



STR10100LBF

Surface Mount Low V_F Schottky Barrier Rectifier

Voltage

100 V

Current

10 A

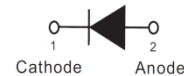
Features

- 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 : SMBF Package
- Terminals : Solderable per MIL-STD-750, Method 2026
- Approx. Weight : 0.05 grams

SMBF



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

PARAMETER	SYMBOL	LIMIT	UNITS
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	100	V
Maximum RMS Voltage	V_{RMS}	70	V
Maximum DC Blocking Voltage	V_{DC}	100	V
Maximum Average Forward Current	$I_{F(AV)}$	10	A
Peak Forward Surge Current : 8.3 ms Single Half Sine-Wave Superimposed On Rated Load	I_{FSM}	140	A
Typical Junction Capacitance Measured at 1 MHZ And Applied $V_R = 4\text{ V}$	C_J	600	pF
Typical Thermal Resistance	(Note 1) $R_{\theta JA}$	135	$^\circ\text{C/W}$
	(Note 2) $R_{\theta JC}$	17	
	(Note 2) $R_{\theta JL}$	19	
Operating Junction Temperature Range	T_J	-55~150	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55~150	$^\circ\text{C}$



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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	$I_F = 3\text{ A}, T_J = 25^\circ\text{C}$	-	0.48	-	V
		$I_F = 5\text{ A}, T_J = 25^\circ\text{C}$	-	0.54	-	
		$I_F = 10\text{ A}, T_J = 25^\circ\text{C}$	-	-	0.72	
		$I_F = 3\text{ A}, T_J = 125^\circ\text{C}$	-	0.41	-	
		$I_F = 5\text{ A}, T_J = 125^\circ\text{C}$	-	0.49	-	
		$I_F = 10\text{ A}, T_J = 125^\circ\text{C}$	-	0.6	-	
Reverse Current ^(Note 3)	I_R	$V_R = 80\text{ V}, T_J = 25^\circ\text{C}$	-	3	-	μA
		$V_R = 100\text{ V}, T_J = 25^\circ\text{C}$	-	-	50	
		$V_R = 100\text{ V}, T_J = 125^\circ\text{C}$	-	5.3	-	mA

NOTES :

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



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TYPICAL CHARACTERISTIC CURVES

