NEW PRODUCT

## Product Summary

B350AF/B360AF

| $V_{RRM}$ (V) | $I_O$ (A) | $V_{F(MAX)}$ (V) @ +25°C | $I_{R(MAX)}$ (mA) @ +25°C |
|---|---|---|---|
| 50 | 3 | 0.65 | 0.2 |
| 60 | 3 | 0.65 | 0.2 |

## 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

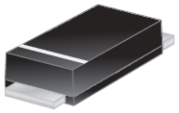
The Schottky rectifier providing low $V_F$ and excellent reverse leakage stability at high temperatures, this device is ideal for use in general rectification applications such as:

- Boost Diode
- Blocking Diode
- Recirculating Diode

## 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 |
|---|---|---|
| B350AF-13 | SMAF | 10,000/Tape & Reel |
| B360AF-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 https://www.diodes.com/design/support/packaging/diodes-packaging/.

## Marking Information


B3XXAF = Product Type Marking Code (ex: B350AF)
= Manufacturers' Code Marking
YWW = Date Code Marking
Y = Last Digit of Year (ex: 7 for 2017)
WW = Week Code (01 to 53)

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 | B350AF | B360AF | Unit |
|---|---|---|---|---|
| Peak Repetitive Reverse Voltage<br>Working Peak Reverse Voltage<br>DC Blocking Voltage | $V_{RRM}$<br>$V_{RWM}$<br>$V_{RM}$ | 50 | 60 | V |
| Average Rectified Output Current | $I_O$ | 3 | | A |
| Non-Repetitive Peak Forward Surge Current 8.3ms<br>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) | $R_{\theta JA}$ | 90 | °C/W |
| Typical Thermal Resistance Junction to Case (Note 5) | $R_{\theta JC}$ | 50 | °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 | | $V_F$ | —<br>— | 0.55<br>0.52 | 0.65<br>— | V | $I_F$ = 3A, $T_J$ = +25°C<br>$I_F$ = 3A, $T_J$ = +125°C |
| Leakage Current (Note 6) | B350AF<br>B360AF | $I_R$ | —<br>—<br>— | 0.02<br>0.03<br>24 | 0.2<br>0.2<br>— | mA | $V_R$ = 50V, $T_J$ = +25°C<br>$V_R$ = 60V, $T_J$ = +25°C<br>$V_R$ = 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.

