



SRM84ALF

ULTRA LOW VF SCHOTTKY BARRIER RECTIFIER

Voltage

45 V

Current

8 A

Features

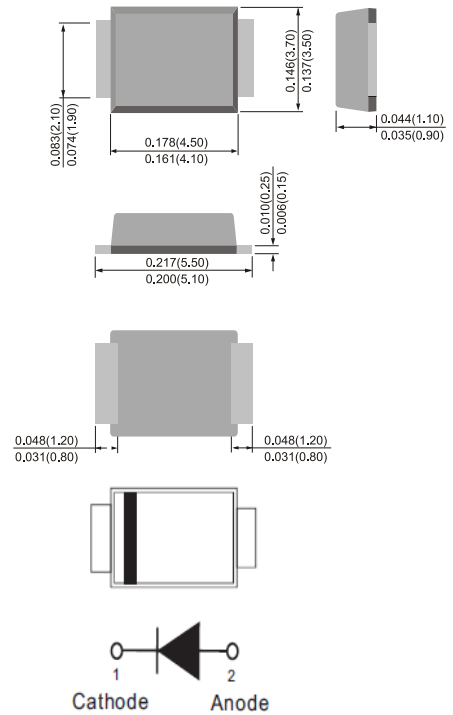
- Ideal for automated placement
- Ultra low forward voltage drop, low power loss
- High efficiency operation
- Low thermal resistance
- Ultra thin profile package for space constrained utilization
- Easy pick and place package suitable for automated handling
- Lead free in compliance with EU RoHS 2011/65/EU directive
- Green molding compound as per IEC61249 Std. . (Halogen Free)

Mechanical Data

- Case: SMBF package
- Terminals: solder plated, solderable per MIL-STD-750, Method 2026
- Weight: 0.002 ounces, 0.05 grams.

SMBF

Unit: inch(mm)



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

PARAMETER	SYMBOL	LIMIT	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	45	V
Maximum rms voltage	V_{RMS}	32	V
Maximum dc blocking voltage	V_R	45	V
Maximum average forward rectified current	$I_{F(AV)}$	8	A
Peak forward surge current : 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	150	A
Typical junction capacitance ($V_R=4\text{V}$, $f=1\text{MHz}$)	C_J	550	pF
Typical thermal resistance	(Note 1) $R_{\theta JC}$	27	$^{\circ}\text{C/W}$
	(Note 2) $R_{\theta JA}$	135	
Operating junction temperature range	T_J	-55 to +150	$^{\circ}\text{C}$
Storage temperature range	T_{STG}	-55 to +150	$^{\circ}\text{C}$

Note : 1. Mounted on a FR4 PCB, single-sided copper, with 100cm² copper pad area.

2. Mounted on a FR4 PCB, single-sided copper, mini pad.



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

PARAMETER	SYMBOL	TEST CONDITION		MIN.	TYP.	MAX.	UNITS
Breakdown voltage	V_{BR}	$I_R=0.5\text{mA}$	$T_J=25^{\circ}\text{C}$	45	-	-	V
Instantaneous forward voltage	V_F	$I_F=1\text{A}$	$T_J=25^{\circ}\text{C}$	-	0.3	-	V
		$I_F=5\text{A}$		-	0.4	-	
		$I_F=8\text{A}$		-	-	0.49	
		$I_F=1\text{A}$	$T_J=125^{\circ}\text{C}$	-	0.21	-	V
$I_F=5\text{A}$	-	0.35		-			
Reverse current	I_R	$V_R=36\text{V}$	$T_J=25^{\circ}\text{C}$	-	70	-	μA
		$V_R=45\text{V}$	$T_J=25^{\circ}\text{C}$	-	-	210	μA
			$T_J=125^{\circ}\text{C}$	-	19	-	mA



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TYPICAL CHARACTERISTIC CURVES