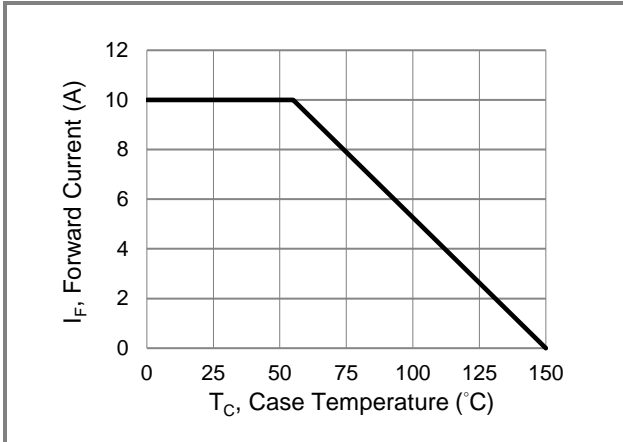


Fig.1 Forward Current Derating Curve

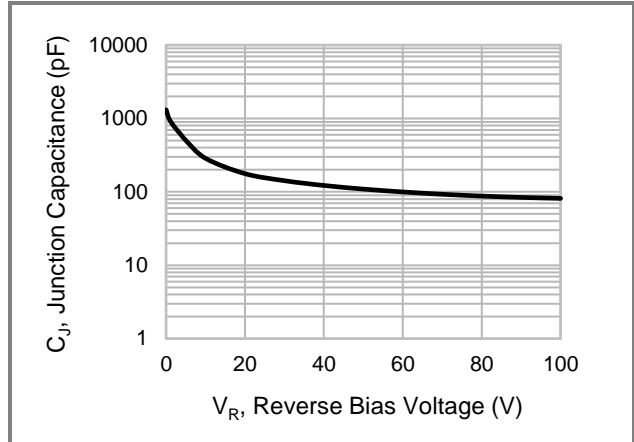


Fig.2 Typical Junction Capacitance

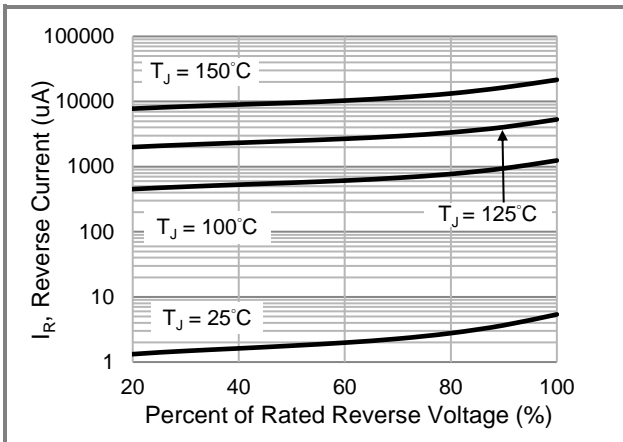


Fig.3 Typical Reverse Characteristics

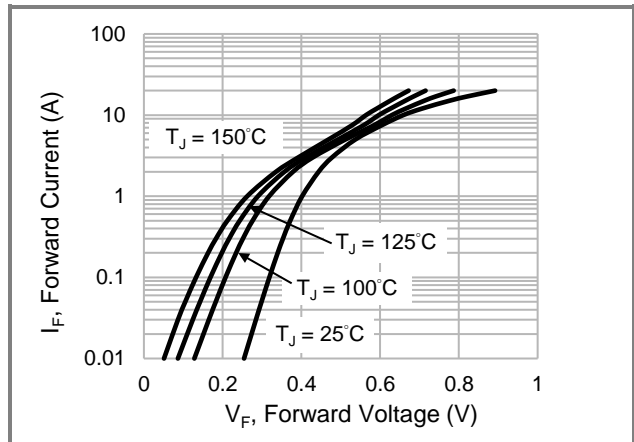


Fig.4 Typical Forward Characteristics

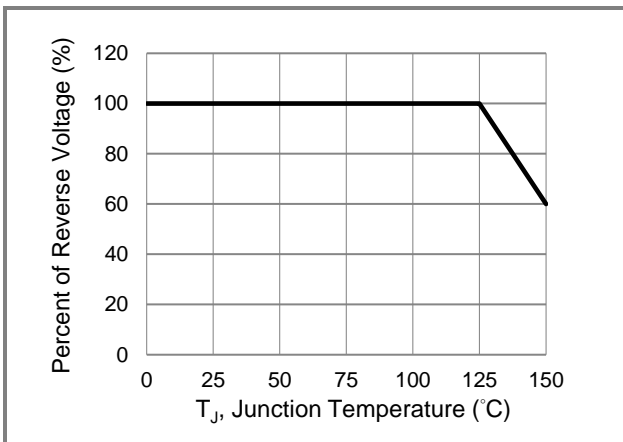


Fig.5 Operating Temperature Derating Curve

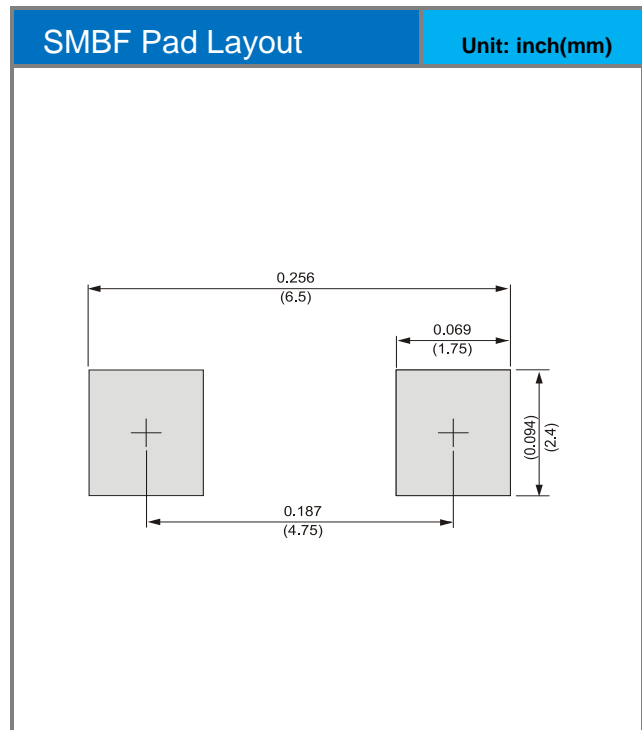
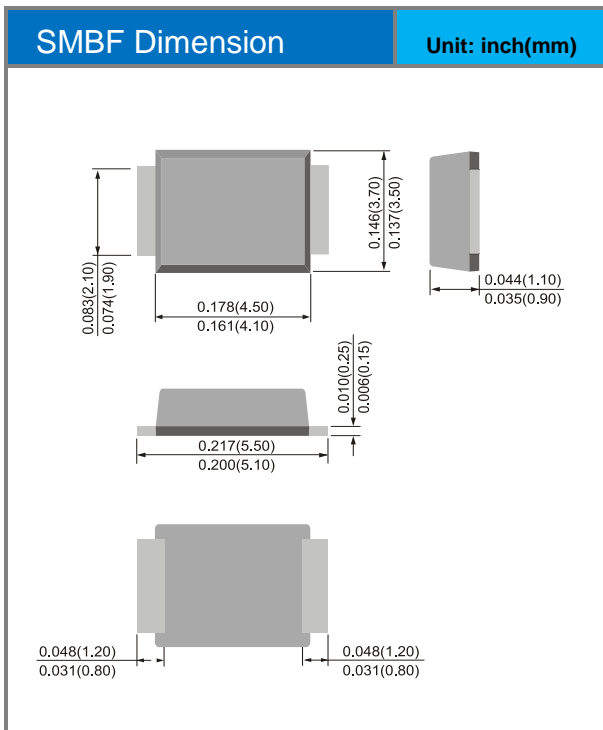


STR10100LBF

Part No. Packing Code Version

Part No. Packing Code	Package Type	Packing Type	Marking	Version
STR10100LBF_R1_00701	SMBF	1.5K / 7" Reel	STR10100LBF	Halogen free RoHS compliant

Packaging Information & Mounting Pad Layout





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