

SK54-AU

SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

Voltage

40 V

Current

5 A

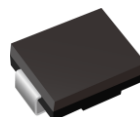
Features

- 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: Molded plastic, SMC
- Polarity: Color Band denotes cathode end
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.0082 ounces, 0.2325 grams

SMC



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}	40	V
Maximum RMS Voltage	V_{RMS}	28	V
Maximum DC Blocking Voltage	V_{DC}	40	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	5	A
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load per diode	I_{FSM}	100	A
Typical Junction Capacitance Measured at 1 MHz And Applied $V_R = 4V$	C_J	240	pF
Typical Thermal Resistance per diode	$R_{\theta JA}^{(1)}$	55	$^{\circ}\text{C/W}$
	$R_{\theta JC}^{(2)}$	15	
	$R_{\theta JL}^{(1)}$	17	
Operating Junction Temperature Range	T_J	-55~150	$^{\circ}\text{C}$
Storage Temperature Range	T_{STG}	-55~150	$^{\circ}\text{C}$



SK54-AU

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

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
Instantaneous forward voltage	V_F	$I_F = 1\text{ A}, T_J = 25^\circ\text{C}$	-	0.37	-	V
		$I_F = 2\text{ A}, T_J = 25^\circ\text{C}$	-	0.41	-	
		$I_F = 5\text{ A}, T_J = 25^\circ\text{C}$	-	-	0.55	
		$I_F = 1\text{ A}, T_J = 125^\circ\text{C}$	-	0.25	-	
		$I_F = 2\text{ A}, T_J = 125^\circ\text{C}$	-	0.31	-	
		$I_F = 5\text{ A}, T_J = 125^\circ\text{C}$	-	0.43	-	
Reverse current	$I_R^{(3)}$	$V_R = 32\text{ V}, T_J = 25^\circ\text{C}$	-	15	-	uA
		$V_R = 40\text{ V}, T_J = 25^\circ\text{C}$	-	-	200	
		$V_R = 40\text{ V}, T_J = 100^\circ\text{C}$	-	-	20	mA

NOTES:

1. Mounted on a PCB, single-sided copper, with 14 mm^2 (0.013mm thick) copper pad area
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



