

SB1040CD

Surface Mount Schottky Barrier Rectifier

Voltage 40 V **Current** 10 A

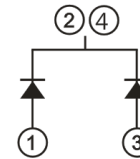
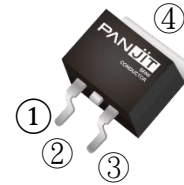
Features

- 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)}	10 5	A
per device			
per diode			
Peak Forward Surge Current : 8.3 ms Single Half Sine-Wave Superimposed On Rated Load Per Diode	I _{FSM}	120	A
Typical Junction Capacitance	C _J	247	pF
Measured at 1 MHz And Applied V _R = 4 V			
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

SB1040CD

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

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
Forward Voltage Per Diode	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 Per Diode	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

SB1040CD

TYPICAL CHARACTERISTIC CURVES

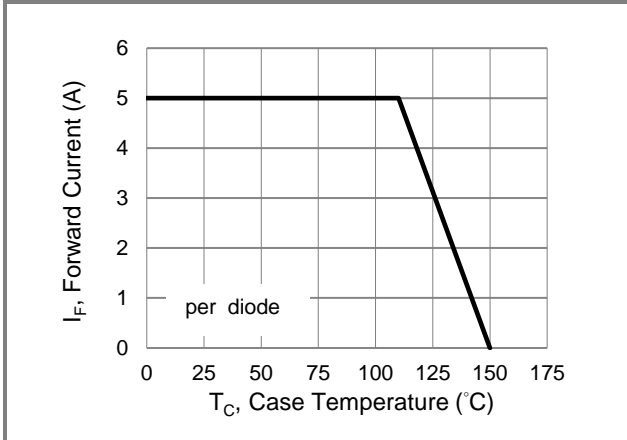


Fig.1 Forward Current Derating Curve

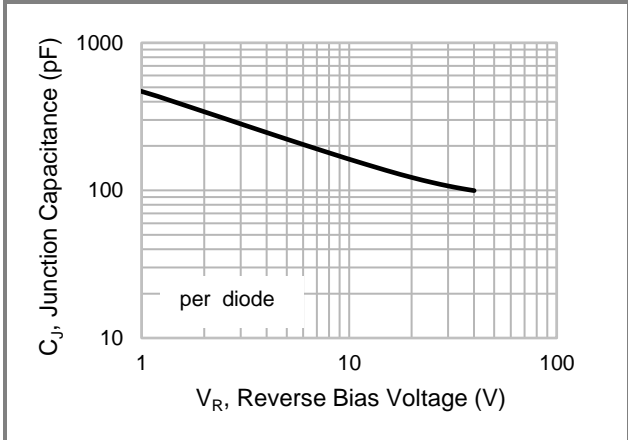


Fig.2 Typical Junction Capacitance

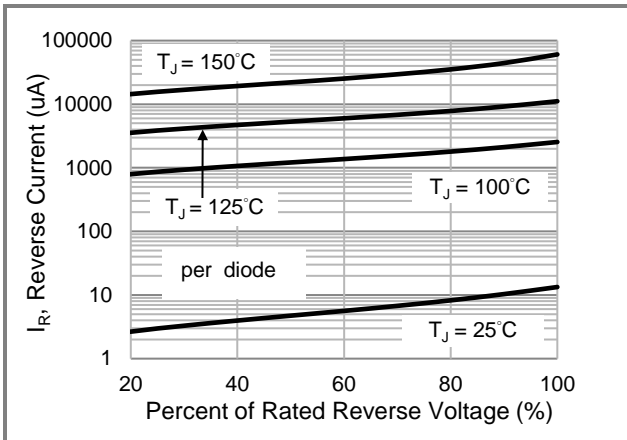


Fig.3 Typical Reverse Characteristics

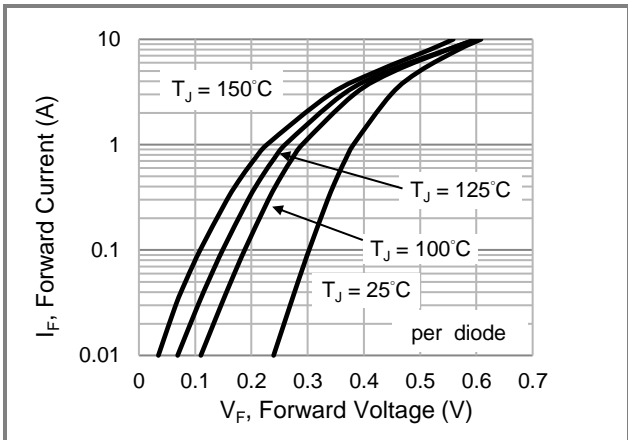


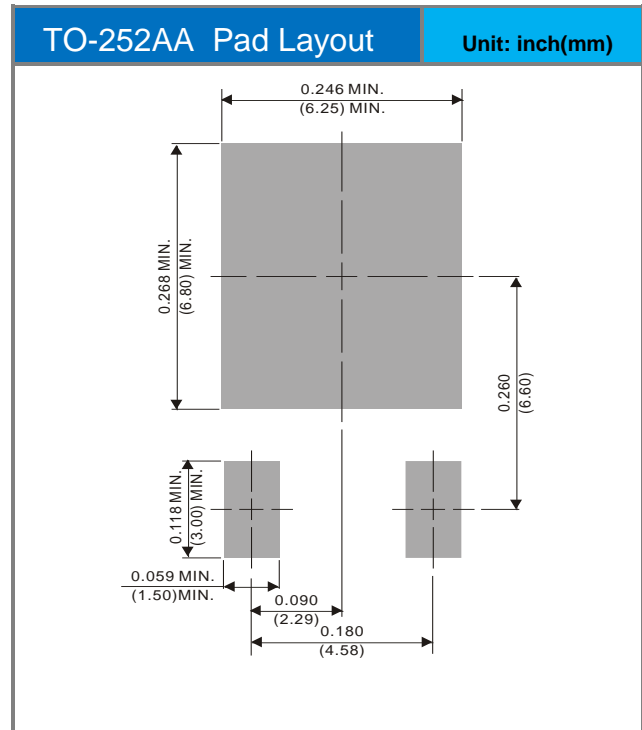
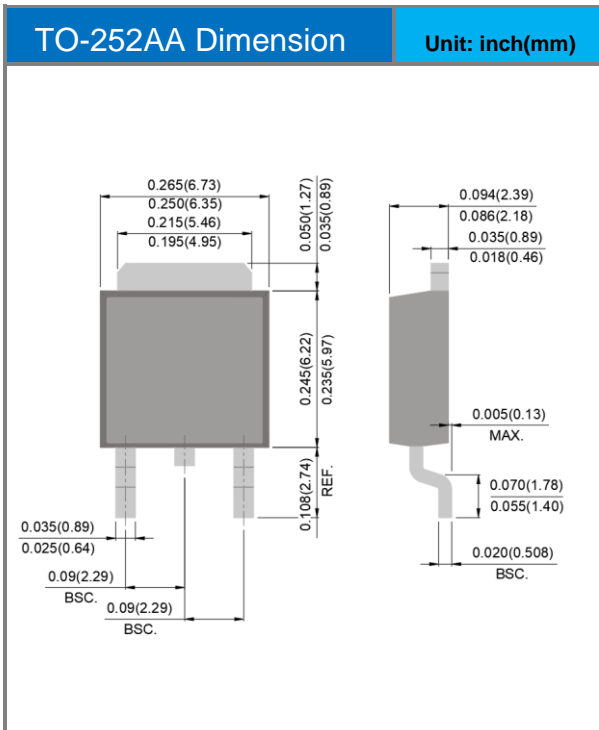
Fig.4 Typical Forward Characteristics

SB1040CD

Product and Packing Information

Part No.	Package Type	Packing Type	Marking
SB1040CD	TO-252AA	3K pcs / 13" reel	SB1040CD

Packaging Information & Mounting Pad Layout



SB1040CD

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