

Product Summary

B350BE/B350CE
B360BE/B360CE

V _{RRM} (V)	I _o (A)	V _F Max (V) @ +25°C	I _R Max (mA) @ +25°C
50	3	0.65	0.1
60	3	0.65	0.2

Description and Applications

The Schottky rectifier providing low V_F and excellent reverse leakage stability at high temperatures, this device is ideal for use in general rectification applications such as:

- Boost Diode
- Blocking Diode
- Recirculating Diode

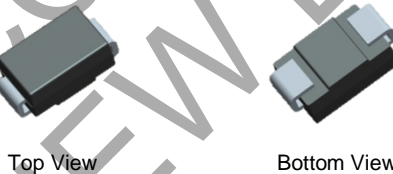
Features and Benefits

- Reduced Low Forward Voltage Drop (V_F); Better Efficiency and Cooler Operation
- Reduced High-Temperature Reverse Leakage; Increased Reliability against Thermal Runaway Failure in High Temperature Operation
- **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. "Green" Device (Note 3)**
- **For automotive applications requiring specific change control (i.e. parts qualified to AEC-Q100/101/200, PPAP capable, and manufactured in IATF 16949 certified facilities), please [contact us](#) or your local Diodes representative. <https://www.diodes.com/quality/product-definitions/>**

Mechanical Data

- Case: SMB, SMC
- Case Material: Molded Plastic, "Green" Molding Compound. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Finish – Matte Tin Annealed over Copper Leadframe. Solderable per MIL-STD-202, Method 208 (E3)
- Polarity: Cathode Band
- Weight: SMB- 0.093 grams (Approximate)
SMC- 0.21 grams (Approximate)

SMB/SMC

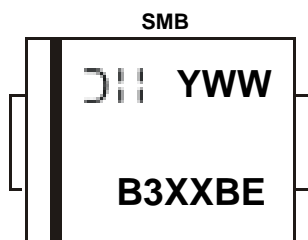


Ordering Information (Note 4)

Part Number	Case	Packaging
B3XXBE-13	SMB	3,000/Tape & Reel
B3XXCE-13	SMC	3,000/Tape & Reel

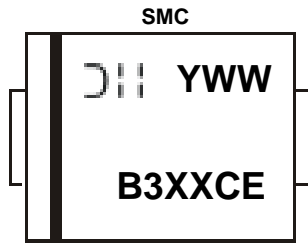
- Notes:
1. EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3) compliant. All applicable RoHS exemptions applied.
 2. See <https://www.diodes.com/quality/lead-free/> for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
 3. Halogen- and Antimony-free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
 4. For packaging details, go to our website at <https://www.diodes.com/design/support/packaging/diodes-packaging/>.

Marking Information



B3XXBE = Product Type Marking Code, ex: B350BE
 ☺☺☺ = Manufacturers' Code Marking
 YWW = Date Code Marking
 Y = Last Digit of Year (ex: 9 for 2019)
 WW = Week Code (01 to 53)

Marking Information (continued)



B3XXCE = Product Type Marking Code, ex: B350CE
 DII = Manufacturers' Code Marking
 YWW = Date Code Marking
 Y = Last Digit of Year (ex: 9 for 2019)
 WW = Week Code (01 to 53)

Maximum Ratings (@T_A = +25°C, unless otherwise specified.)

Single phase, half wave, 60Hz, resistive or inductive load.
 For capacitive load, derate current by 20%.

Characteristic	Symbol	B350BE/B350CE	B360BE/B360CE	Unit
Peak Repetitive Reverse Voltage	V _{RRM}	50	60	V
Working Peak Reverse Voltage	V _{RWM}			
DC Blocking Voltage	V _{RM}			
Average Rectified Output Current	I _O	3		A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I _{FSM}	80		A

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Typical Thermal Resistance Junction to Ambient (Note 5)	SMB	90	°C/W
	SMC	70	
Typical Thermal Resistance Junction to Case (Note 5)	SMB	50	°C/W
	SMC	30	
Operating and Storage Temperature Range	T _J , T _{STG}	-55 to +150	°C

Electrical Characteristics (@T_A = +25°C, unless otherwise specified.)

