

# MB1H60AL-AU

## Surface Mount Ultra Low I<sub>R</sub> Schottky Barrier Rectifier

**Voltage**

**60 V**

**Current**

**1 A**

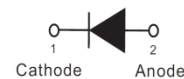
### Features

- 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 : SOD-123FL Package
- Terminals : Solderable per MIL-STD-750, Method 2026
- Approx. Weight : 0.0173 grams

SOD-123FL



### Maximum Ratings and Thermal Characteristics (T<sub>A</sub> = 25 °C unless otherwise noted)

PARAMETER	SYMBOL	LIMIT	UNITS
Maximum Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	60	V
Maximum RMS Voltage	V <sub>RMS</sub>	42	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	60	V
Maximum Average Forward Current	I <sub>F(AV)</sub>	1	A
Peak Forward Surge Current : 8.3 ms Single Half Sine-Wave Superimposed On Rated Load	I <sub>FSM</sub>	30	A
Typical Junction Capacitance Measured at 1 MHz And Applied V <sub>R</sub> = 4 V	C <sub>J</sub>	55	pF
Typical Thermal Resistance (Note 1)	R <sub>θJA</sub>	200	°C/W
(Note 2)	R <sub>θJC</sub>	32	
Operating Junction Temperature Range	T <sub>J</sub>	-55~175	°C
Storage Temperature Range	T <sub>STG</sub>	-55~175	°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	$V_F$	$I_F = 0.5\text{ A}, T_J = 25^\circ\text{C}$	-	0.6	-	V
		$I_F = 1\text{ A}, T_J = 25^\circ\text{C}$	-	-	0.75	
		$I_F = 0.5\text{ A}, T_J = 125^\circ\text{C}$	-	0.49	-	
		$I_F = 1\text{ A}, T_J = 125^\circ\text{C}$	-	0.56	-	
Reverse Current <sup>(Note 3)</sup>	$I_R$	$V_R = 48\text{ V}, T_J = 25^\circ\text{C}$	-	20	-	nA
		$V_R = 60\text{ V}, T_J = 25^\circ\text{C}$	-	-	3	uA
		$V_R = 60\text{ V}, T_J = 125^\circ\text{C}$	-	80	-	

NOTES :

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

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## TYPICAL CHARACTERISTIC CURVES

