

SK23-AU

MINI SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

Voltage

30 V

Current

2 A

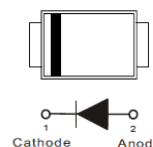
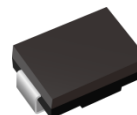
Features

- 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 ($T_A = 25^\circ\text{C}$ unless otherwise noted)

PARAMETER	SYMBOL	LIMIT	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	30	V
Maximum RMS Voltage	V_{RMS}	21	V
Maximum DC Blocking Voltage	V_{DC}	30	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 $V_R = 4\text{ V}$	C_J	100	pF
Typical Thermal Resistance per diode	$R_{\theta JA}^{(1)}$	135	$^\circ\text{C/W}$
	$R_{\theta JC}^{(2)}$	18	
	$R_{\theta JL}^{(2)}$	12	
Operating Junction Temperature Range	T_J	-55 to +150	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 to +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
Instantaneous forward voltage	V_F	$I_F = 0.5\text{ A}, T_J = 25^\circ\text{C}$	-	0.39	-	V
		$I_F = 2\text{ A}, T_J = 25^\circ\text{C}$	-	-	0.5	
		$I_F = 0.5\text{ A}, T_J = 125^\circ\text{C}$	-	0.26	-	
		$I_F = 2\text{ A}, T_J = 125^\circ\text{C}$	-	0.4	-	
Reverse current	$I_R^{(3)}$	$V_R = 30\text{ V}, T_J = 25^\circ\text{C}$	-	-	90	μA
		$V_R = 30\text{ V}, T_J = 100^\circ\text{C}$	-	-	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 cm^2 copper pad area
3. Short duration pulse test used to minimize self-heating effect

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TYPICAL CHARACTERISTIC CURVES