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Forward Voltage Drop	V _F	—	0.55	0.65	V	I _F = 3A, T _J = +25°C
		—	0.52	—		I _F = 3A, T _J = +125°C
Leakage Current (Note 6)	I _R	—	—	0.1	mA	V _R = 50V, T _J = +25°C
		—	—	0.2		V _R = 60V, T _J = +25°C
		—	25	—		V _R = 60V, T _J = +125°C
Typical Capacitance	C _T	—	110	—	pF	V _R = 4.0V, f = 1MHz

Notes: 5. Device mounted on FR-4 substrate, 0.4"×0.5", 2oz, single-sided, PC boards with 0.2"×0.25" copper pad.
 6. Short duration pulse test used to minimize self-heating effect.

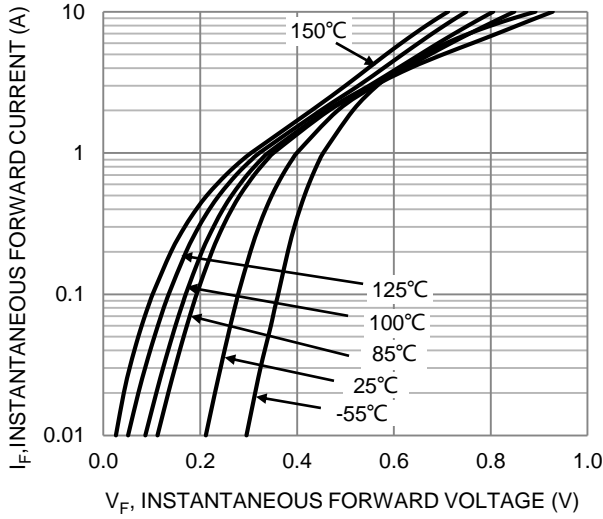


Figure 1. Typical Forward Characteristics

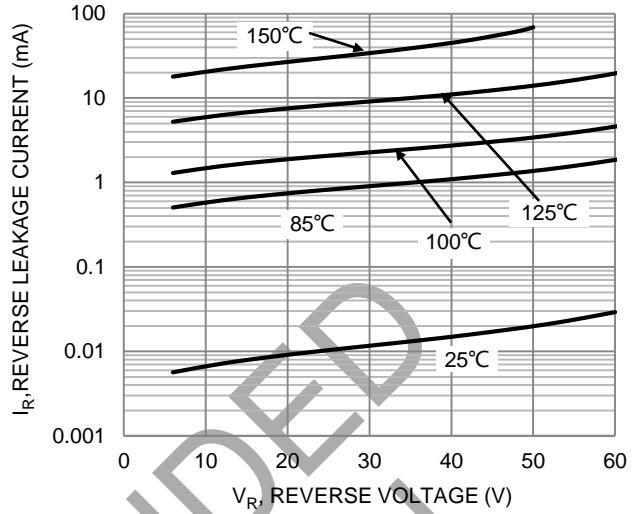


Figure 2. Typical Reverse Characteristics

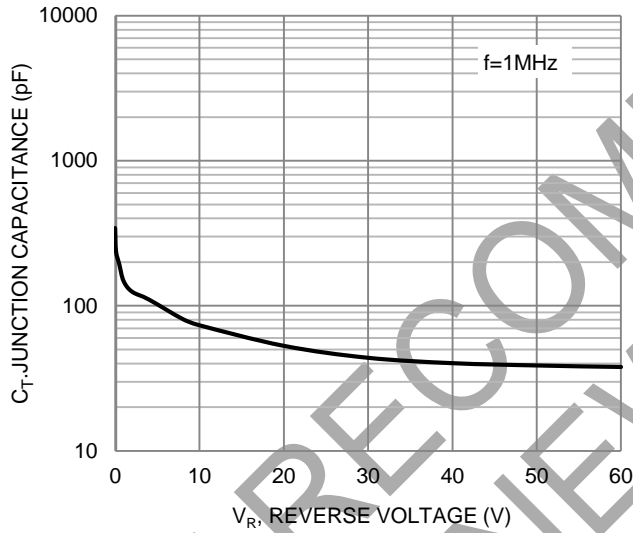


Figure 3. Typical Junction Capacitance

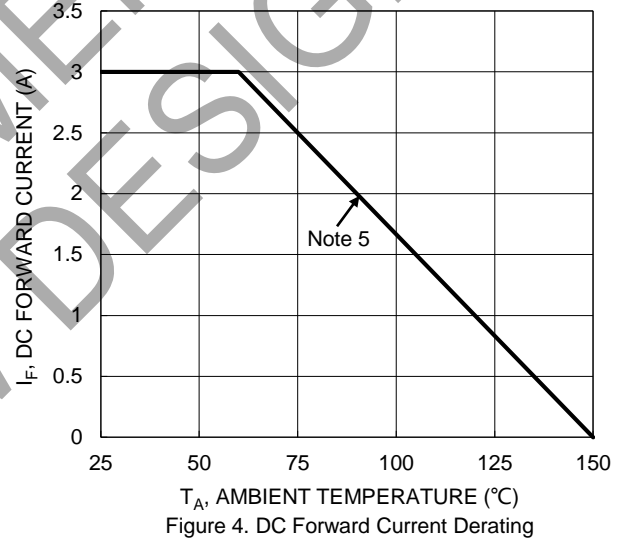


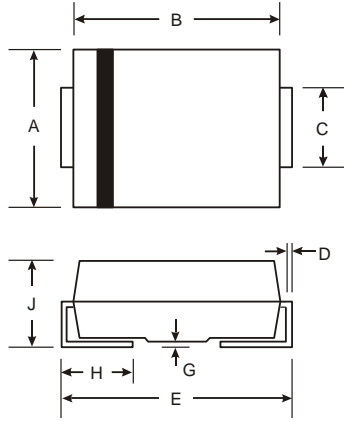
Figure 4. DC Forward Current Derating

