



# MB24-AU

## SCHOTTKY BARRIER RECTIFIER

**Voltage**

**40 V**

**Current**

**2 A**

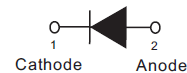
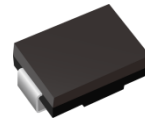
### Features

- Low forward voltage drop
- Deal for automated placement
- 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
- AEC-Q101 qualified

### Mechanical Data

- Case: SMB Package
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.0032 ounces, 0.092 grams

**SMB**



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

PARAMETER	SYMBOL	LIMIT	UNITS
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	40	V
Maximum Rms Voltage	$V_{RMS}$	28	V
Maximum Dc Blocking Voltage	$V_{DC}$	40	V
Maximum Average Forward Current	$I_{F(AV)}$	2	A
Peak Forward Surge Current: 8.3 ms Single Half Sine-Wave Superimposed On Rated Load	$I_{FSM}$	50	A
Typical Junction Capacitance Measured at 1 MHz And Applied $V_R = 4\text{ V}$	$C_J$	100	pF
Typical Thermal Resistance	$R_{\theta JA}^{(1)}$	135	$^\circ\text{C/W}$
	$R_{\theta JC}^{(1)}$	18	
Operating Junction Temperature Range	$T_J$	-55~150	$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-55~150	$^\circ\text{C}$



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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	$V_F$	$I_F = 0.5\text{ A}, T_J = 25^\circ\text{C}$	-	0.45	-	V
		$I_F = 2.0\text{ A}, T_J = 25^\circ\text{C}$	-	-	0.7	
		$I_F = 0.5\text{ A}, T_J = 125^\circ\text{C}$	-	0.33	-	
		$I_F = 2.0\text{ A}, T_J = 125^\circ\text{C}$	-	0.49	-	
Reverse Current	$I_R^{(2)}$	$V_R = 32\text{ V}, T_J = 25^\circ\text{C}$	-	0.34	-	uA
		$V_R = 40\text{ V}, T_J = 25^\circ\text{C}$	-	-	50	
		$V_R = 40\text{ V}, T_J = 125^\circ\text{C}$	-	0.7	-	mA

