

## SRM54AV-AU

### MINI SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

Voltage

45 V

Current

5 A

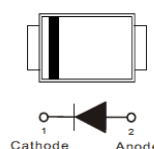
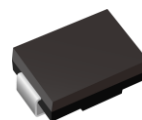
#### Features

- 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: JEDEC DO-214AA 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	$V_{RRM}$	45	V
Maximum RMS Voltage	$V_{RMS}$	32	V
Maximum DC Blocking Voltage	$V_{DC}$	45	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	$I_{FSM}$	120	A
Typical Junction Capacitance Measured at 1 MHz And Applied $V_R = 4V$	$C_J$	350	pF
Typical Thermal Resistance per diode	$R_{\theta JA}^{(1)}$	135	$^{\circ}\text{C/W}$
	$R_{\theta JC}^{(2)}$	18	
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	$V_F$	$I_F = 1\text{ A}, T_J = 25^\circ\text{C}$	-	0.32	-	V
		$I_F = 2\text{ A}, T_J = 25^\circ\text{C}$	-	0.35	-	
		$I_F = 5\text{ A}, T_J = 25^\circ\text{C}$	-	-	0.49	
		$I_F = 1\text{ A}, T_J = 125^\circ\text{C}$	-	0.23	-	
		$I_F = 2\text{ A}, T_J = 125^\circ\text{C}$	-	0.29	-	
		$I_F = 5\text{ A}, T_J = 125^\circ\text{C}$	-	0.41	-	
Reverse current	$I_R^{(3)}$	$V_R = 36\text{ V}, T_J = 25^\circ\text{C}$	-	25	-	uA
		$V_R = 45\text{ V}, T_J = 25^\circ\text{C}$	-	-	210	
		$V_R = 45\text{ V}, T_J = 125^\circ\text{C}$	-	10	-	mA

#### NOTES:

1. Mounted on a FR4 PCB, single-sided copper, with mini pad
2. Mounted on a FR4 PCB, single-sided copper, with  $100\text{ cm}^2$  copper pad area
3. Short duration pulse test used to minimize self-heating effect