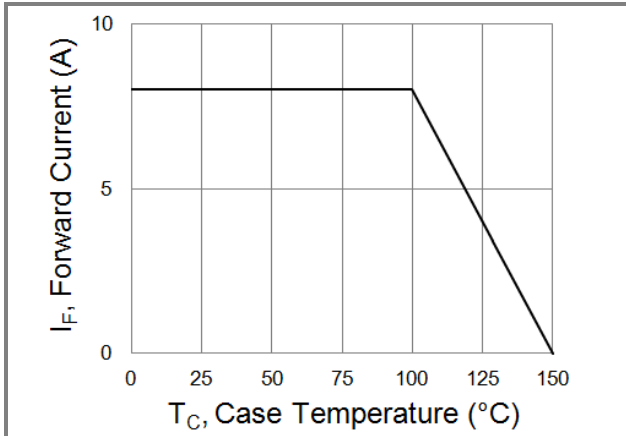


Fig.1 Forward Current Derating Curve

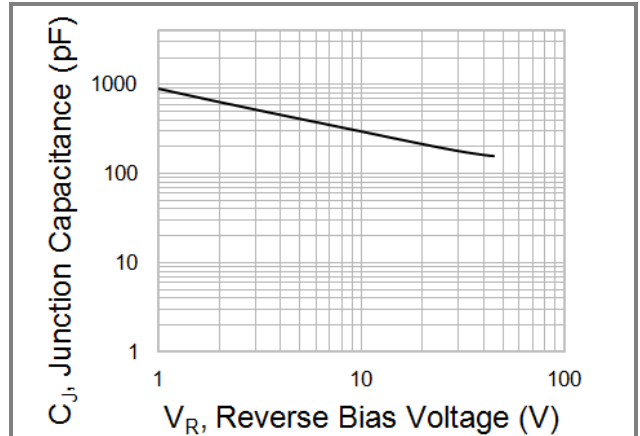


Fig.2 Typical Junction Capacitance

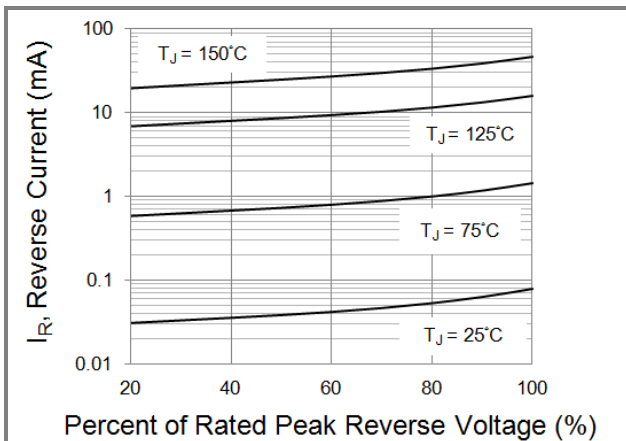


Fig.3 Typical Reverse Characteristics

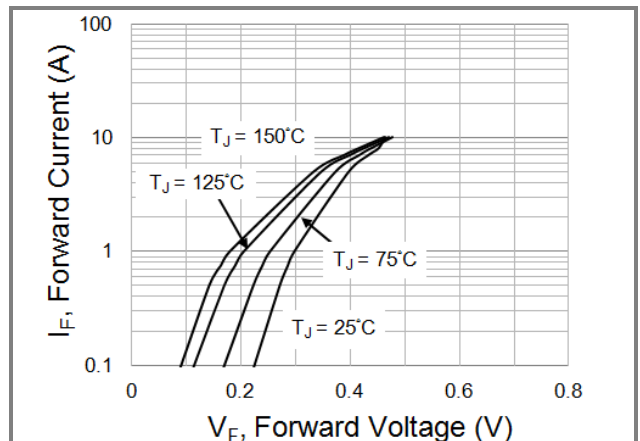


Fig.4 Typical Forward Characteristics

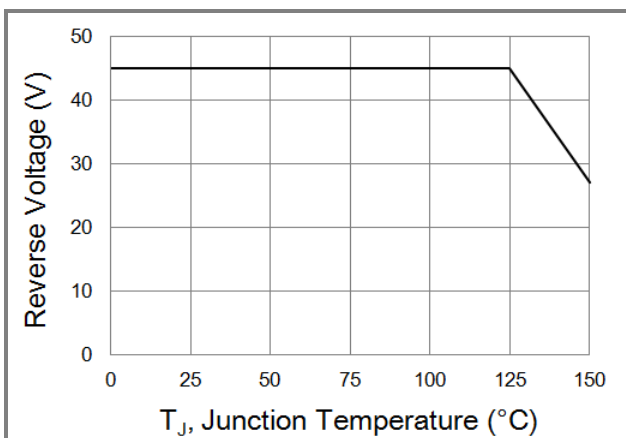


Fig.5 Operating Temperature Derating Curve

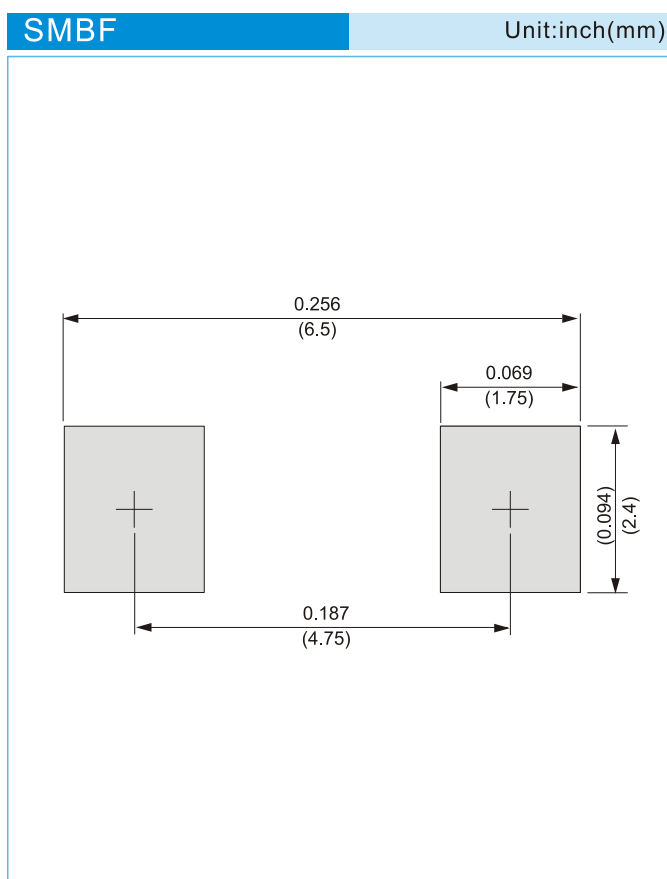


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Part No Packing Code Version

Part No Packing Code	Package Type	Packing Type	Marking	Version
SRM84ALF_R1_00001	SMBF	1.5K pcs / 7" reel	SRM84ALF	Halogen free
SRM84ALF_R2_00001	SMBF	5K pcs / 13" reel	SRM84ALF	Halogen free

Mounting Pad Layout





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