NEW PRODUCT

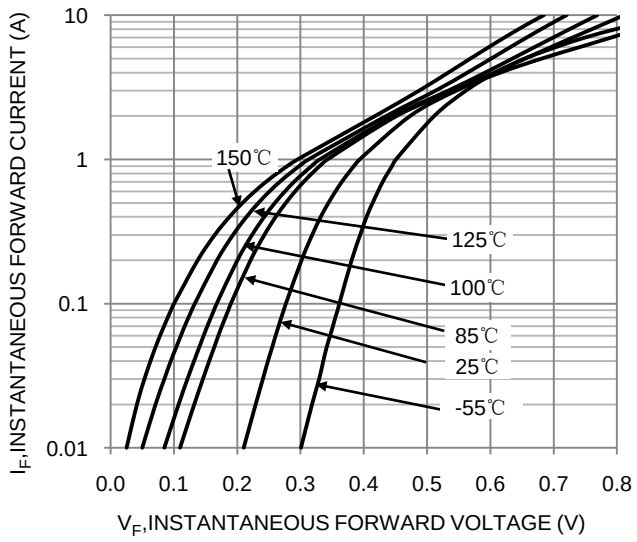



Figure 1. Typical Forward Characteristics

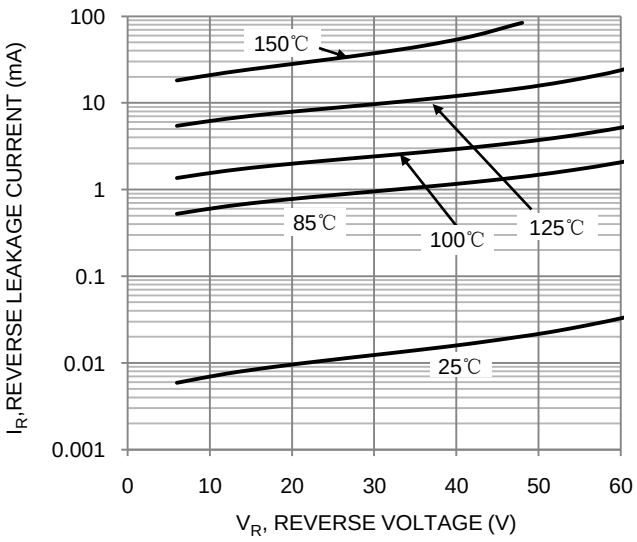



Figure 2. Typical Reverse Characteristics

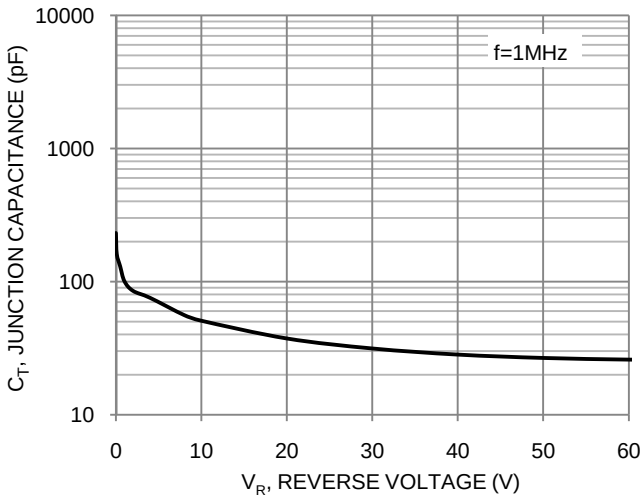



Figure 3. Typical Junction Capacitance

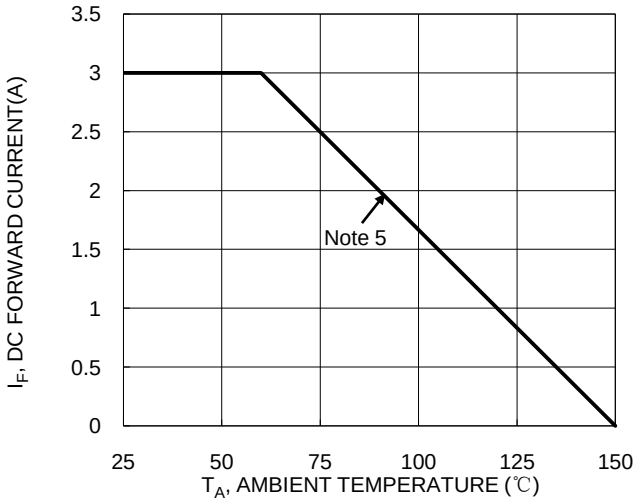


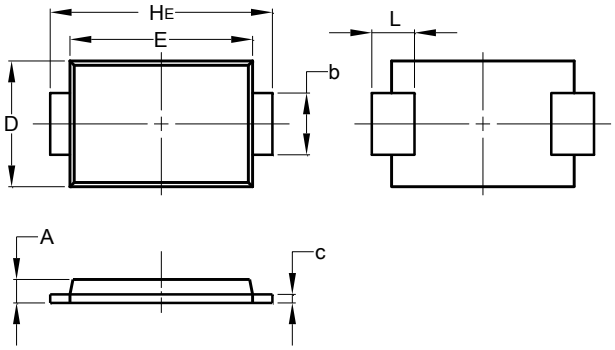

Figure 4. DC Forward Current Derating

NEW PRODUCT

## Package Outline Dimensions

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

**SMAF**

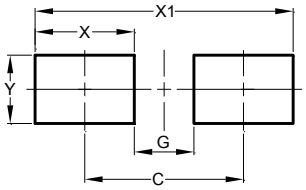



| SMAF | | |
|---|---|---|
| **Dim** | **Min** | **Max** |
| **A** | 0.90 | 1.10 |
| **b** | 1.25 | 1.65 |
| **c** | 0.10 | 0.40 |
| **D** | 2.25 | 2.95 |
| **E** | 3.95 | 4.60 |
| **$H_E$** | 4.80 | 5.60 |
| **L** | 0.50 | 1.50 |
| **All Dimensions in mm** | | |

## 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 |

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.



**www.diodes.com**

# X-ON Electronics

Largest Supplier of Electrical and Electronic Components

***Click to view similar products for*** Schottky Diodes & Rectifiers ***category:***

***Click to view products by*** Diodes Incorporated ***manufacturer:***

Other Similar products are found below :

MA4E2039 D1FH3-5063 MBR0530L-TP MBR10100CT-BP MBR1545CT MMBD301M3T5G RB160M-50TR RB551V-30 BAS16E6433HTMA1 BAT 54-02LRH E6327 NSR05F40QNXT5G JANS1N6640 SB07-03C-TB-H SB1003M3-TL-W SK310-T SK32A-LTP SK34B-TP SS3003CH-TL-E GA01SHT18 CRS10I30A(TE85L,QM MA4E2501L-1290 MBRB30H30CT-1G SB007-03C-TB-E SK32A-TP SK33B-TP SK38B-TP NRVBM120LT1G NTE505 NTSB30U100CT-1G SS15E-TP ACDBA1100LR-HF ACDBA1200-HF ACDBA140-HF ACDBA2100-HF ACDBA3100-HF CDBQC0530L-HF CDBQC0240LR-HF ACDBA260LR-HF ACDBA1100-HF SK310B-TP MA4E2502L-1246 MA4E2502H-1246 NRVBM120ET1G NSR01L30MXT5G SB560 PMAD1108-LF SD103ATW-TP 1N5819T-G PDS1040Q-13 MBR3060FCTe3/TU