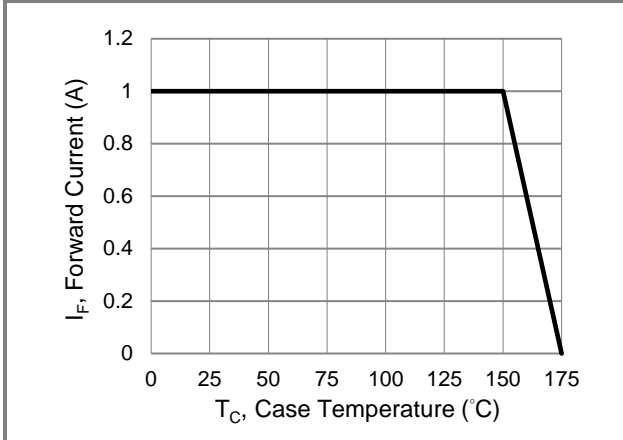


Fig.1 Forward Current Derating Curve

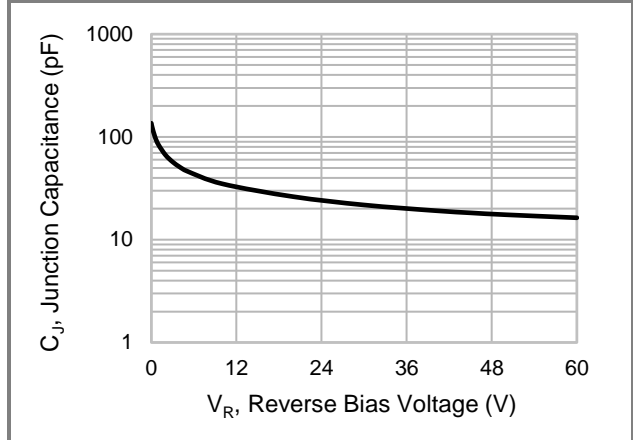


Fig.2 Typical Junction Capacitance

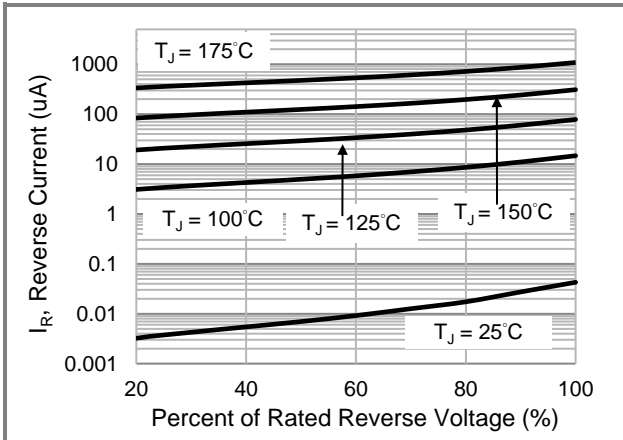


Fig.3 Typical Reverse Characteristics

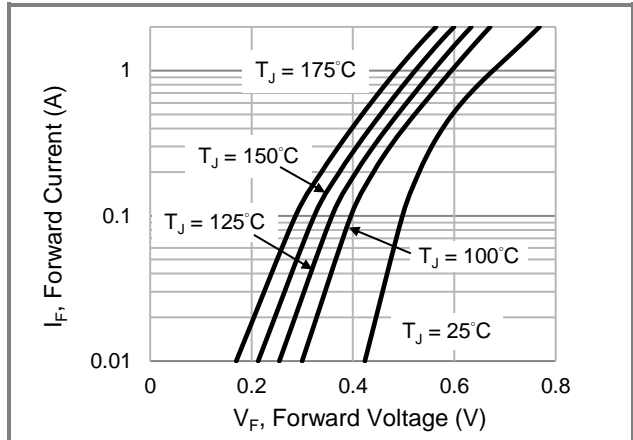


Fig.4 Typical Forward Characteristics

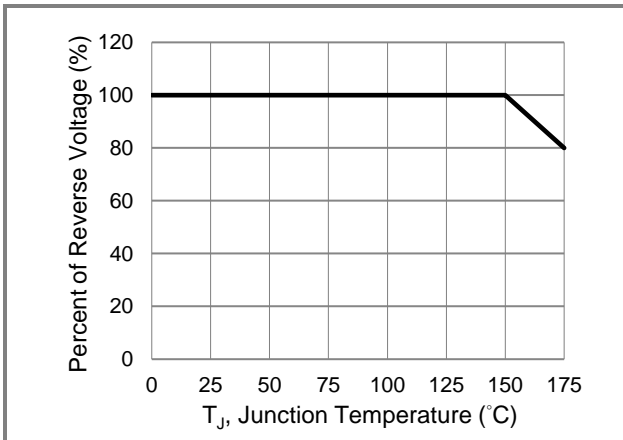


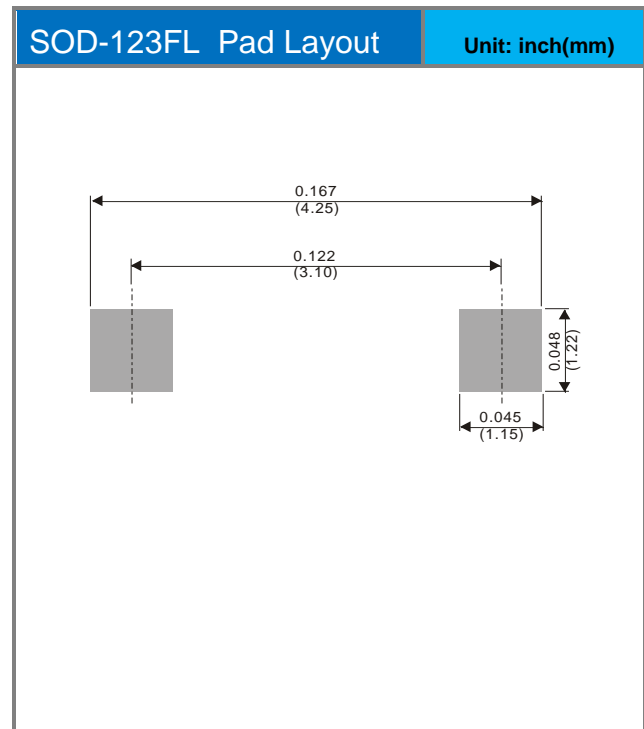
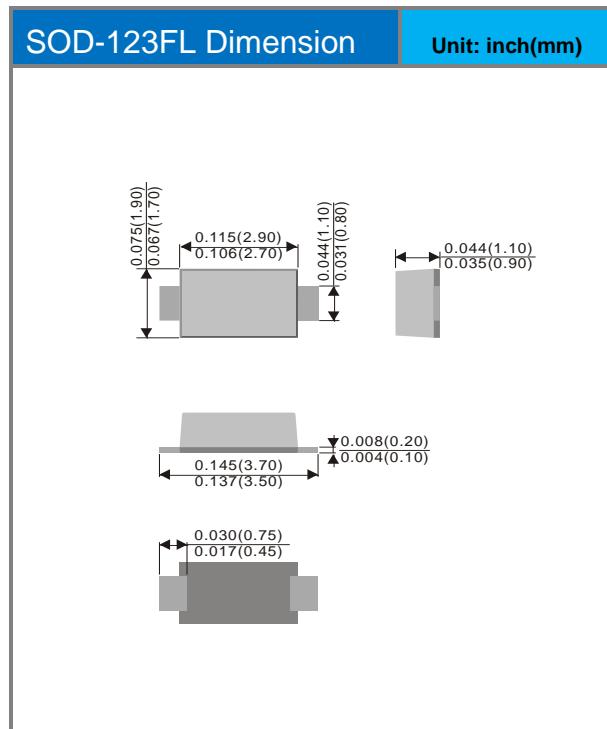
Fig.5 Operating Temperature Derating Curve

# MB1H60AL-AU

## Product and Packing Information

Part No.	Package Type	Packing Type	Marking
MB1H60AL-AU	SOD-123FL	3K / 7" Reel	6AL

## Packaging Information & Mounting Pad Layout



## **MB1H60AL-AU**

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