NOT RECOMMENDED FOR NEW DESIGN

Package Outline Dimensions

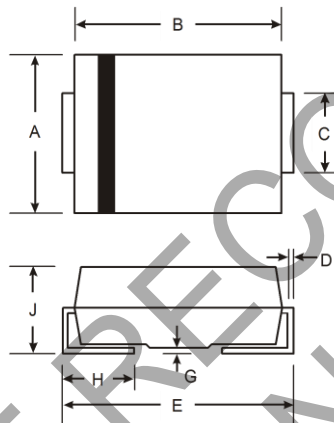
Please see <http://www.diodes.com/package-outlines.html> for the latest version.

SMB



SMB		
Dim	Min	Max
A	3.30	3.94
B	4.06	4.57
C	1.96	2.21
D	0.15	0.31
E	5.00	5.59
G	0.05	0.20
H	0.76	1.52
J	2.00	2.50
All Dimensions in mm		

SMC



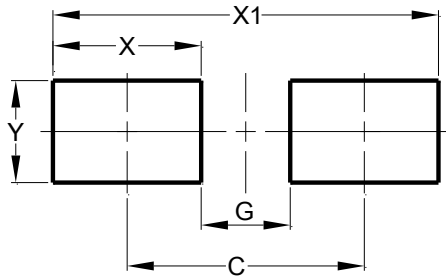
SMC		
Dim	Min	Max
A	5.59	6.22
B	6.60	7.11
C	2.75	3.18
D	0.15	0.31
E	7.75	8.13
G	0.10	0.20
H	0.76	1.52
J	2.00	2.50
All Dimensions in mm		

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Suggested Pad Layout

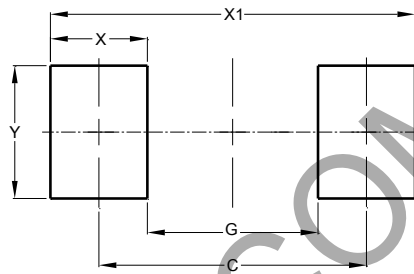
Please see <http://www.diodes.com/package-outlines.html> for the latest version.

SMB



Dimensions	Value (in mm)
C	4.30
G	1.80
X	2.50
X1	6.80
Y	2.30

SMC



Dimensions	Value (in mm)
C	6.90
G	4.40
X	2.50
X1	9.40
Y	3.30

NOT RECOMMENDED FOR NEW DESIGN

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