



MBR310AFC-AU

Surface Mount Schottky Barrier Rectifier

Voltage

100 V

Current

3 A

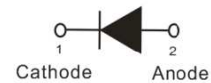
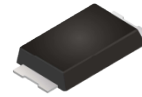
Features

- Low power loss, high efficiency
- High surge current capability
- AEC-Q101 qualified
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

Mechanical Data

- Case : SMAF-C plastic
- 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	LIMIT	UNITS
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	100	V
Maximum RMS Voltage	V _{RMS}	70	V
Maximum DC Blocking Voltage	V _{DC}	100	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
Typical Junction Capacitance Measured at 1 MHz And Applied V _R = 4V	C _J	120	pF
Typical Thermal Resistance	(Note 1) R _{θJA}	150	°C/W
	(Note 2) R _{θJC}	22	
	(Note 3) R _{θJL}	20	
Operating Junction Temperature Range	T _J	-55 to +150	°C
Storage Temperature Range	T _{STG}	-55 to +150	°C



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Electrical Characteristics ($T_A = 25^\circ\text{C}$ unless otherwise noted)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
Forward Voltage	V_F	$I_F = 1\text{ A}, T_J = 25^\circ\text{C}$	-	0.63	-	V
		$I_F = 3\text{ A}, T_J = 25^\circ\text{C}$	-	-	0.8	
		$I_F = 1\text{ A}, T_J = 125^\circ\text{C}$	-	0.47	-	
		$I_F = 3\text{ A}, T_J = 125^\circ\text{C}$	-	0.59	-	
Reverse Current ^(Note 4)	I_R	$V_R = 80\text{ V}, T_J = 25^\circ\text{C}$	-	0.1	-	uA
		$V_R = 100\text{ V}, T_J = 25^\circ\text{C}$	-	-	50	
		$V_R = 100\text{ V}, T_J = 125^\circ\text{C}$	-	0.3	-	mA

NOTES:

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



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TYPICAL CHARACTERISTIC CURVES