## SRM54AV-AU

### TYPICAL CHARACTERISTIC CURVES

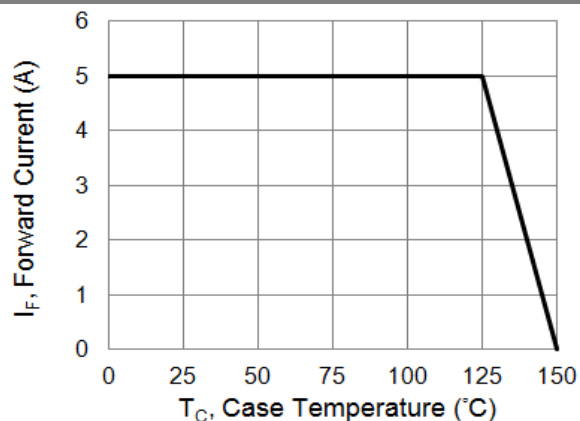


Fig.1 Forward Current Derating Curve

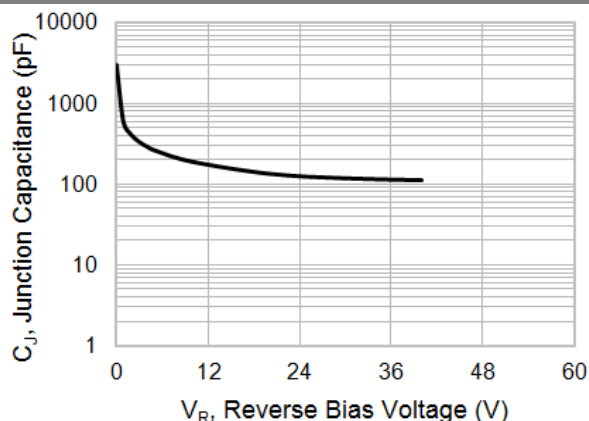


Fig.2 Typical Junction Capacitance

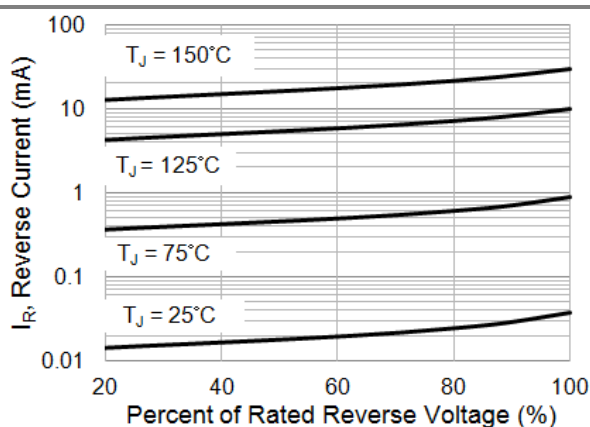


Fig.3 Typical Reverse Characteristics

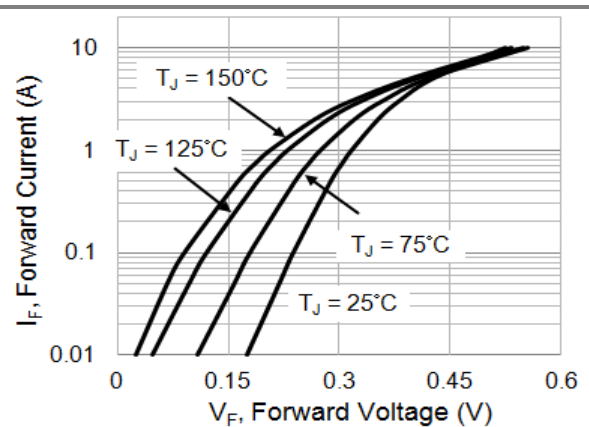


Fig.4 Typical Forward Characteristics

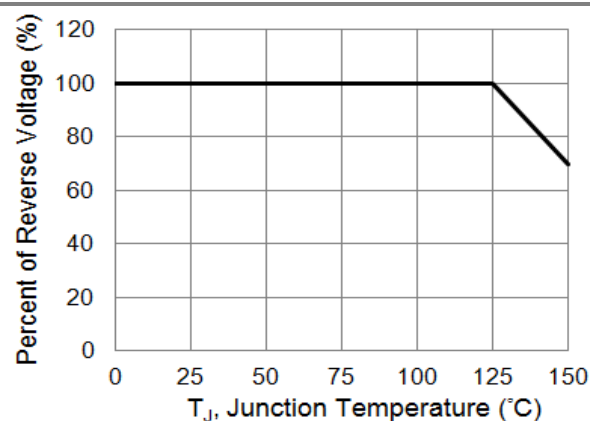


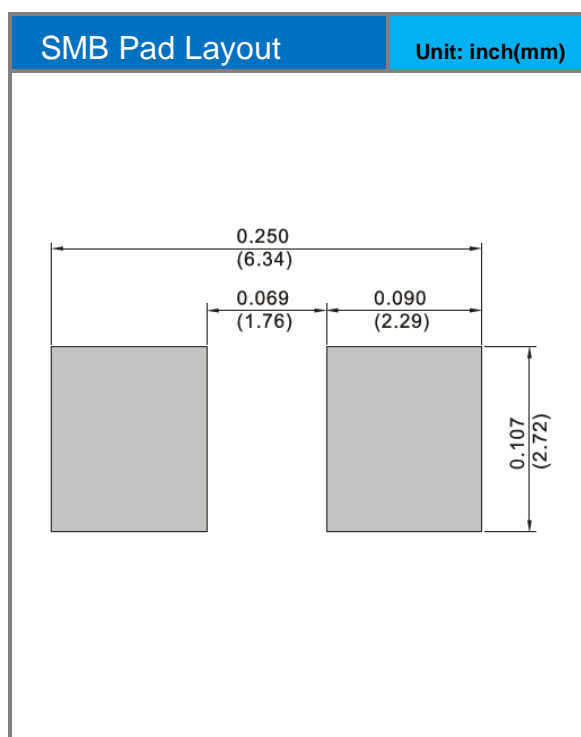
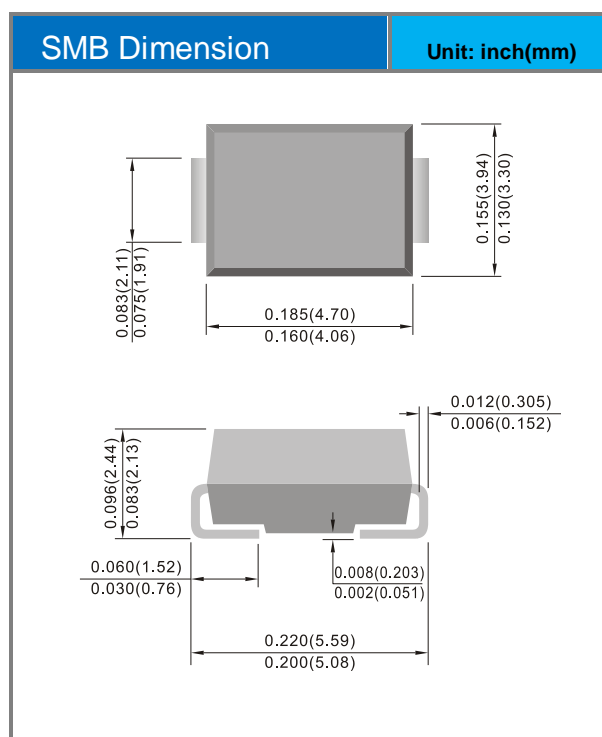
Fig.5 Operating Temperature Derating Curve

## SRM54AV-AU

### Part No Packing Code Version

Part No Packing Code	Package Type	Packing Type	Marking	Version
SRM54AV-AU_R1_000A1	SMB	800 pcs / 7" reel	SRM54AV	Halogen free

### Packaging Information & Mounting Pad Layout





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