SK54-AU

TYPICAL CHARACTERISTIC CURVES

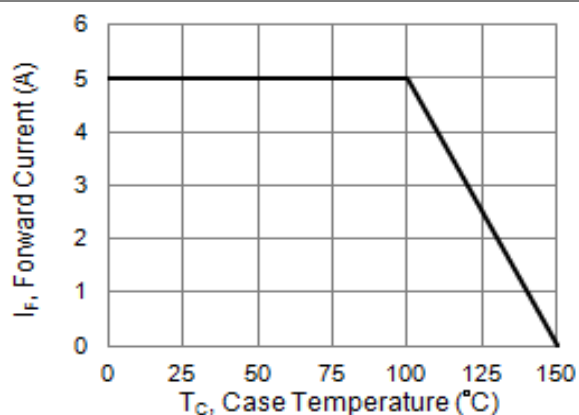


Fig.1 Forward Current Derating Curve

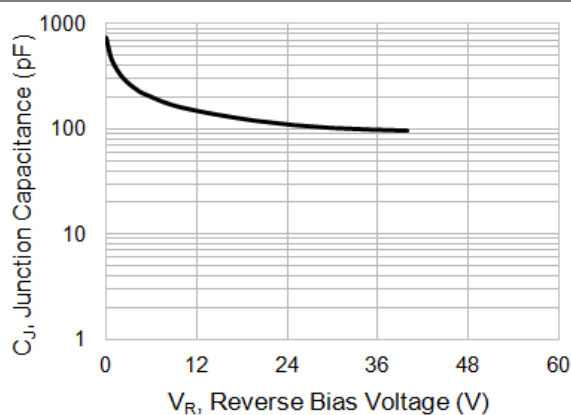


Fig.2 Typical Junction Capacitance

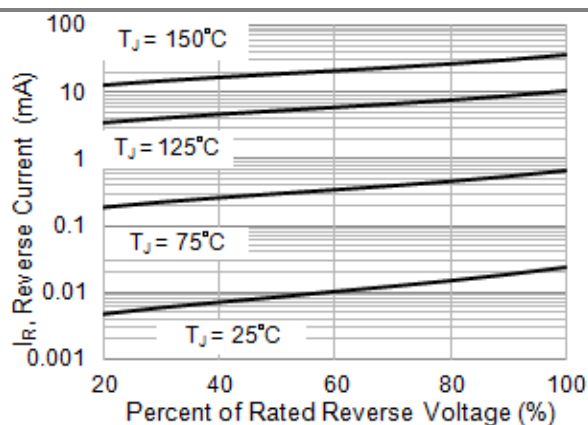


Fig.3 Typical Reverse Characteristics

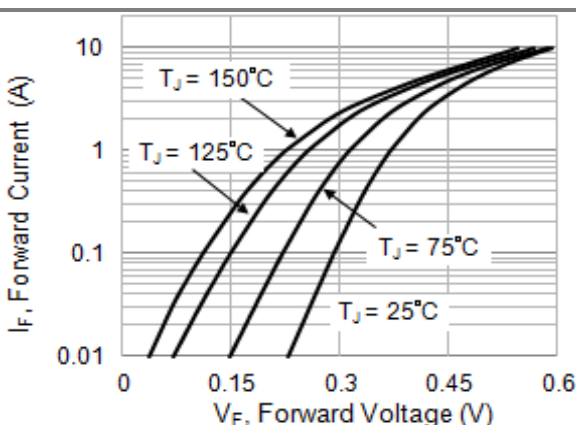


Fig.4 Typical Forward Characteristics

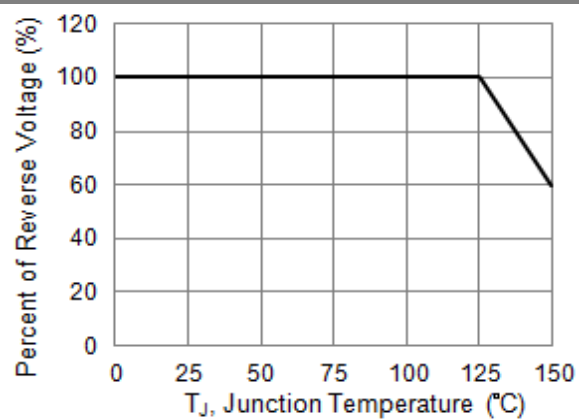


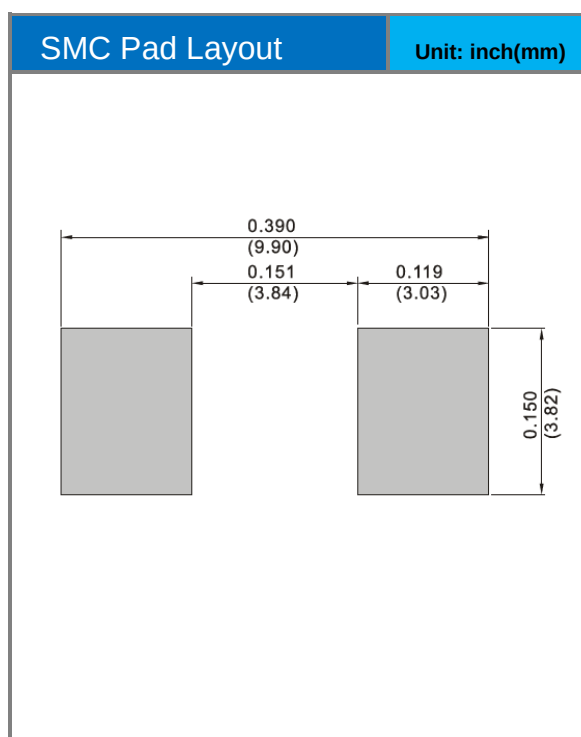
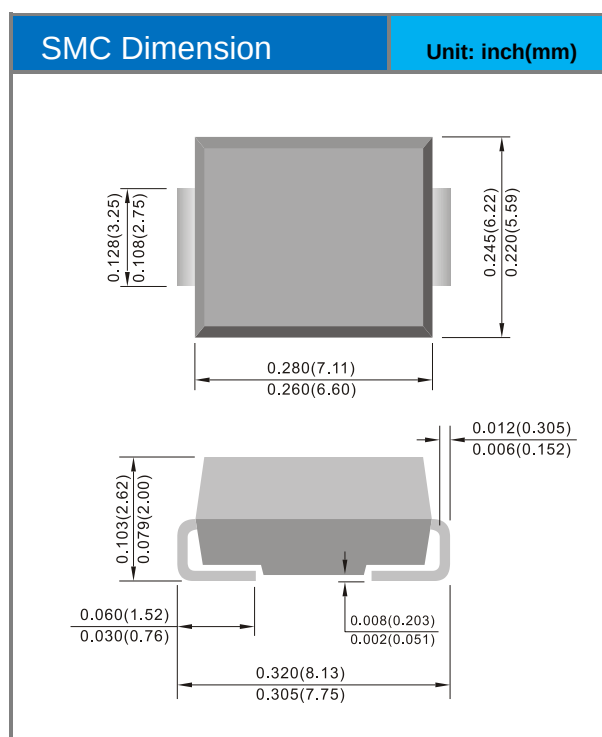
Fig.5 Operating Temperature Derating Curve

SK54-AU

Part No Packing Code Version

Part No Packing Code	Package Type	Packing Type	Marking	Version
SK54-AU_R1_000A1	SMC	800 pcs / 7" reel	SK54	Halogen free

Packaging Information & Mounting Pad Layout





SK54-AU

Disclaimer

- Reproducing and modifying information of the document is prohibited without permission from Panjit International Inc..
- Panjit International Inc. reserves the rights to make changes of the content herein the document anytime without notification. Please refer to our website for the latest document.
- Panjit International Inc. disclaims any and all liability arising out of the application or use of any product including damages incidentally and consequentially occurred.
- Panjit International Inc. does not assume any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.
- Applications shown on the herein document are examples of standard use and operation. Customers are responsible in comprehending the suitable use in particular applications. Panjit International Inc. makes no representation or warranty that such applications will be suitable for the specified use without further testing or modification.
- The products shown herein are not designed and authorized for equipments relating to human life and for any applications concerning life-saving or life-sustaining, such as medical instruments, aerospace machinery et cetera. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify Panjit International Inc. for any damages resulting from such improper use or sale.
- Since Panjit uses lot number as the tracking base, please provide the lot number for tracking when complaining.