

MBR38AFC ~ MBR320AFC Series

Surface Mount Schottky Barrier Rectifier

Voltage

80~200 V

Current

3 A

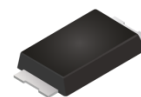
Features

- 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 : Molded plastic, SMAF-C
- Terminals : Solderable per MIL-STD-750, Method 2026
- Approx. Weight : 0.0012 ounces, 0.034 grams

SMAF-C



Maximum Ratings and Thermal Characteristics (T_A = 25°C unless otherwise noted)

PARAMETER	SYMBOL	MBR38AFC	MBR39AFC	MBR310AFC	MBR315AFC	MBR320AFC	UNIT
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	80	90	100	150	200	V
Maximum RMS Voltage	V _{RMS}	56	63	70	105	140	V
Maximum DC Blocking Voltage	V _R	80	90	100	150	200	V
Maximum Average Forward Rectified Current	I _{F(AV)}	3					A
Peak Forward Surge Current : 8.3 ms Single Half Sine-Wave Superimposed On Rated Load	I _{FSM}	80					A
Instantaneous Forward Voltage at 3A	V _F	0.8			0.9		V
Reverse Current ^(Note 4)	I _R	50					uA
Typical Junction Capacitance Measured at 1 MHz And Applied V _R = 4V	C _J	20			10	85	pF
Typical Thermal Resistance	^(Note 1) R _{θJA}	150					°C/W
	^(Note 2) R _{θJL}	20					
	^(Note 3) R _{θJC}	22					
Operating Junction Temperature Range	T _J	-55 to +150					°C
Storage Temperature Range	T _{STG}	-55 to +150					°C

NOTES:

1. Mounted on a FR4 PCB, single-sided copper, standard footprint
2. Mounted on a FR4 PCB, single-sided copper, with 48cm² copper pad area
3. Mounted on a FR4 PCB, single-sided copper, with 100cm² copper pad area
4. Short duration pulse test used to minimize self-heating effect

