



# STR10100BF

## Surface Mount Low $V_F$ Schottky Barrier Rectifier

**Voltage** 100 V **Current** 10 A

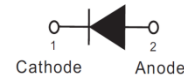
### Features

- Superfast recovery times-epitaxial construction
- Low forward voltage, high current capability
- Low leakage
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- 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<sub>A</sub> = 25 °C unless otherwise noted)

PARAMETER	SYMBOL	LIMIT	UNITS
Maximum Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	100	V
Maximum RMS Voltage	V <sub>RMS</sub>	70	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	100	V
Maximum Average Forward Current	I <sub>F(AV)</sub>	10	A
Peak Forward Surge Current : 8.3 ms Single Half Sine-Wave Superimposed On Rated Load	I <sub>FSM</sub>	130	A
Typical Junction Capacitance Measured at 1 MHz And Applied V <sub>R</sub> = 4 V	C <sub>J</sub>	490	pF
Typical Thermal Resistance	(Note 1) R <sub>θJA</sub>	135	°C/W
	(Note 2) R <sub>θJC</sub>	17	
	(Note 2) R <sub>θJL</sub>	19	
Operating Junction Temperature Range	T <sub>J</sub>	-55~150	°C
Storage Temperature Range	T <sub>STG</sub>	-55~150	°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	$V_F$	$I_F = 3\text{ A}, T_J = 25^\circ\text{C}$	-	0.5	-	V
		$I_F = 5\text{ A}, T_J = 25^\circ\text{C}$	-	0.57	-	V
		$I_F = 10\text{ A}, T_J = 25^\circ\text{C}$	-	-	0.77	V
		$I_F = 3\text{ A}, T_J = 125^\circ\text{C}$	-	0.44	-	V
		$I_F = 5\text{ A}, T_J = 125^\circ\text{C}$	-	0.52	-	V
		$I_F = 10\text{ A}, T_J = 125^\circ\text{C}$	-	0.63	-	V
Reverse Current <sup>(Note 3)</sup>	$I_R$	$V_R = 80\text{ V}, T_J = 25^\circ\text{C}$	-	2.8	-	uA
		$V_R = 100\text{ V}, T_J = 25^\circ\text{C}$	-	-	50	
		$V_R = 100\text{ V}, T_J = 125^\circ\text{C}$	-	4.8	-	mA

NOTES :

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



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## TYPICAL CHARACTERISTIC CURVES