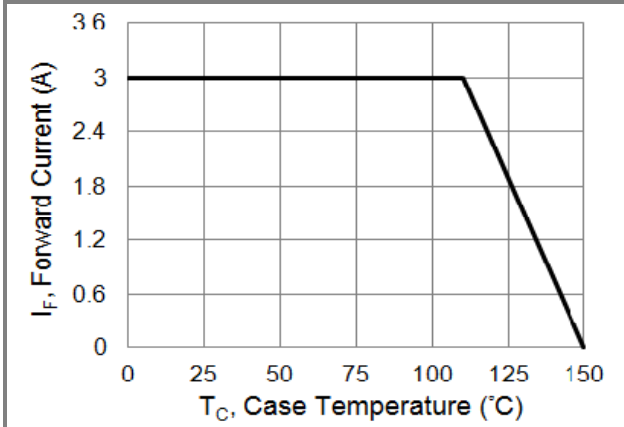


Fig.1 Forward Current Derating Curve

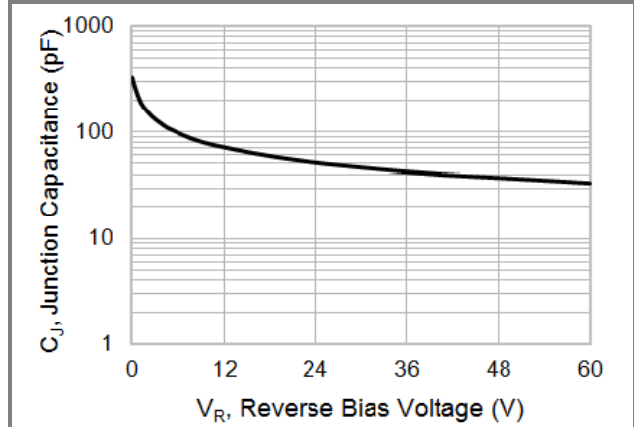


Fig.2 Typical Junction Capacitance

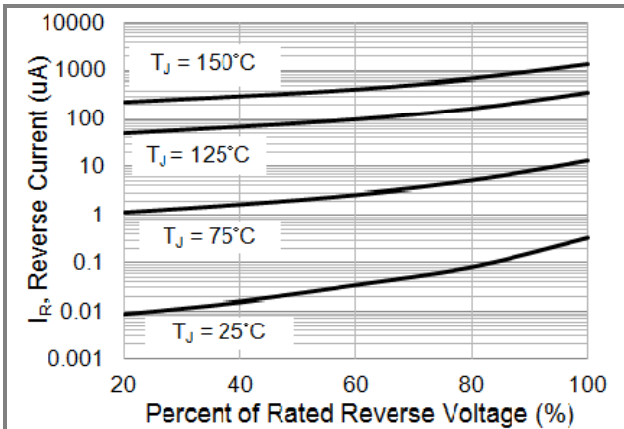


Fig.3 Typical Reverse Characteristics

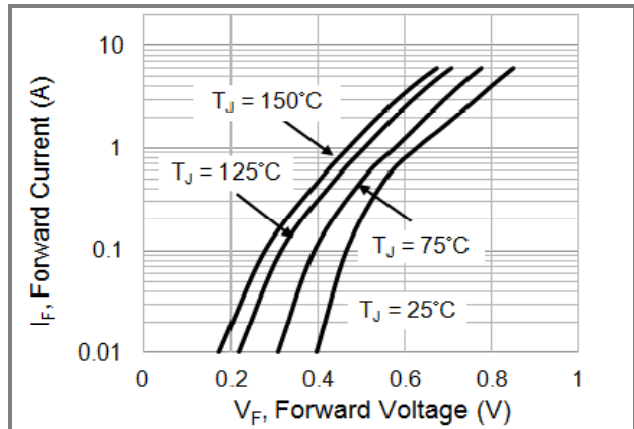


Fig.4 Typical Forward Characteristics

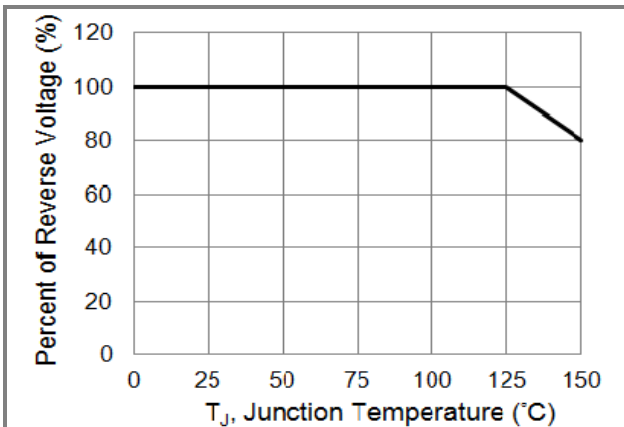


Fig.5 Operating Temperature Derating Curve

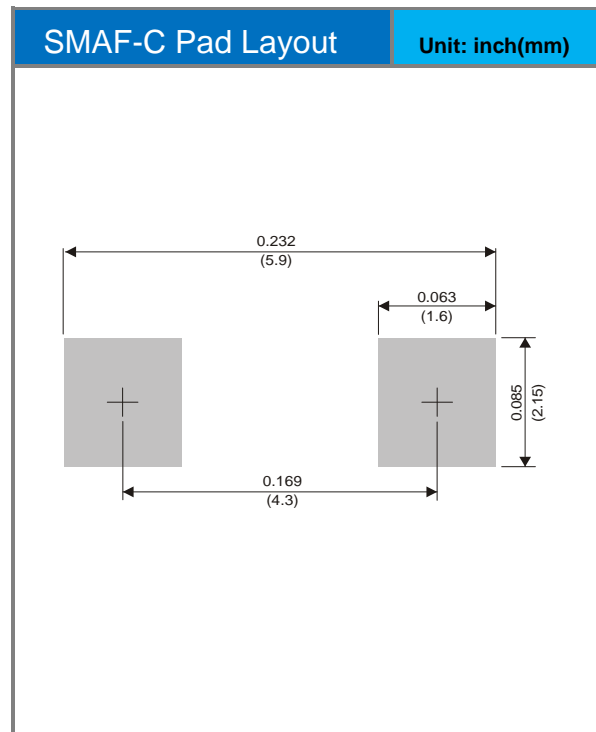
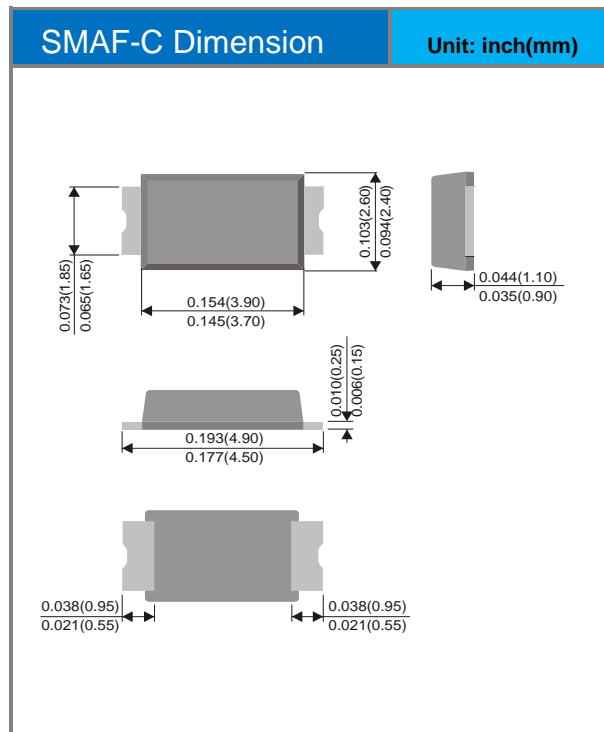


MBR310AFC-AU

Part No. Packing Code Version

Part No. Packing Code	Package Type	Packing Type	Marking	Version
MBR310AFC-AU_R1_000A1	SMAF-C	3K / 7" reel	MBR310	Halogen free

Packaging Information & Mounting Pad Layout





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