28	V
Maximum DC Blocking Voltage	V _{DC}	40	V
Maximum Average Forward Current	I _{F(AV)}	5	A
Peak Forward Surge Current : 8.3 ms Single Half Sine-Wave Superimposed On Rated Load Per Diode	I _{FSM}	120	A
Typical Junction Capacitance Measured at 1 MHz And Applied V _R = 4 V	C _J	247	pF
Typical Thermal Resistance Per Diode	(Note 1) R _{θJA}	50	°C/W
	(Note 2) R _{θJC}	6	
	(Note 2) R _{θJL}	5.3	
Operating Junction Temperature Range	T _J	-55~150	°C
Storage Temperature Range	T _{STG}	-55~150	°C

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

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
Forward Voltage	V_F	$I_F = 1\text{ A}, T_J = 25^\circ\text{C}$	-	0.38	-	V
		$I_F = 3\text{ A}, T_J = 25^\circ\text{C}$	-	0.45	-	V
		$I_F = 5\text{ A}, T_J = 25^\circ\text{C}$	-	0.5	0.55	V
		$I_F = 1\text{ A}, T_J = 125^\circ\text{C}$	-	0.26	-	V
		$I_F = 3\text{ A}, T_J = 125^\circ\text{C}$	-	0.36	-	V
		$I_F = 5\text{ A}, T_J = 125^\circ\text{C}$	-	0.44	-	V
Reverse Current	I_R	$V_R = 32\text{ V}, T_J = 25^\circ\text{C}$	-	8.2	-	nA
		$V_R = 40\text{ V}, T_J = 25^\circ\text{C}$	-	13.3	200	μA
		$V_R = 40\text{ V}, T_J = 125^\circ\text{C}$	-	11.1	-	mA

NOTES :

1. Mounted on a FR4 PCB, single-sided copper, standard footprint.
2. Mounted on a FR4 PCB, single-sided copper, with 100 cm² copper pad area.

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TYPICAL CHARACTERISTIC CURVES

