



# MBR5H60AFC-AU

## Surface Mount Ultra Low $I_R$ Schottky Barrier Rectifier

**Voltage**

**60 V**

**Current**

**5 A**

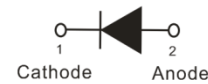
### Features

- Low leakage current
- Ideal for automated placement
- 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 : 0.034 grams

**SMAF-C**



### Maximum Ratings and Thermal Characteristics ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

PARAMETER	SYMBOL	LIMIT	UNITS
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	60	V
Maximum RMS Voltage	$V_{RMS}$	42	V
Maximum DC Blocking Voltage	$V_R$	60	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	5	A
Peak Forward Surge Current : 8.3 ms Single Half Sine-Wave Superimposed On Rated Load	$I_{FSM}$	100	A
Typical Junction Capacitance Measured at 1 MHz And Applied $V_R = 4V$	$C_J$	225	pF
Typical Thermal Resistance (Note 1) (Note 2)	$R_{\theta JA}$	150	$^\circ\text{C/W}$
	$R_{\theta JC}$	20	
Operating Junction Temperature Range	$T_J$	-55 to +175	$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-55 to +175	$^\circ\text{C}$



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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	$V_F$	$I_F = 1\text{ A}, T_J = 25^\circ\text{C}$	-	0.53	-	V
		$I_F = 2\text{ A}, T_J = 25^\circ\text{C}$	-	0.58	-	
		$I_F = 5\text{ A}, T_J = 25^\circ\text{C}$	-	-	0.75	
		$I_F = 1\text{ A}, T_J = 125^\circ\text{C}$	-	0.41	-	
		$I_F = 2\text{ A}, T_J = 125^\circ\text{C}$	-	0.48	-	
		$I_F = 5\text{ A}, T_J = 125^\circ\text{C}$	-	0.59	-	
Reverse Current <sup>(Note 3)</sup>	$I_R$	$V_R = 48\text{ V}, T_J = 25^\circ\text{C}$	-	140	-	nA
		$V_R = 60\text{ V}, T_J = 25^\circ\text{C}$	-	-	5	uA
		$V_R = 60\text{ V}, T_J = 125^\circ\text{C}$	-	400	-	

**NOTES :**

1. Mounted on a FR4 PCB, single-sided copper, standard footprint.
2. Mounted on a FR4 PCB, single-sided copper, with 100 cm<sup>2</sup> copper pad area.
3. Short duration pulse test used to minimize self-heating effect.



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## TYPICAL CHARACTERISTIC CURVES