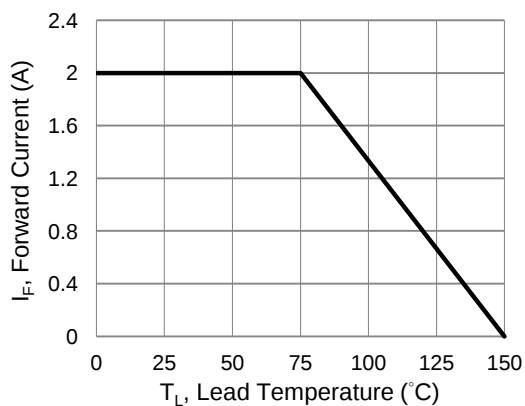


Fig.1 Forward Current Derating Curve

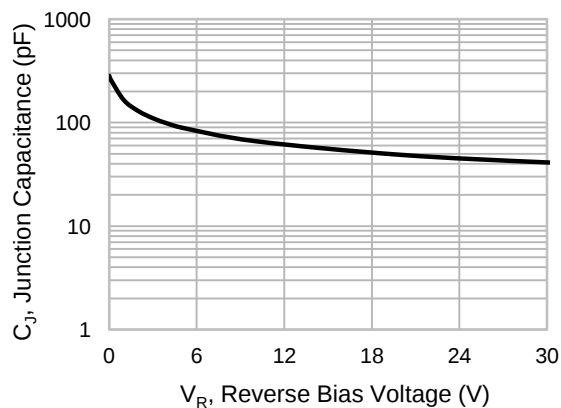


Fig.2 Typical Junction Capacitance

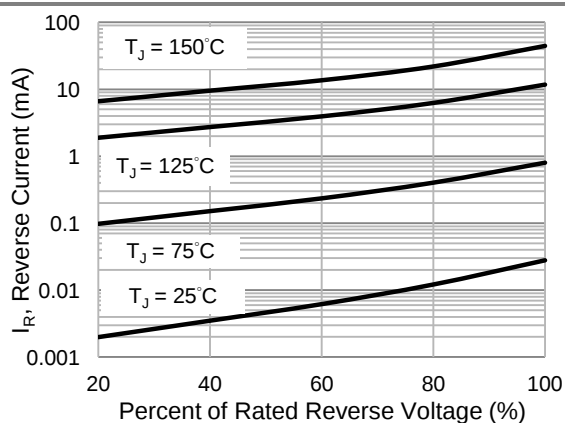


Fig.3 Typical Reverse Characteristics

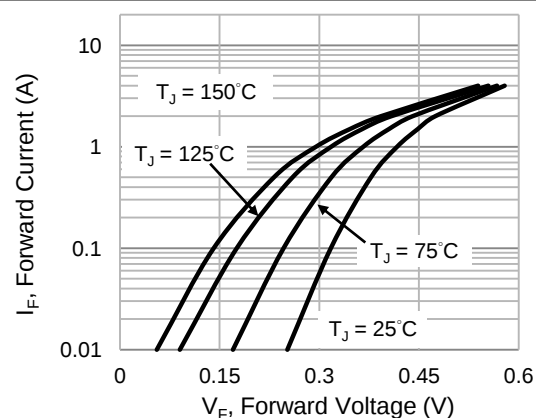


Fig.4 Typical Forward Characteristics

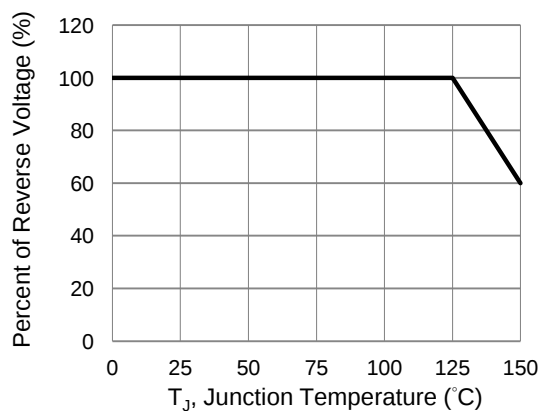


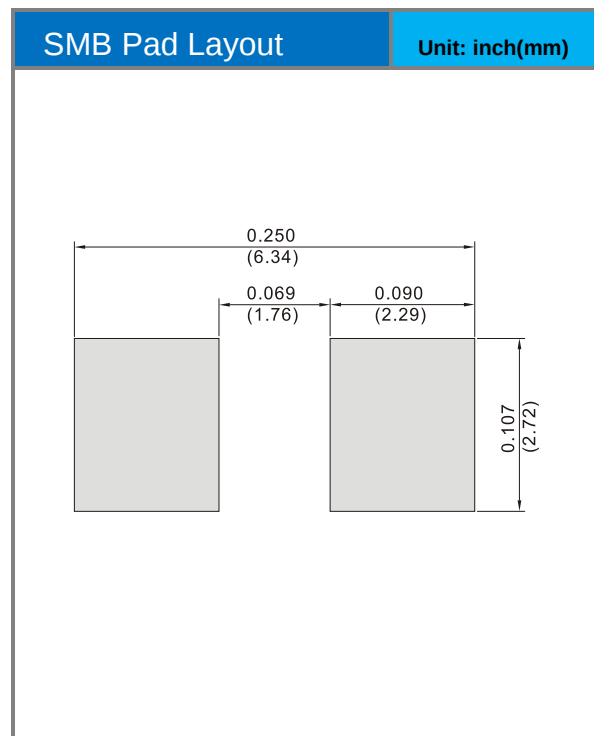
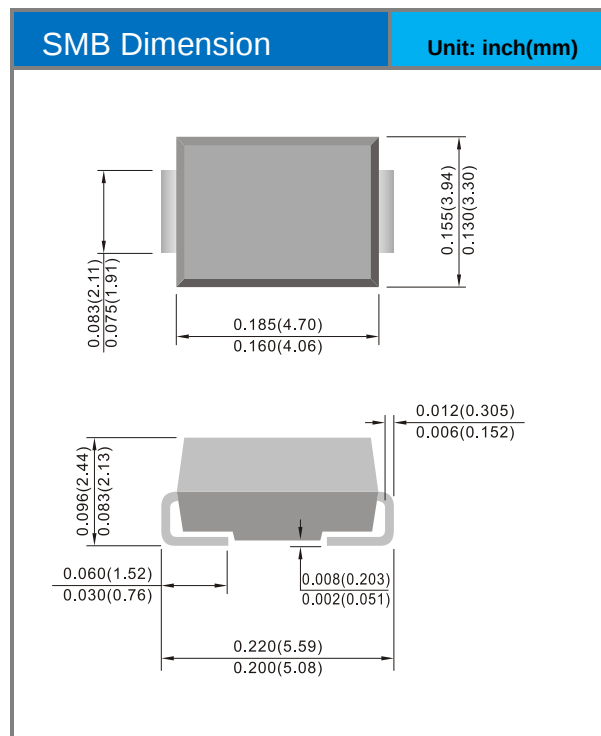
Fig.5 Operating Temperature Derating Curve

SK23-AU

Part No Packing Code Version

Part No Packing Code	Package Type	Packing Type	Marking	Version
SK23-AU_R1_000A1	SMB	800 pcs / 7" reel	SK23	Halogen free

Packaging Information & Mounting Pad Layout





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