MBR38AFC ~ MBR320AFC Series

TYPICAL CHARACTERISTIC CURVES

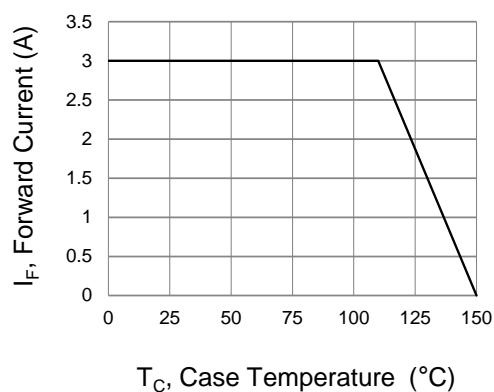


Fig.1 Forward Current Derating Curve

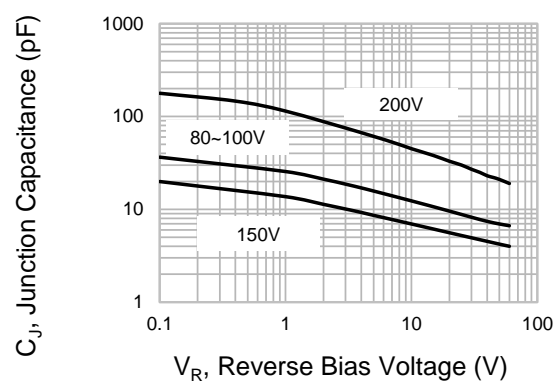


Fig.2 Typical Junction Capacitance

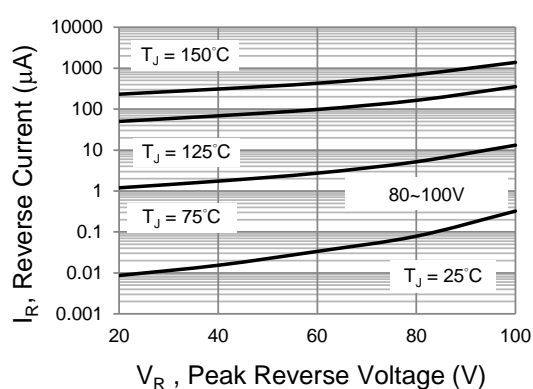


Fig.3 Typical Reverse Characteristics

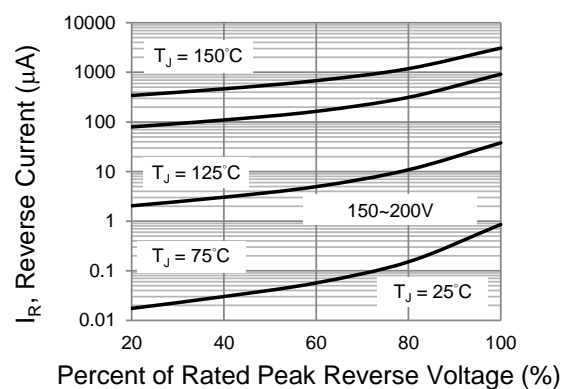


Fig.4 Typical Reverse Characteristics

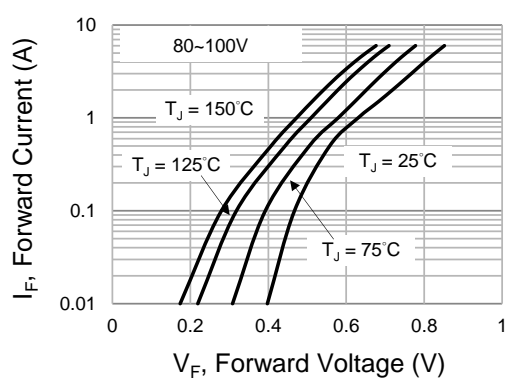


Fig.5 Typical Forward Characteristics

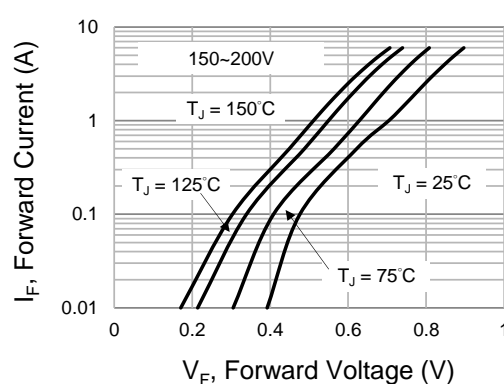


Fig.6 Typical Forward Characteristics

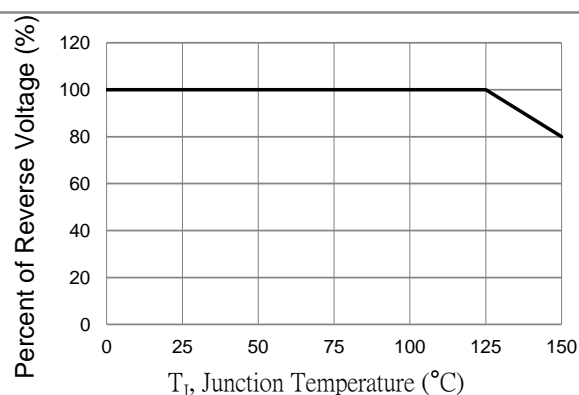


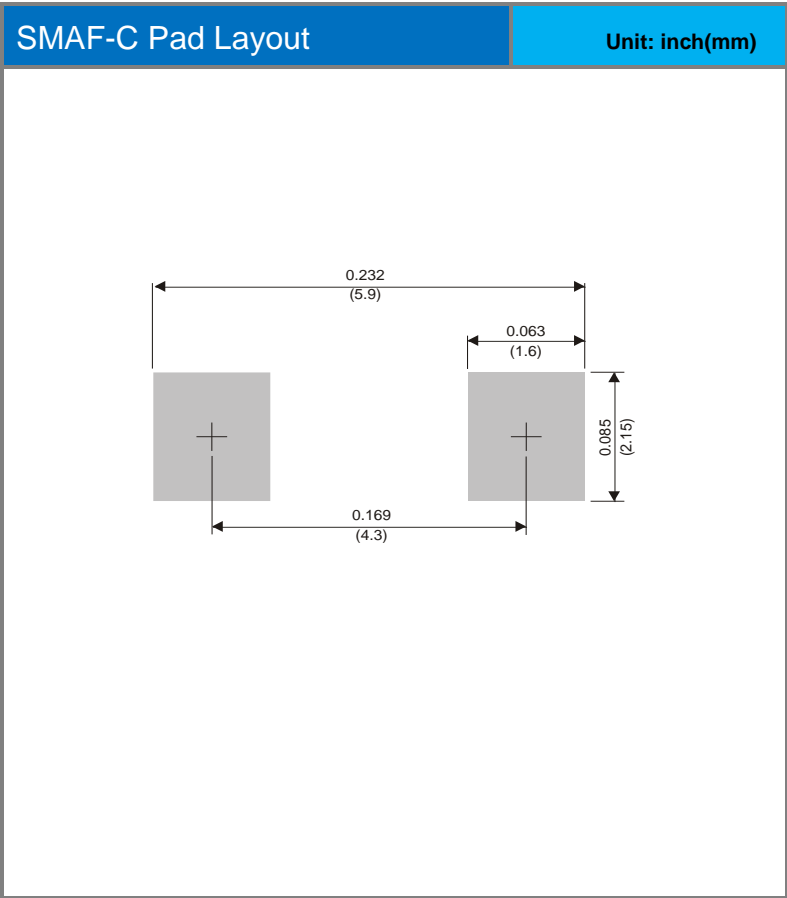
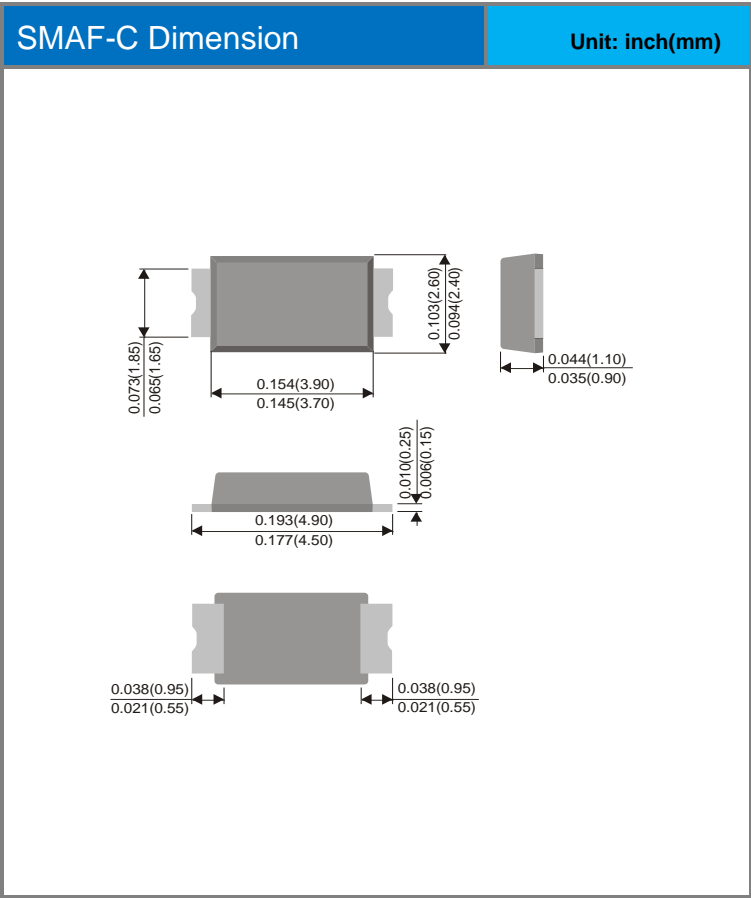
Fig.7 Operating Temperature Derating Curve

MBR38AFC ~ MBR320AFC Series

Product and Packing Information

Part No.	Package Type	Packing Type	Marking
MBR38AFC	SMAF-C	3K pcs / 7" reel	MBR38
MBR39AFC	SMAF-C	3K pcs / 7" reel	MBR39
MBR310AFC	SMAF-C	3K pcs / 7" reel	MBR310
MBR315AFC	SMAF-C	3K pcs / 7" reel	MBR315
MBR320AFC	SMAF-C	3K pcs / 7" reel	MBR320

Packaging Information & Mounting Pad Layout



MBR38AFC ~ MBR320AFC Series

Disclaimer

- Reproducing and modifying information of the document is prohibited without permission from Panjit International Inc..
- Panjit International Inc. reserves the rights to make changes of the content herein the document anytime without notification. Please refer to our website for the latest document.
- Panjit International Inc. disclaims any and all liability arising out of the application or use of any product including damages incidentally and consequentially occurred.
- Panjit International Inc. does not assume any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.
- Applications shown on the herein document are examples of standard use and operation. Customers are responsible in comprehending the suitable use in particular applications. Panjit International Inc. makes no representation or warranty that such applications will be suitable for the specified use without further testing or modification.
- The products shown herein are not designed and authorized for equipments requiring high level of reliability or relating to human life and for any applications concerning life-saving or life-sustaining, such as medical instruments, transportation equipment, aerospace machinery et cetera. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify Panjit International Inc. for any damages resulting from such improper use or sale.
- Since Panjit uses lot number as the tracking base, please provide the lot number for tracking when complaining.

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[Panjit:](#)

[MBR310AFC_R1_00001](#) [MBR315AFC_R1_00001](#) [MBR320AFC_R1_00001](#) [MBR38AFC_R1_00001](#)
[MBR39AFC_R1_00001](#) [MBR310AFC_R1_00601](#)