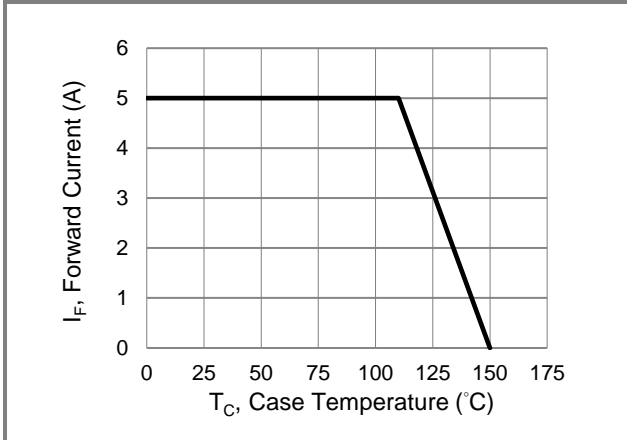


Fig.1 Forward Current Derating Curve

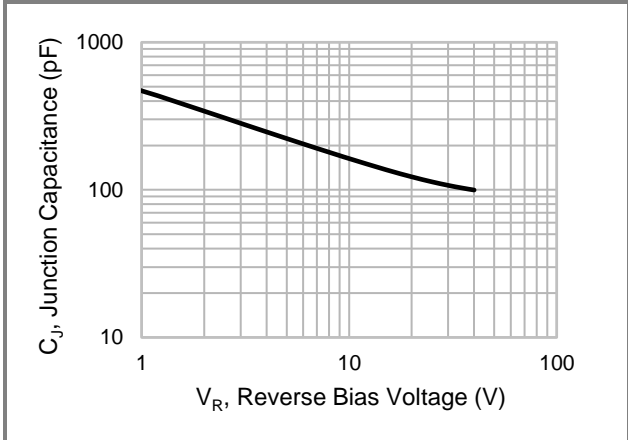


Fig.2 Typical Junction Capacitance

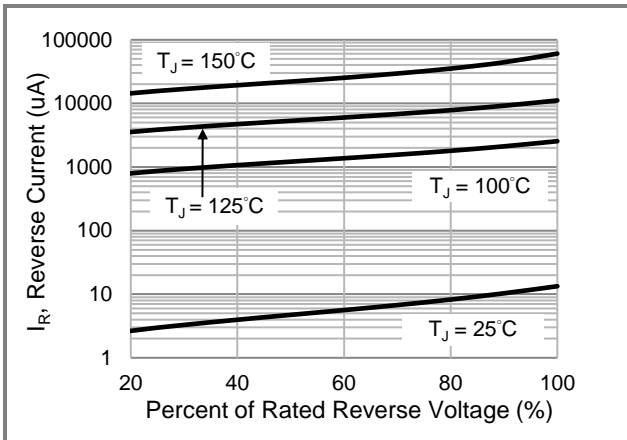


Fig.3 Typical Reverse Characteristics

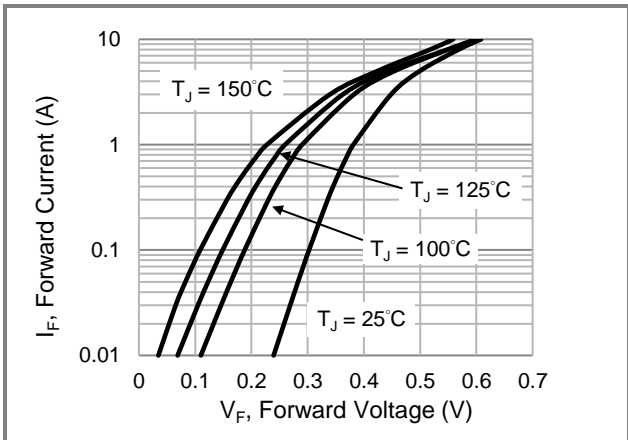


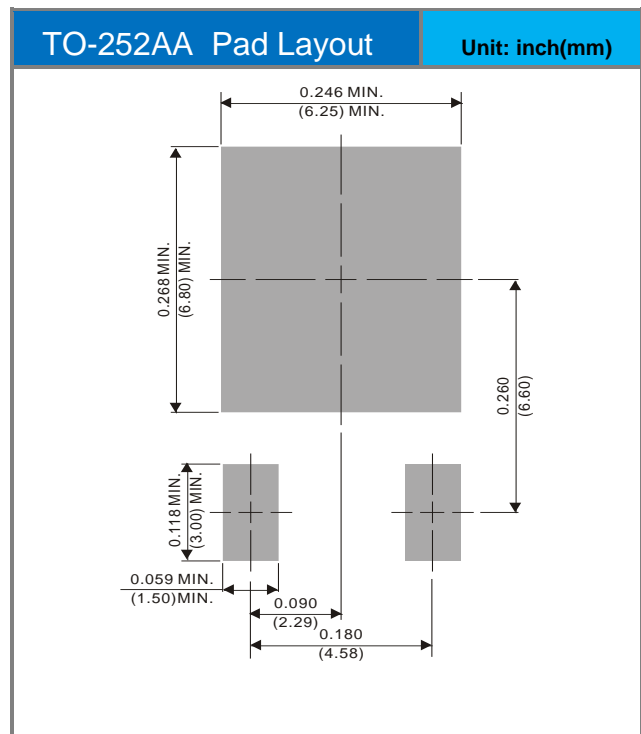
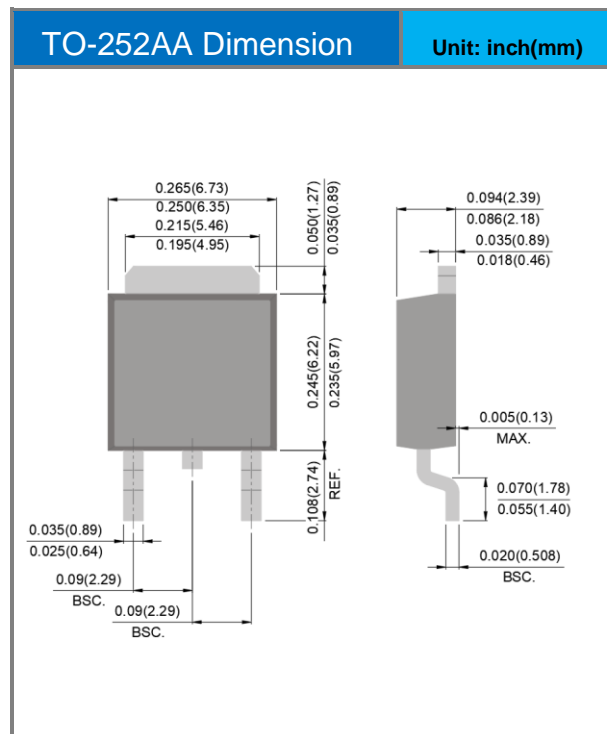
Fig.4 Typical Forward Characteristics

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Product and Packing Information

Part No.	Package Type	Packing Type	Marking
SB540YD	TO-252AA	3K pcs / 13" reel	SB540YD

Packaging Information & Mounting Pad Layout



SB540YD

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