

SK24-AU

MINI SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

Voltage

40 V

Current

2 A

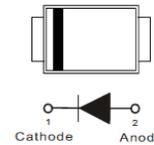
Features

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

Mechanical Data

- Case: SMB molded plastic
- Polarity: Color Band denotes cathode end
- 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 °C unless otherwise noted)

PARAMETER	SYMBOL	LIMIT	UNITS
Maximum Recurrent 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 Rectified Current	I _{F(AV)}	2	A
Peak Forward Surge Current: 8.3 ms single half sine-wave superimposed on rated load per diode	I _{FSM}	50	A
Typical Junction Capacitance Measured at 1 MHz And Applied V _R = 4 V	C _J	100	pF
Typical Thermal Resistance per diode	R _{θJA} ⁽¹⁾	135	°C/W
	R _{θJC} ⁽²⁾	18	
	R _{θJL} ⁽²⁾	12	
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 ($T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
Instantaneous forward voltage	V_F	$I_F = 0.5\text{ A}, T_J = 25\text{ }^\circ\text{C}$	-	0.39	-	V
		$I_F = 2\text{ A}, T_J = 25\text{ }^\circ\text{C}$	-	-	0.5	
		$I_F = 0.5\text{ A}, T_J = 125\text{ }^\circ\text{C}$	-	0.26	-	
		$I_F = 2\text{ A}, T_J = 125\text{ }^\circ\text{C}$	-	0.4	-	
Reverse current	$I_R^{(3)}$	$V_R = 32\text{ V}, T_J = 25\text{ }^\circ\text{C}$	-	12	-	uA
		$V_R = 40\text{ V}, T_J = 25\text{ }^\circ\text{C}$	-	-	90	
		$V_R = 40\text{ V}, T_J = 100\text{ }^\circ\text{C}$	-	-	20	mA

NOTES:

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

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TYPICAL CHARACTERISTIC CURVES

