

SBT55LAFC

Surface Mount Low V_F Schottky Barrier Rectifier

Voltage

50 V

Current

5 A

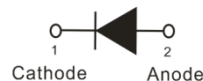
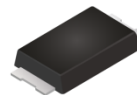
Features

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

Mechanical Data

- Case : SMAF-C plastic
- Terminals : Solderable per MIL-STD-750, Method 2026
- Approx. Weight : 0.0012 ounces, 0.034 grams

SMAF-C



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}	50	V
Maximum RMS Voltage	V_{RMS}	35	V
Maximum DC Blocking Voltage	V_R	50	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	I_{FSM}	80	A
Typical Thermal Resistance (Note 1)	$R_{\theta JA}$	150	$^\circ\text{C/W}$
(Note 2)	$R_{\theta JL}$	22	
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
Forward Voltage	V_F	$I_F = 1\text{ A}, T_J = 25^\circ\text{C}$	-	0.32	-	V
		$I_F = 2\text{ A}, T_J = 25^\circ\text{C}$	-	0.37	-	
		$I_F = 5\text{ A}, T_J = 25^\circ\text{C}$	-	0.45	0.5	
		$I_F = 1\text{ A}, T_J = 125^\circ\text{C}$	-	0.2	-	
		$I_F = 2\text{ A}, T_J = 125^\circ\text{C}$	-	0.29	-	
Reverse Current ^(Note 3)	I_R	$V_R = 40\text{ V}, T_J = 25^\circ\text{C}$	-	30	-	uA
		$V_R = 50\text{ V}, T_J = 25^\circ\text{C}$	-	-	100	
		$V_R = 50\text{ V}, T_J = 125^\circ\text{C}$	-	15	-	mA

NOTES :

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

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TYPICAL CHARACTERISTIC CURVES

