

MB24-AU

SCHOTTKY BARRIER RECTIFIER

Voltage

40 V

Current

2 A

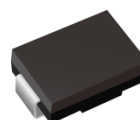
Features

- 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	$^\circ\text{C}$



MB24-AU

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^2 copper pad area
3. Short duration pulse test used to minimize self-heating effect.

MB24-AU

TYPICAL CHARACTERISTIC CURVES

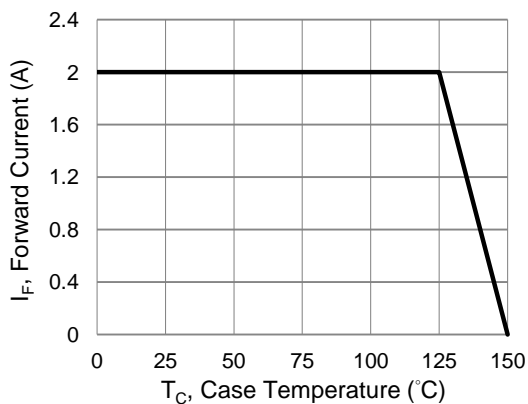


Fig.1 Forward Current Derating Curve

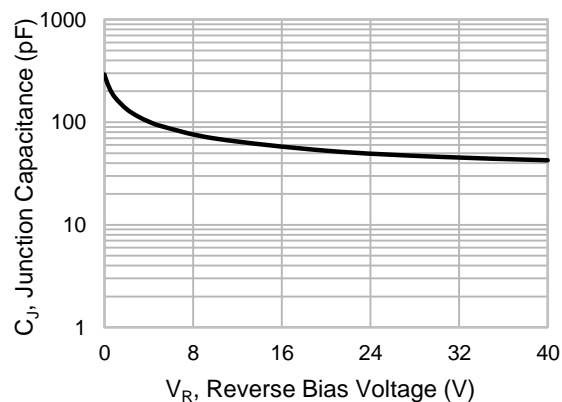


Fig.2 Typical Junction Capacitance

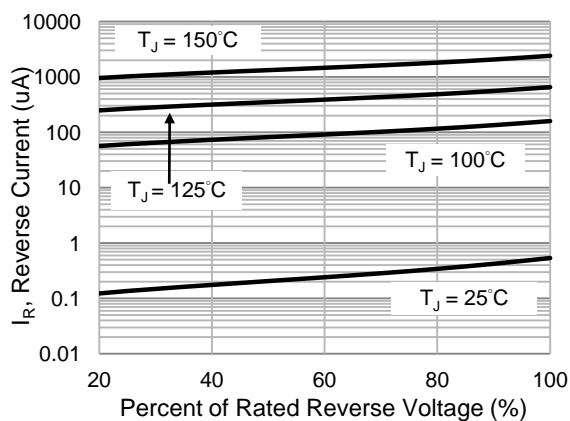


Fig.3 Typical Reverse Characteristics

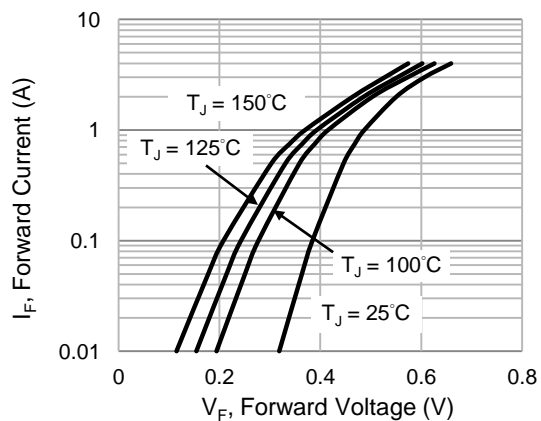


Fig.4 Typical Forward Characteristics

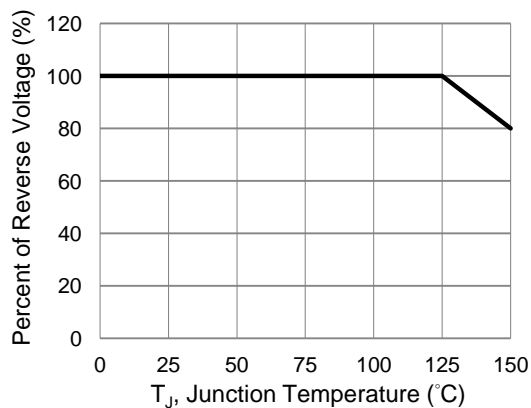


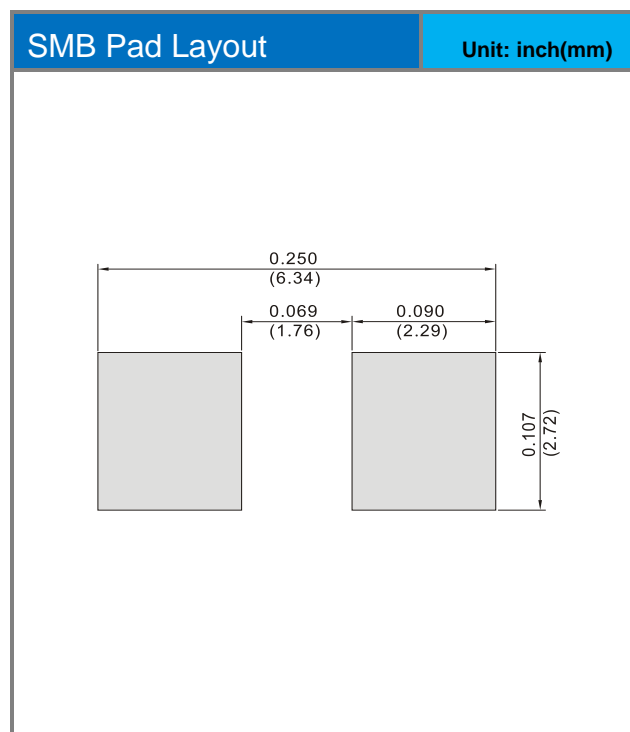
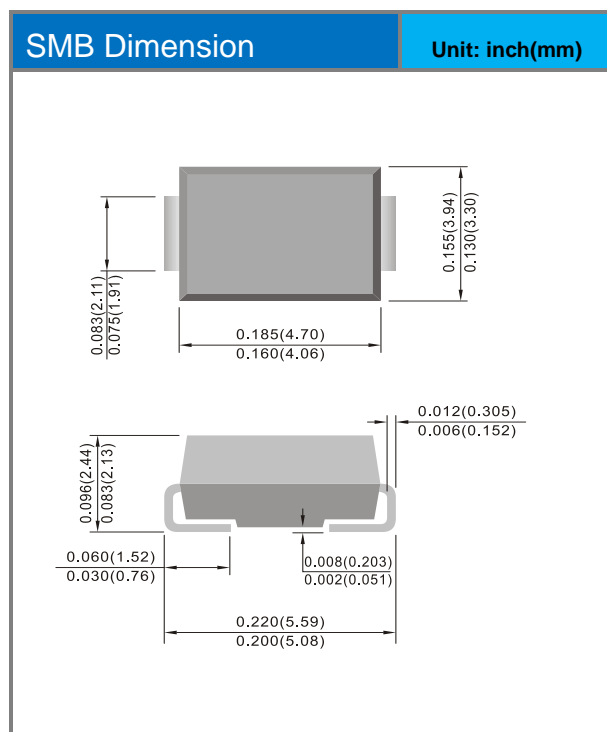
Fig.5 Operating Temperature Derating Curve

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





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