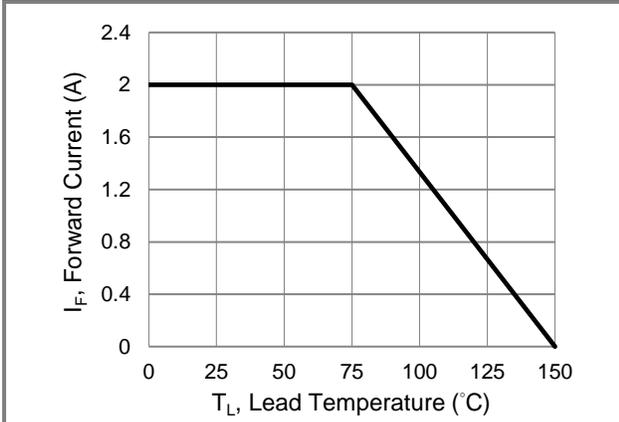


Fig.1 Forward Current Derating Curve

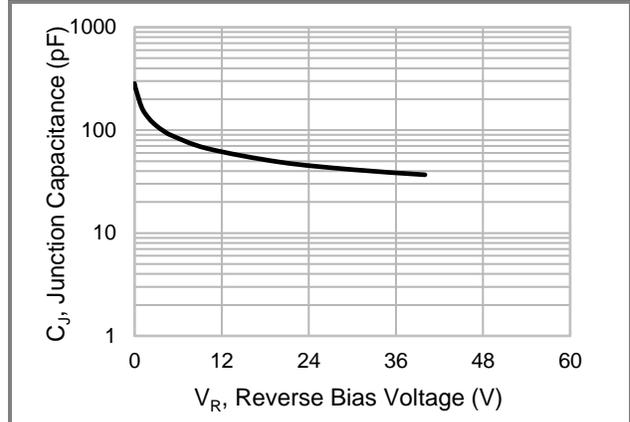


Fig.2 Typical Junction Capacitance

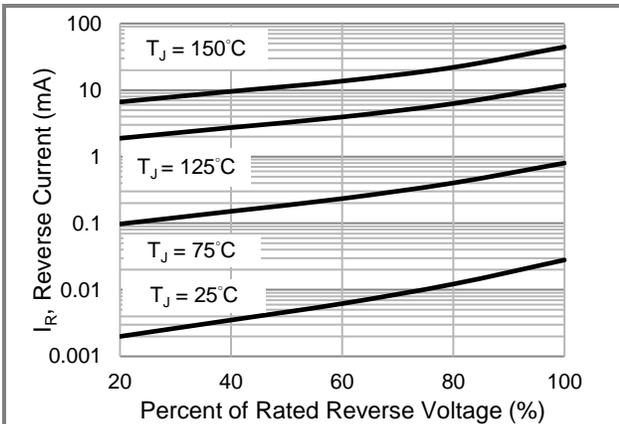


Fig.3 Typical Reverse Characteristics

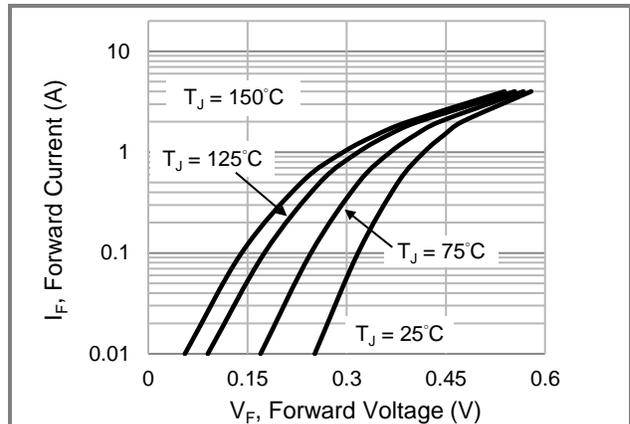


Fig.4 Typical Forward Characteristics

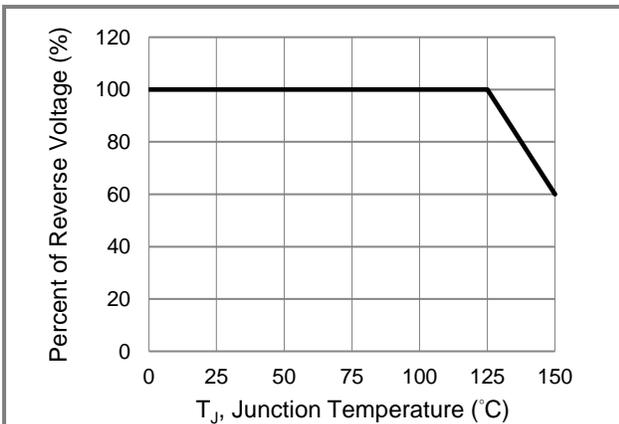


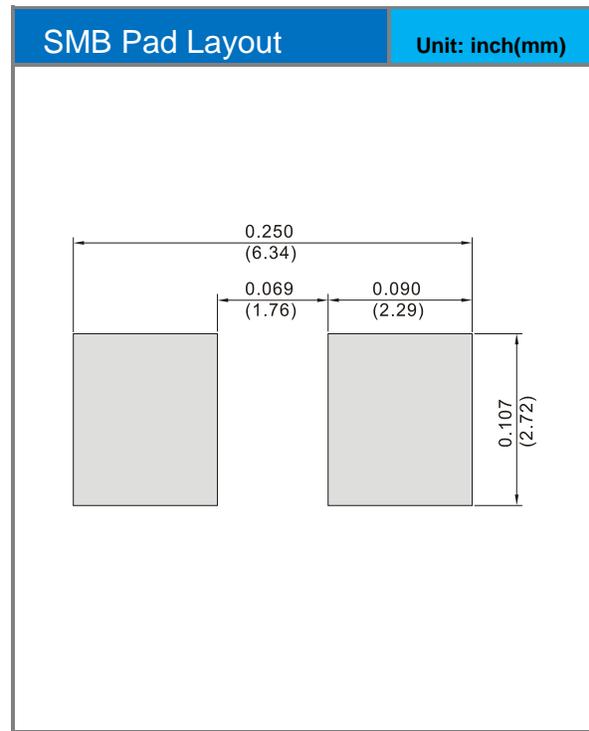
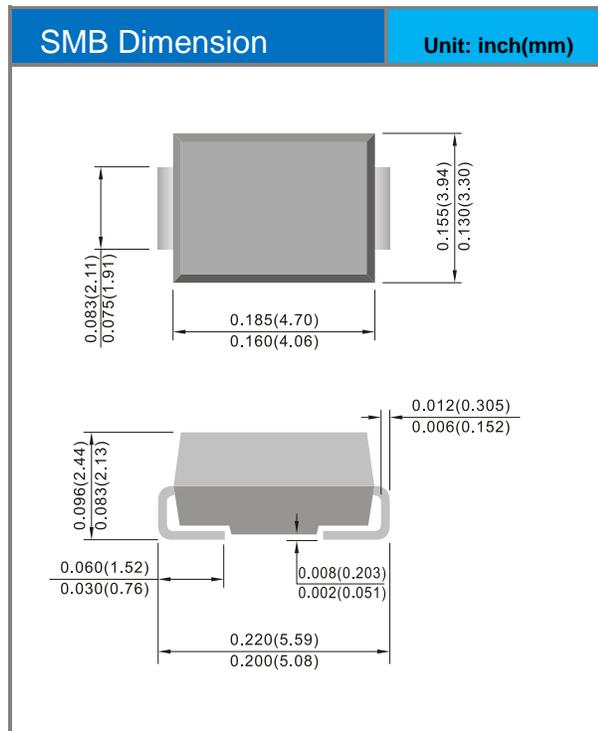
Fig.5 Operating Temperature Derating Curve

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Product and Packing Information

Part No.	Package Type	Packing Type	Marking
SK24-AU	SMB	800 pcs / 7" reel	SK24

Packaging Information & Mounting Pad Layout



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