NEW PRODUCT

Product Summary

B340AF/B345AF

Part Number	V_{RRM} (V)	I_O (A)	$V_{F(MAX)}$ (V) @ +25°C	$I_{R(MAX)}$ (mA) @ +25°C
B340AF	40	3	0.50	0.20
B345AF	45	3	0.50	0.30

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)**

Description and Applications

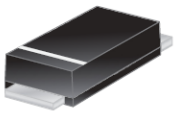
The B340AF is a 3A 40V and B345AF is a 3A 45V single rectifier packaged in the low profile SMAF package. Providing low V_F and excellent reverse leakage stability at high temperatures, this device is ideal for use in general rectification applications such as:

- Boost Diodes
- Blocking Diodes
- Recirculating Diodes

Mechanical Data

- Case: SMAF
- 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: 0.036 grams (Approximate)

SMAF



Top View

Ordering Information (Note 4)

Part Number	Case	Packaging
B340AF-13	SMAF	10,000/Tape & Reel
B345AF-13	SMAF	10,000/Tape & Reel

Notes:
1. EU Directive 2002/95/EC (RoHS) & 2011/65/EU (RoHS 2) compliant. All applicable RoHS exemptions applied.
2. See http://www.diodes.com/quality/lead_free.html 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 http://www.diodes.com/products/packages.html.

Marking Information

SMAF

B340AF = Product Type Marking Code
= Manufacturers' Code Marking
YWW = Date Code Marking
Y = Last Digit of Year (ex: 6 for 2016)
WW = Week Code (01 to 53)

SMAF

B345AF = Product Type Marking Code
= Manufacturers' Code Marking
YWW = Date Code Marking
Y = Last Digit of Year (ex: 6 for 2016)
WW = Week Code (01 to 53)

© Diodes Incorporated

NEW PRODUCT

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	B340AF	B345AF	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_{RM}	40	45	V
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)	$R_{\theta JA}$	35	°C/W
Typical Thermal Resistance Junction to Case (Note 5)	$R_{\theta JC}$	6.0	°C/W
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	— —	0.47 0.43	0.50 —	V	I_F = 3A, T_J = +25°C I_F = 3A, T_J = +125°C
Leakage Current (Note 6) B340AF	I_R	— —	0.03 15	0.20 —	mA	V_R = 40V, T_J = +25°C V_R = 40V, T_J = +125°C
Leakage Current (Note 6) B345AF	I_R	— —	0.04 18.0	0.30 —	mA	V_R = 45V, T_J = +25°C V_R = 45V, T_J = +125°C
Typical Capacitance	C_T	—	120	—	pF	V_R = 4.0V, f = 1MHz

Notes: 5. Device mounted on 2inch*2inch Al board.
6. Short duration pulse test used to minimize self-heating effect.

