



**THE DATASHEET OF  
SMBJ350A-13-F**

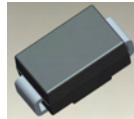


## Features

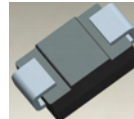
- 600W Peak Pulse Power Dissipation
- 350V Standoff Voltage
- Glass Passivated Die Construction
- Excellent Clamping Capability
- Fast Response Time
- **Lead Free Finish/RoHS Compliant (Note 1)**
- **Green Molding Compound (No Halogen and Antimony) (Note 2)**

## Mechanical Data

- Case: SMB
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Lead Free Plating (Matte Tin Finish). Solderable per MIL-STD-202, Method 208
- Polarity Indicator: Cathode Band
- Weight: 0.1 grams (approximate)



Top View



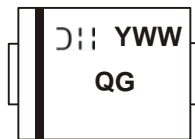
Bottom View

## Ordering Information (Note 3)

Part Number	Qualification	Case	Packaging
SMBJ350A-13-F	Commercial	SMB	3000/Tape & Reel

- Notes:
1. EU Directive 2002/95/EC (RoHS). All applicable RoHS exemptions applied, see EU Directive 2002/95/EC Annex Notes
  2. Diodes Inc.'s "Green" Policy can be found on our website at <http://www.diodes.com>.
  3. For packaging details, go to our website at <http://www.diodes.com>.

## Marking Information



- QG = Product type marking code (See Page 2)  
 J11 = Manufacturers' code marking  
 YWW = Date code marking  
 Y = Last digit of year (ex: 1 for 2011)  
 WW = Week code (01 ~ 53)

**Maximum Ratings** @ $T_A = 25^\circ\text{C}$  unless otherwise specified

Characteristic	Symbol	Value	Unit
Peak Pulse Power Dissipation (Non repetitive current pulse derated above $T_A = 25^\circ\text{C}$ ) (Note 4)	$P_{PK}$	600	W
Peak Power Derating Above $25^\circ\text{C}$	$P_{der}$	4.8	W/ $^\circ\text{C}$
Peak Forward Surge Current, 8.3ms Single Half Sine Wave Superimposed on Rated Load (Notes 4 & 5)	$I_{FSM}$	100	A
Steady State Power Dissipation @ $T_L = 75^\circ\text{C}$	$PM_{(AV)}$	5.0	W
Instantaneous Forward Voltage @ $I_{PP} = 35\text{A}$ (Notes 4 & 5)	$V_F$	5.0	V

**Thermal Characteristics**

Characteristic	Symbol	Value	Unit
Operating Temperature Range	$T_J$	-55 to +150	$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-55 to +175	$^\circ\text{C}$

**Electrical Characteristics** @ $T_A = 25^\circ\text{C}$  unless otherwise specified

Part Number	Reverse Standoff Voltage	Breakdown Voltage		Test Current	Max. Reverse Leakage @ $V_{RWM}$	Max. Clamping Voltage @ $I_{PP}$	Max. Peak Pulse Current $I_{PP}$	Marking Code
		$V_{BR}$ @ $I_T$ (Note 6)	Min (V)					
See Note 5	$V_{RWM}$ (V)			$I_T$ (mA)	$I_R$ ( $\mu\text{A}$ )	$V_C$ (V)	(A)	-
SMBJ350A	350.0		391.0 432.0	1.0	5.0	567.0	1.1	QG

- Notes:
- Valid provided that terminals are kept at ambient temperature.
  - Measured with 8.3ms single half sine-wave. Duty cycle = 4 pulses per minute maximum.
  - $V_{BR}$  measured with  $I_T$  current pulse = 300 $\mu\text{s}$