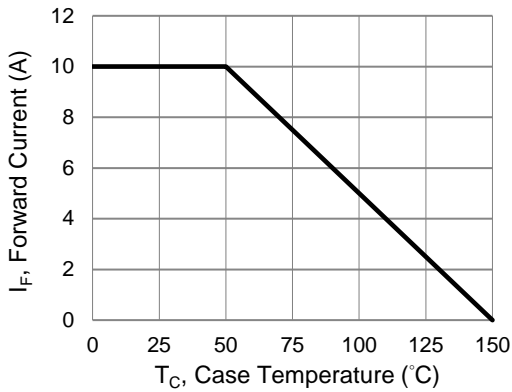


Fig.1 Forward Current Derating Curve

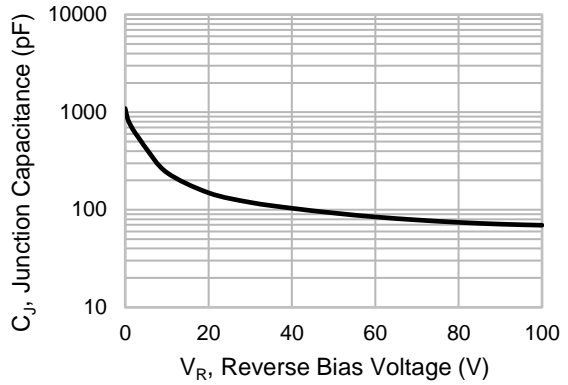


Fig.2 Typical Junction Capacitance

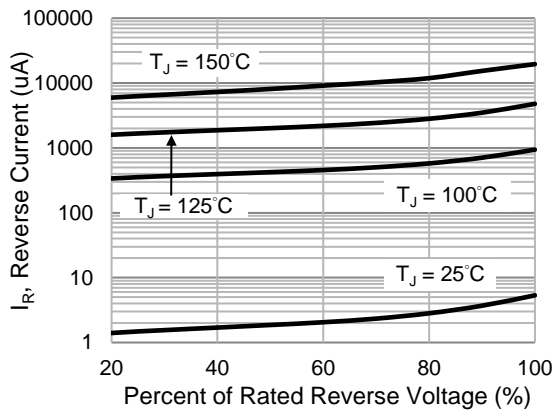


Fig.3 Typical Reverse Characteristics

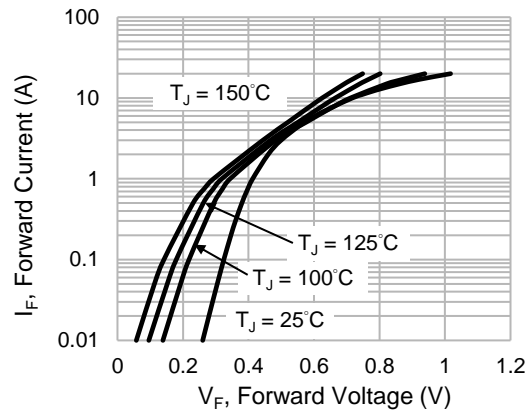


Fig.4 Typical Forward Characteristics

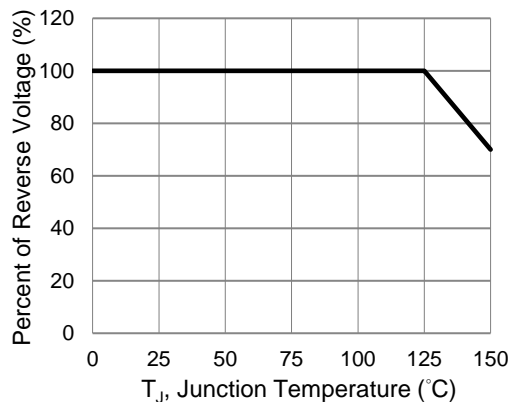


Fig.5 Operating Temperature Derating Curve

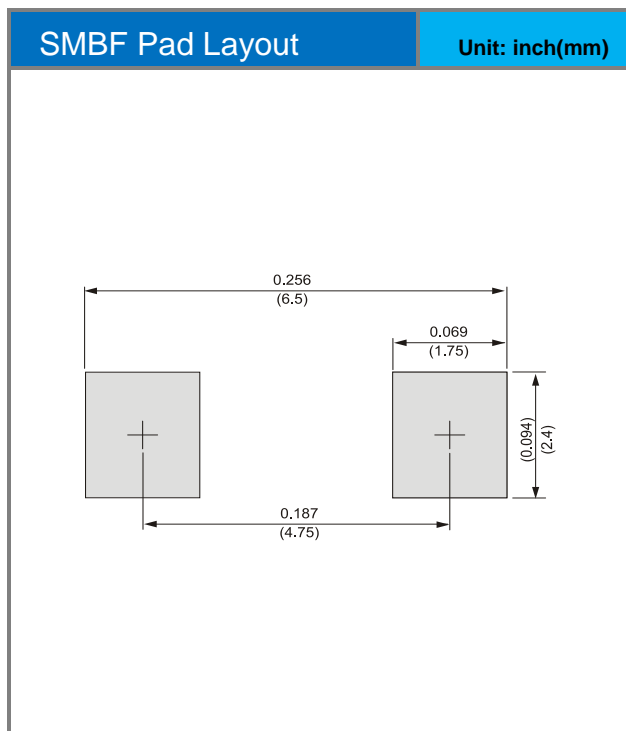
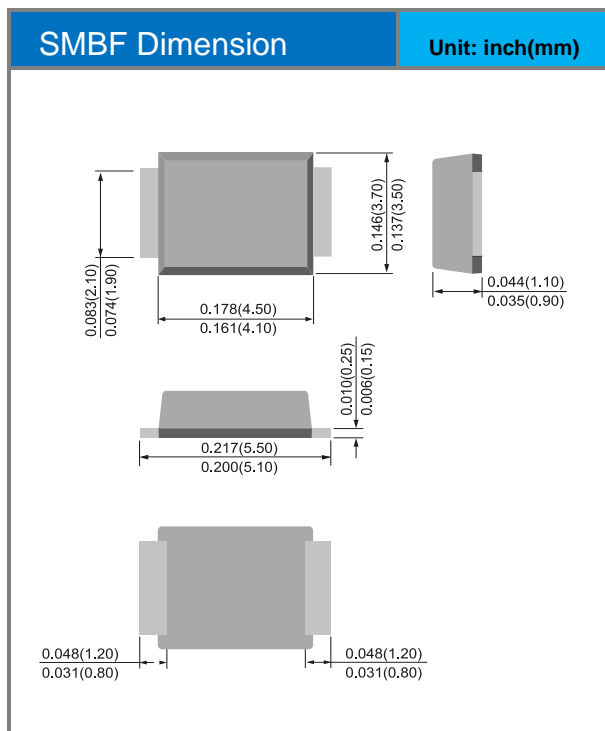


# STR10100BF

Part No. Packing Code Version

Part No. Packing Code	Package Type	Packing Type	Marking	Version
STR10100BF_R2_00701	SMBF	5K pcs / 13" reel	STR10100BF	Halogen free RoHS compliant

## Packaging Information & Mounting Pad Layout





## STR10100BF

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