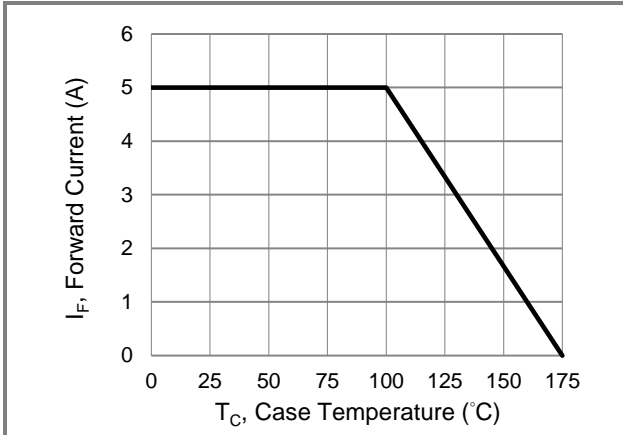


Fig.1 Forward Current Derating Curve

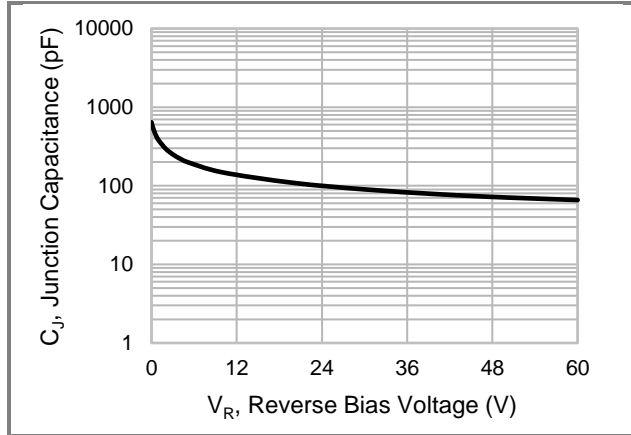


Fig.2 Typical Junction Capacitance

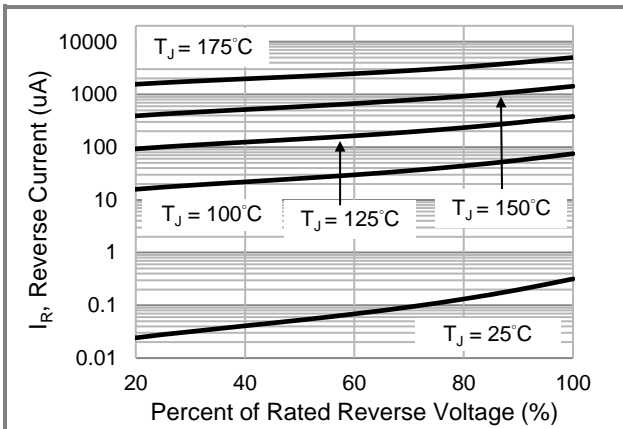


Fig.3 Typical Reverse Characteristics

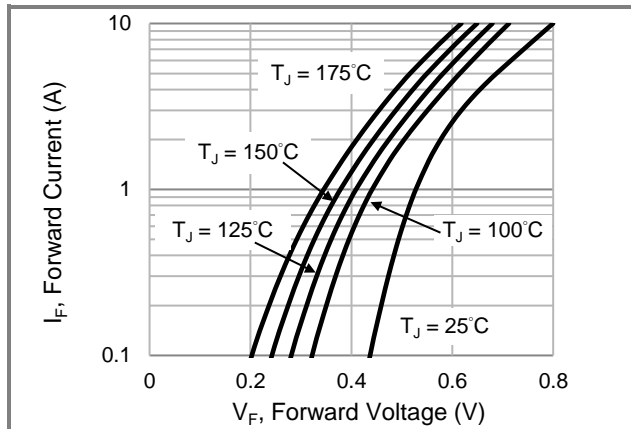


Fig.4 Typical Forward Characteristics

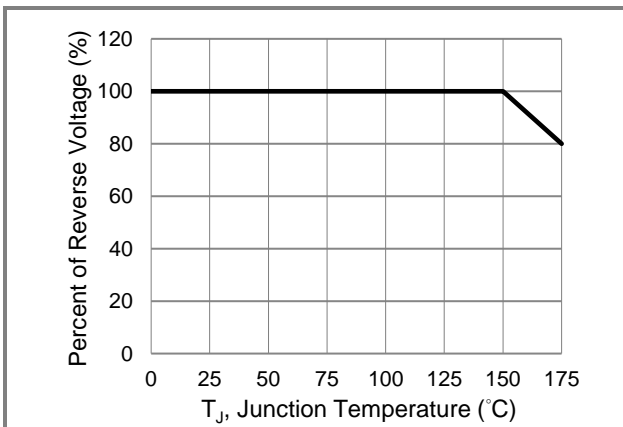


Fig.5 Operating Temperature Derating Curve

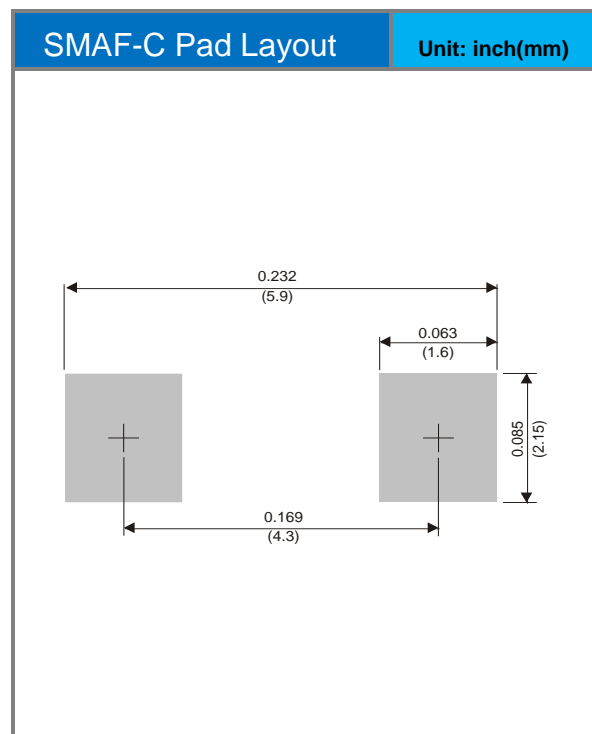
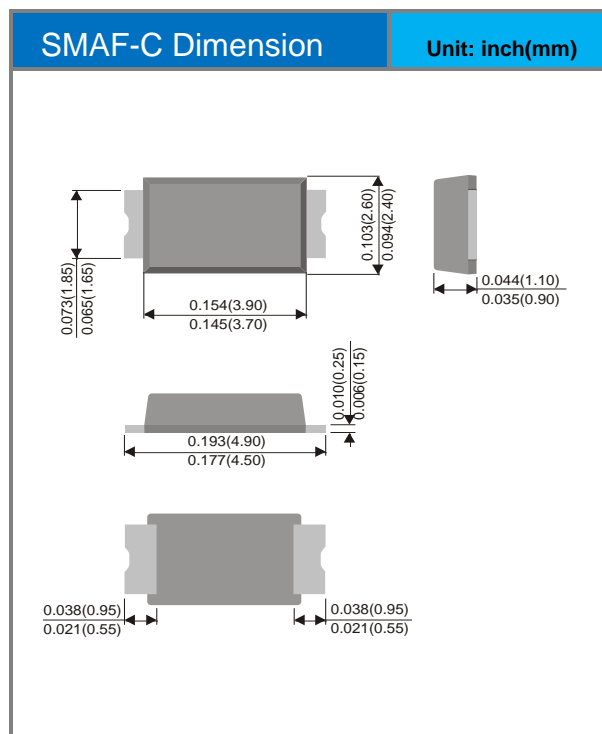


# MBR5H60AFC-AU

Part No. Packing Code Version

Part No. Packing Code	Package Type	Packing Type	Marking	Version
MBR5H60AFC-AU_R1_000A1	SMAF-C	3K pcs / 7" reel	MBR5H60	Halogen free RoHS compliant

## Packaging Information & Mounting Pad Layout





## **MBR5H60AFC-AU**

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