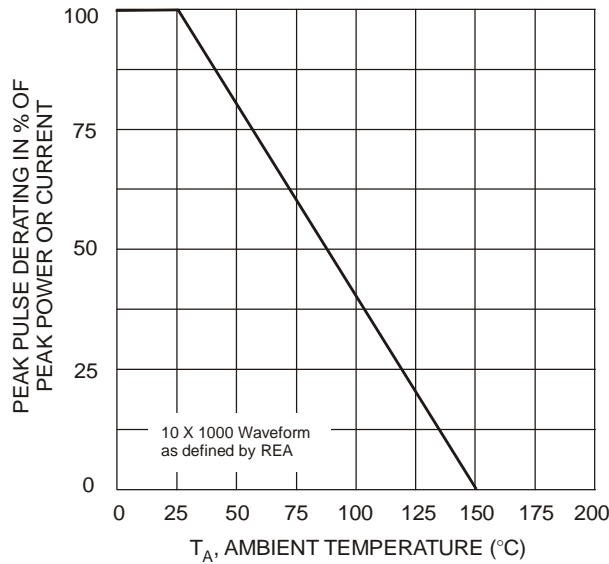


Fig. 1 Pulse Derating Curve

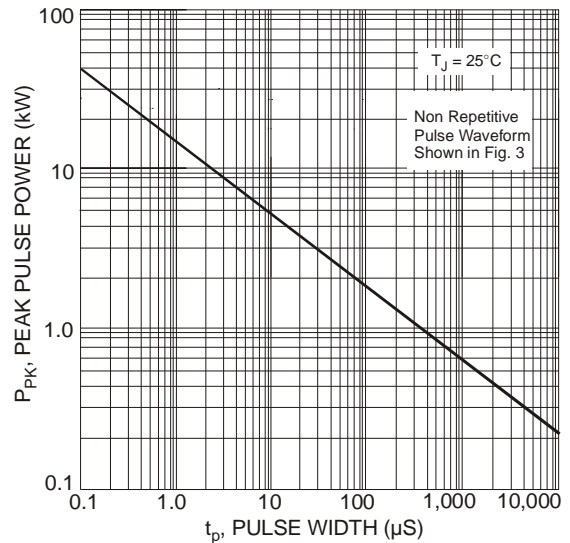


Fig. 2 Pulse Rating Curve

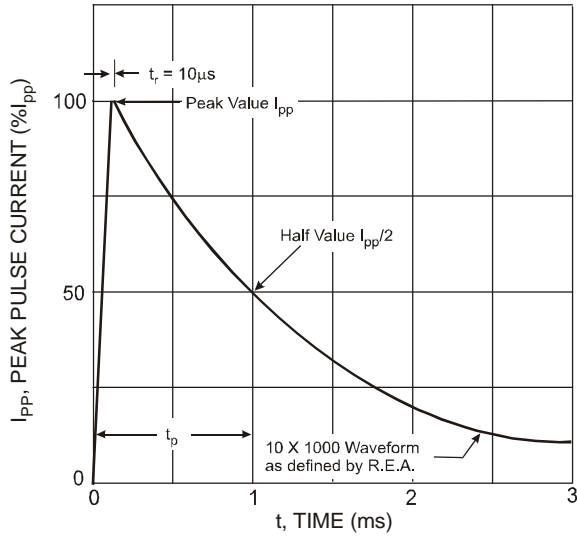


Fig. 3 Pulse Waveform

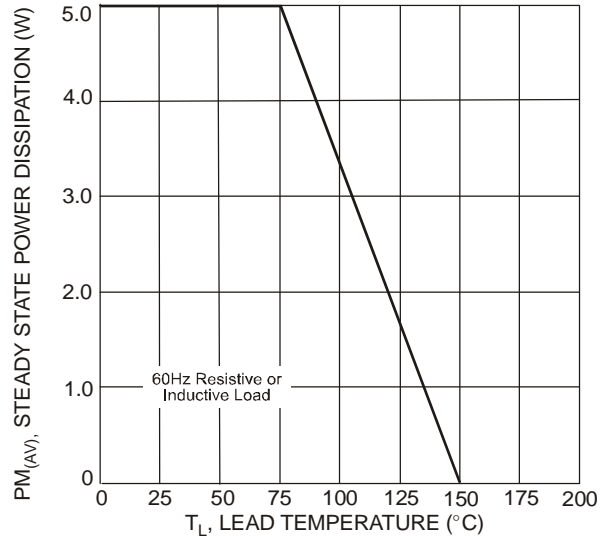
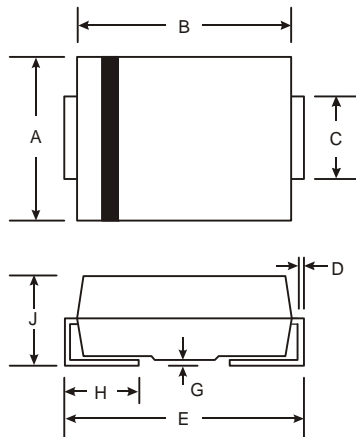