© Diodes Incorporated

NEW PRODUCT

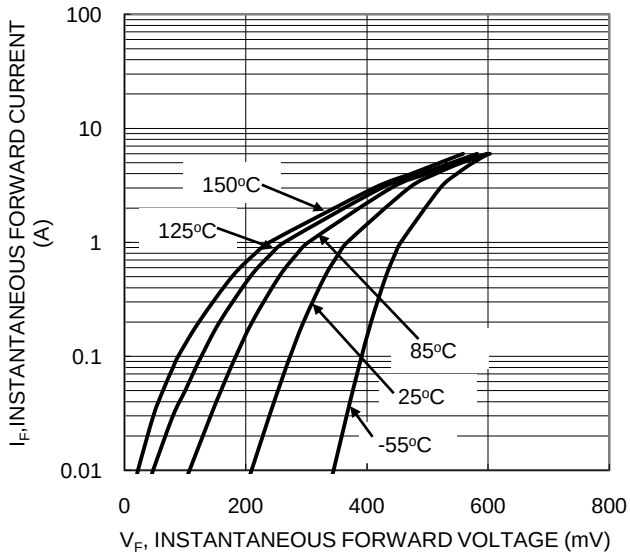


Figure 1. Typical Forward Characteristics

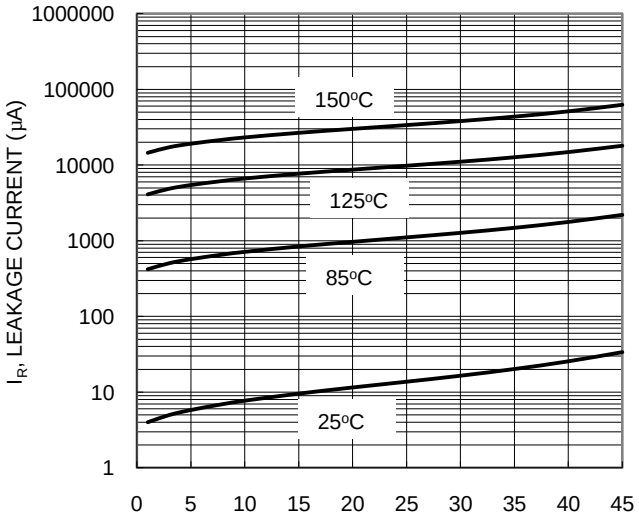


Figure 2. Typical Reverse Characteristics

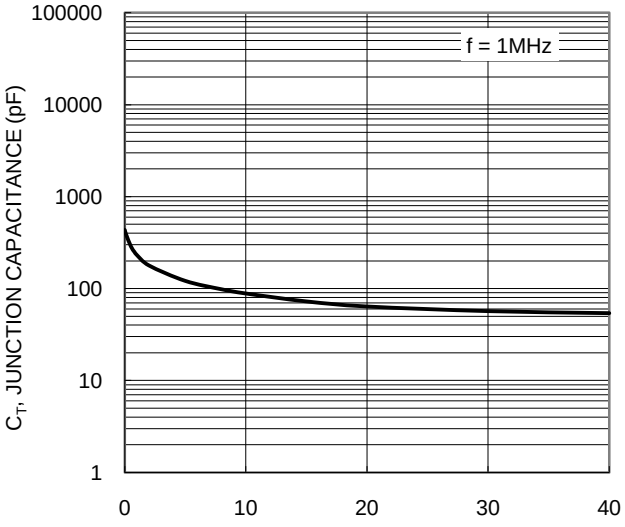


Figure 3. Typical Junction Capacitance

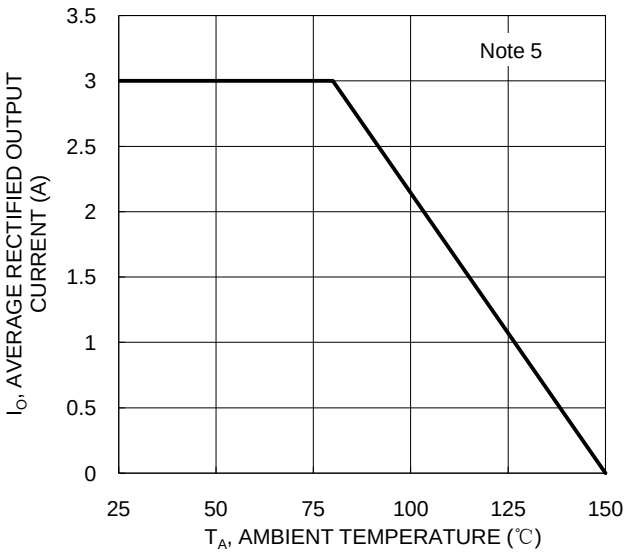


Figure 4. DC Forward Current Derating

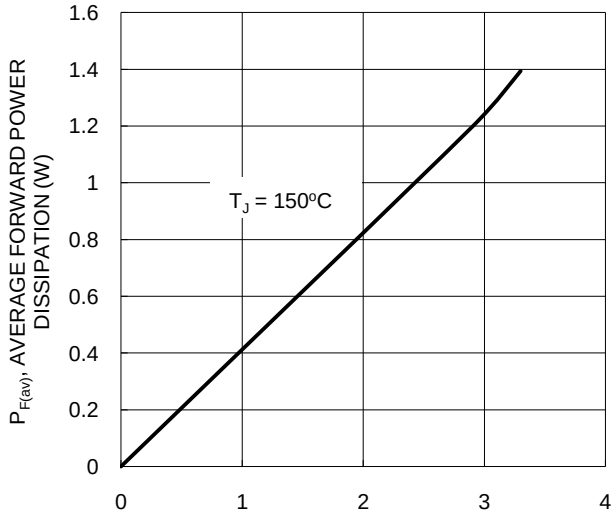


Figure 5. Forward Power Dissipation

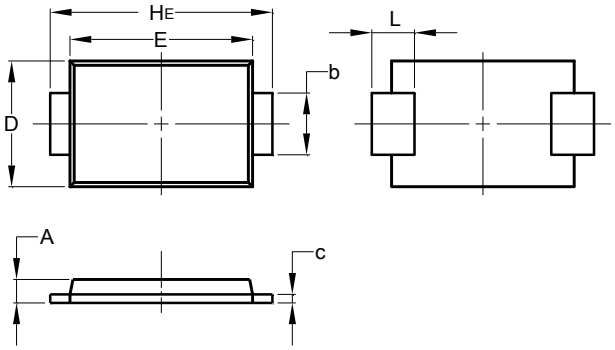
© Diodes Incorporated

NEW PRODUCT

Package Outline Dimensions

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

SMAF

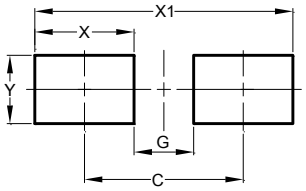


SMAF		
Dim	**Min**	**Max**
A	0.90	1.10
b	1.25	1.65
c	0.10	0.40
D	2.25	2.95
E	3.95	4.60
H_E	4.80	5.60
L	0.50	1.50
All Dimensions in mm		

Suggested Pad Layout

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

SMAF



Dimensions	Value (in mm)
C	4.00
G	1.50
X	2.50
X1	6.50
Y	1.70

© Diodes Incorporated

NEW PRODUCT

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.

This document is written in English but may be translated into multiple languages for reference. Only the English version of this document is the final and determinative format released by Diodes Incorporated.

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 © 2016, Diodes Incorporated

www.diodes.com

Общество с ограниченной ответственностью «МосЧип» ИНН 7719860671 / КПП 771901001
Адрес: 105318, г.Москва, ул.Щербаковская д.3, офис 1107

Данный компонент на территории Российской Федерации

Вы можете приобрести в компании MosChip.

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

http://moschip.ru/get-element

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

Офис по работе с юридическими лицами:

105318, г.Москва, ул.Щербаковская д.3, офис 1107, 1118, ДЦ «Щербаковский»

Телефон: +7 495 668-12-70 (многоканальный)

Факс: +7 495 668-12-70 (доб.304)

E-mail: info@moschip.ru

Skype отдела продаж:
moschip.ru
moschip.ru_4
moschip.ru_6
moschip.ru_9