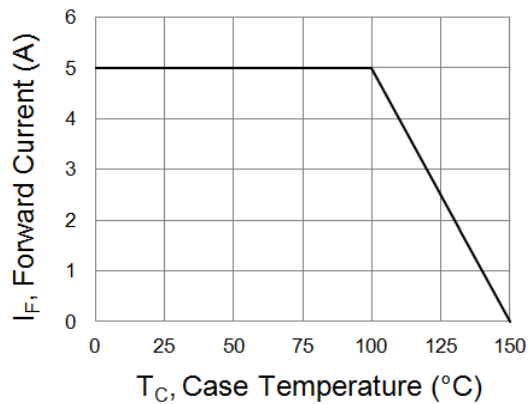


Fig.1 Forward Current Derating Curve

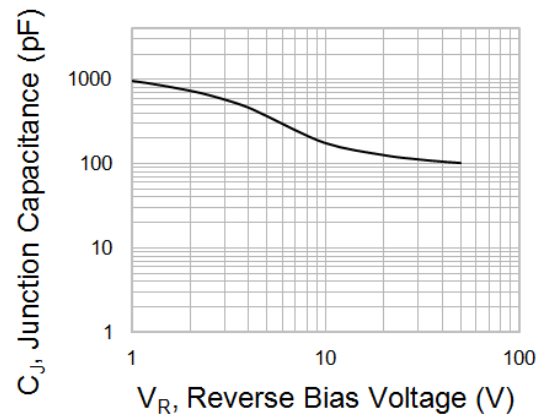


Fig.2 Typical Junction Capacitance

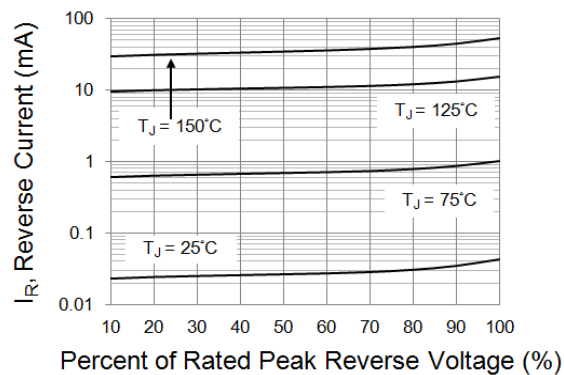


Fig.3 Typical Reverse Characteristics

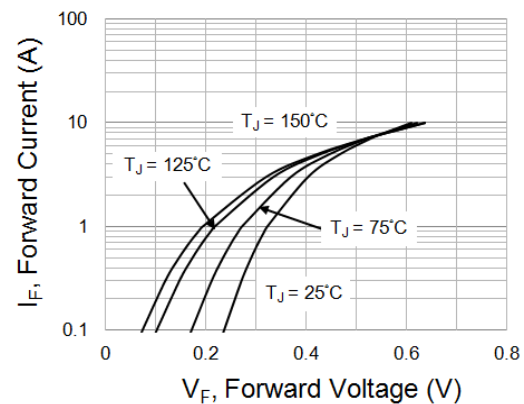


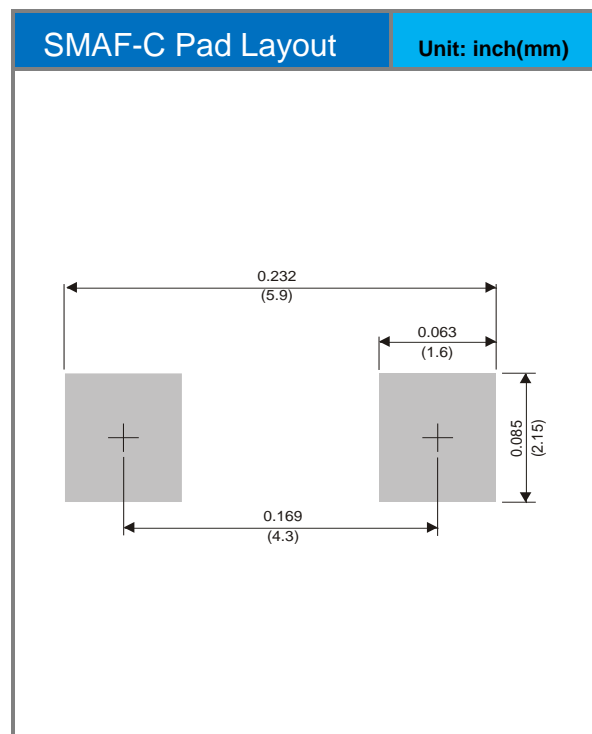
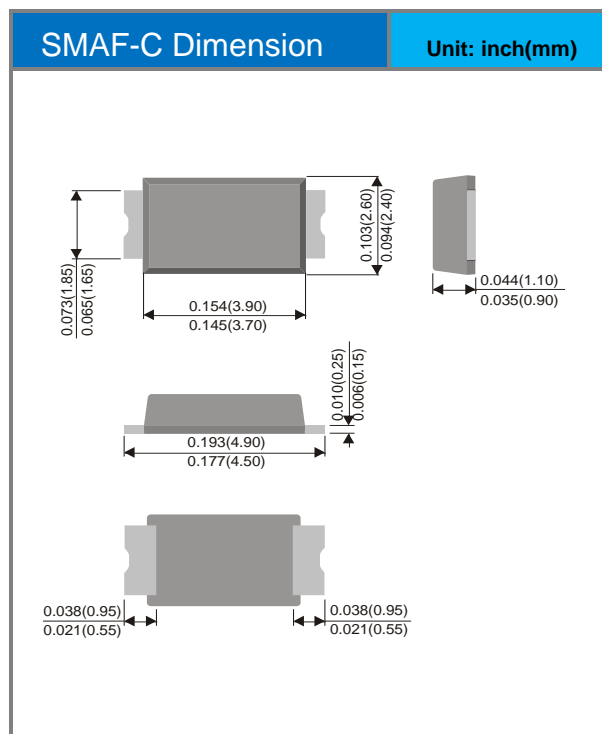
Fig.4 Typical Forward Characteristics

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Product and Packing Information

Part No.	Package Type	Packing Type	Marking
SBT55LAFC	SMAF-C	3K pcs / 7" reel	SBT55L

Packaging Information & Mounting Pad Layout



SBT55LAFC

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