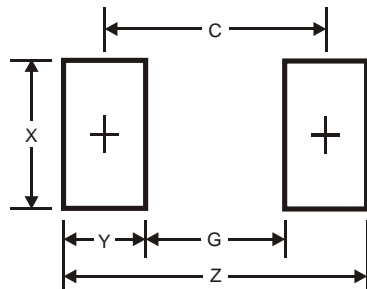
Fig. 4 Steady State Power Derating Curve

**Package Outline Dimensions**



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		

**Suggested Pad Layout**



Dimensions	Value (in mm)
Z	6.8
G	1.8
X	2.3
Y	2.5
C	4.3

**IMPORTANT NOTICE**

DIODES INCORPORATED MAKES NO WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, WITH REGARDS TO THIS DOCUMENT, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE (AND THEIR EQUIVALENTS UNDER THE LAWS OF ANY JURISDICTION).

Diodes Incorporated and its subsidiaries reserve the right to make modifications, enhancements, improvements, corrections or other changes without further notice to this document and any product described herein. Diodes Incorporated does not assume any liability arising out of the application or use of this document or any product described herein; neither does Diodes Incorporated convey any license under its patent or trademark rights, nor the rights of others. Any Customer or user of this document or products described herein in such applications shall assume all risks of such use and will agree to hold Diodes Incorporated and all the companies whose products are represented on Diodes Incorporated website, harmless against all damages.

Diodes Incorporated does not warrant or accept any liability whatsoever in respect of any products purchased through unauthorized sales channel. Should Customers purchase or use Diodes Incorporated products for any unintended or unauthorized application, Customers shall indemnify and hold Diodes Incorporated and its representatives harmless against all claims, damages, expenses, and attorney fees arising out of, directly or indirectly, any claim of personal injury or death associated with such unintended or unauthorized application.

Products described herein may be covered by one or more United States, international or foreign patents pending. Product names and markings noted herein may also be covered by one or more United States, international or foreign trademarks.

**LIFE SUPPORT**

Diodes Incorporated products are specifically not authorized for use as critical components in life support devices or systems without the express written approval of the Chief Executive Officer of Diodes Incorporated. As used herein:

A. Life support devices or systems are devices or systems which:

1. are intended to implant into the body, or
2. support or sustain life and whose failure to perform when properly used in accordance with instructions for use provided in the labeling can be reasonably expected to result in significant injury to the user.

B. A critical component is any component in a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or to affect its safety or effectiveness.

Customers represent that they have all necessary expertise in the safety and regulatory ramifications of their life support devices or systems, and acknowledge and agree that they are solely responsible for all legal, regulatory and safety-related requirements concerning their products and any use of Diodes Incorporated products in such safety-critical, life support devices or systems, notwithstanding any devices- or systems-related information or support that may be provided by Diodes Incorporated. Further, Customers must fully indemnify Diodes Incorporated and its representatives against any damages arising out of the use of Diodes Incorporated products in such safety-critical, life support devices or systems.

Copyright © 2011, Diodes Incorporated

[www.diodes.com](http://www.diodes.com)

## Looking for pricing, stock, or lifecycle information?

Click below to explore more details on WIN SOURCE:

- ⊖ [View SMBJ350A-13-F on WIN SOURCE](#)
- ⊖ [Diodes Incorporated Information](#)

## Optimize Your Supply Chain with WIN SOURCE Solutions

- ✓ Global Sourcing Solution
- ✓ Obsolete Management
- ✓ Cost Control Management
- ✓ Shortage Management
- ✓ Alternative Solution
- ✓ Excess Inventory Management