**NOTES:**

1. Mounted on a FR4 PCB, single-sided copper, mini pad.
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.



# MB24-AU

## TYPICAL CHARACTERISTIC CURVES

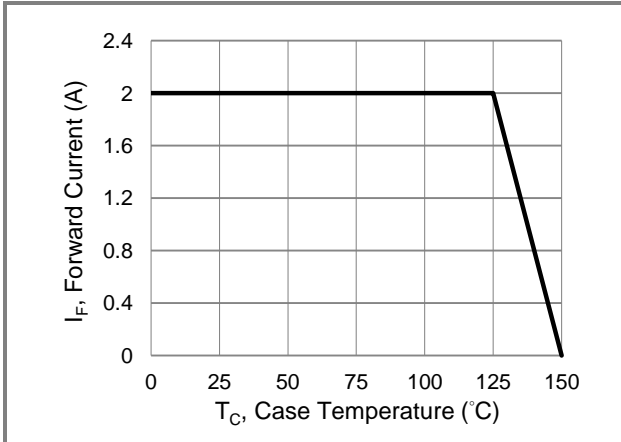


Fig.1 Forward Current Derating Curve

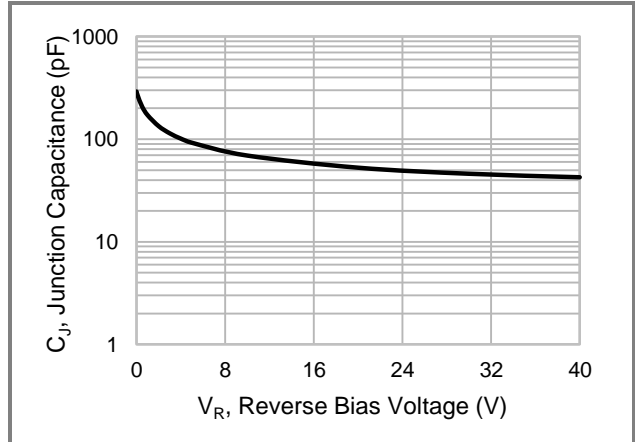


Fig.2 Typical Junction Capacitance

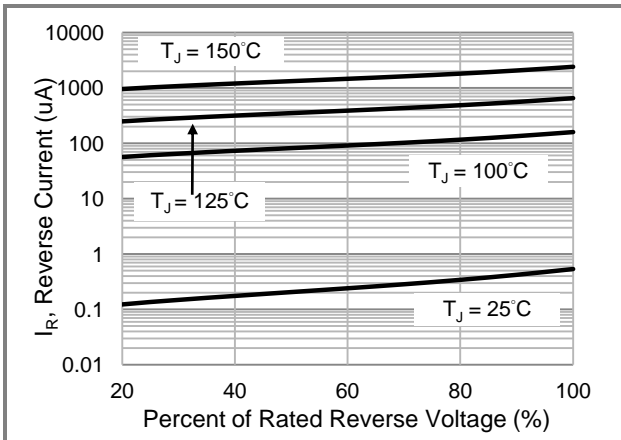


Fig.3 Typical Reverse Characteristics

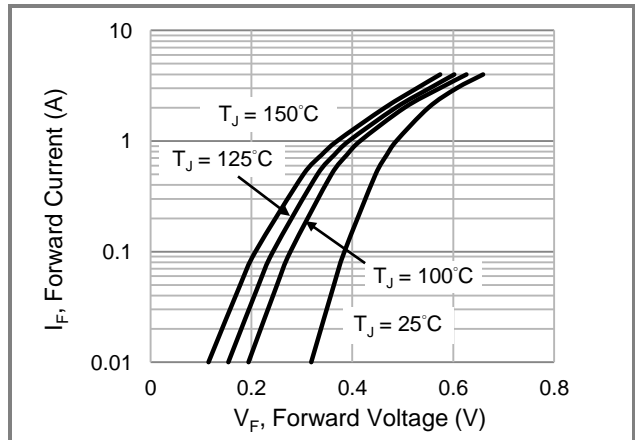


Fig.4 Typical Forward Characteristics

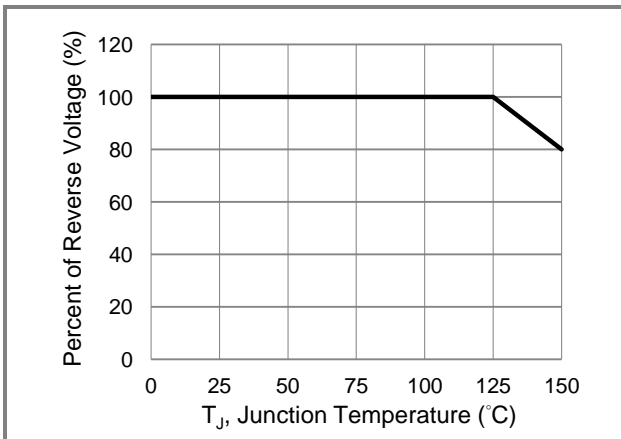


Fig.5 Operating Temperature Derating Curve

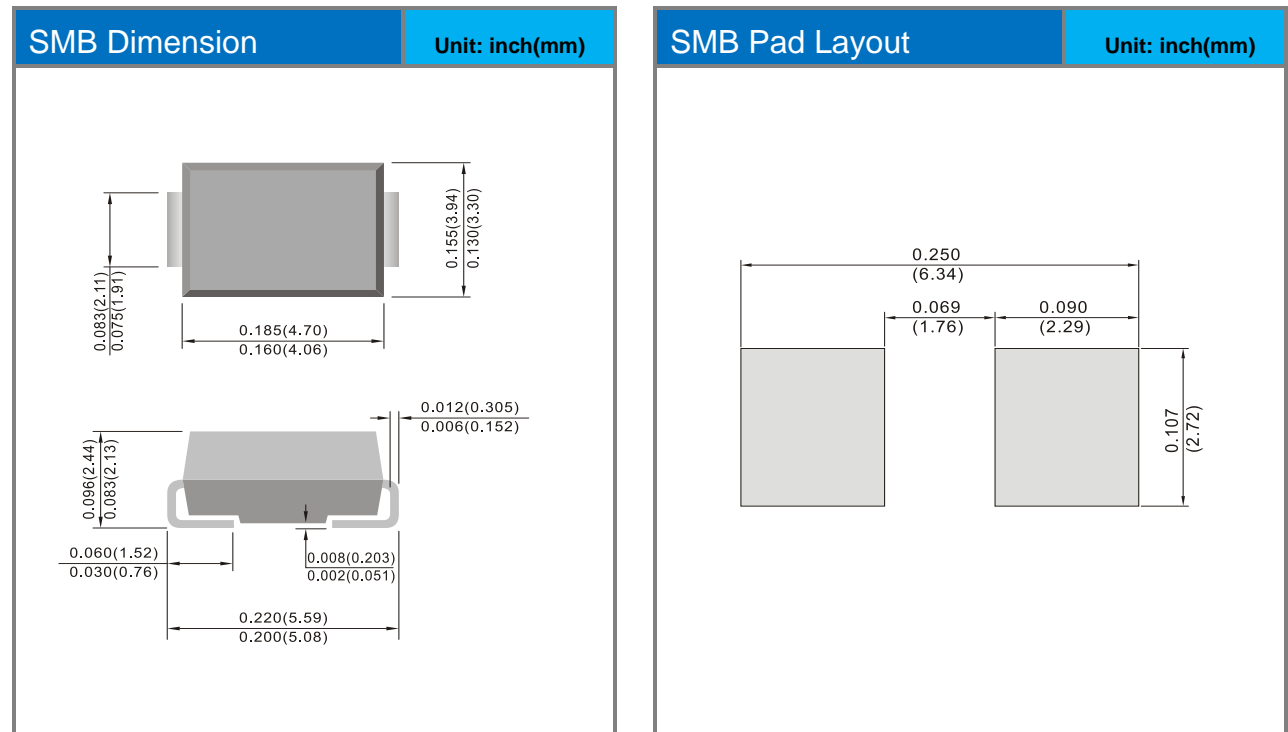


# MB24-AU

## Part No Packing Code Version

Part No Packing Code	Package Type	Packing Type	Marking	Version
MB24-AU_R2_000A1	SMB	3K pcs / 13" reel	MB24	Halogen free

## Packaging Information & Mounting Pad Layout





## MB24-AU

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