STR10100BF

Surface Mount Low V$_F$ Schottky Barrier Rectifier

| Voltage	100 V	Current	10 A

SMBF

Features

- Superfast recovery times-epitaxial construction
- Low forward voltage, high current capability
- Low leakage
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- 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

1 — Cathode   2 — Anode
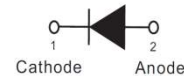
Maximum Ratings and Thermal Characteristics (T$_A$ = 25 ^{o}C unless otherwise noted)

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$_{FSM}$	130	A
Typical Junction Capacitance Measured at 1 MHZ And Applied V$_R$ = 4 V		C$_J$	490	pF
Typical Thermal Resistance	(Note 1)	R$_{\theta JA}$	135	^{o}C/W
	(Note 2)	R$_{\theta JC}$	17	
	(Note 2)	R$_{\theta JL}$	19	
Operating Junction Temperature Range		T$_J$	-55~150	^{o}C
Storage Temperature Range		T$_{STG}$	-55~150	^{o}C

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

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
Forward Voltage	V_F	$I_F = 3\ A$, $T_J = 25\ ^{\circ}C$	-	0.5	-	V
		$I_F = 5\ A$, $T_J = 25\ ^{\circ}C$	-	0.57	-	V
		$I_F = 10\ A$, $T_J = 25\ ^{\circ}C$	-	-	0.77	V
		$I_F = 3\ A$, $T_J = 125\ ^{\circ}C$	-	0.44	-	V
		$I_F = 5\ A$, $T_J = 125\ ^{\circ}C$	-	0.52	-	V
		$I_F = 10\ A$, $T_J = 125\ ^{\circ}C$	-	0.63	-	V
Reverse Current(Note 3)	I_R	$V_R = 80\ V$, $T_J = 25\ ^{\circ}C$	-	2.8	-	uA
		$V_R = 100\ V$, $T_J = 25\ ^{\circ}C$	-	-	50	
		$V_R = 100\ V$, $T_J = 125\ ^{\circ}C$	-	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^2 copper pad area.
3. Short duration pulse test used to minimize self-heating effect.
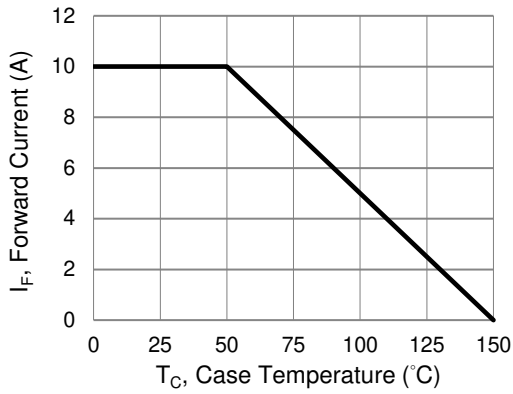
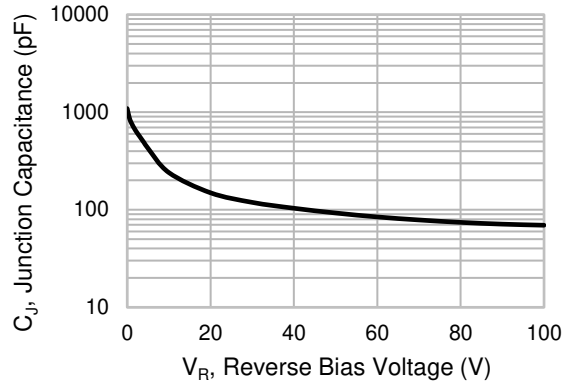## TYPICAL CHARACTERISTIC CURVES

Fig.1 Forward Current Derating Curve
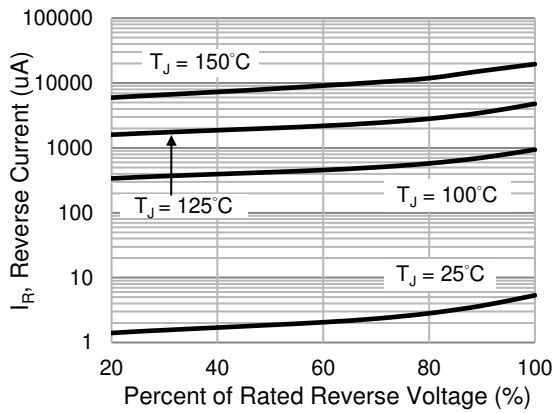

Fig.2 Typical Junction Capacitance

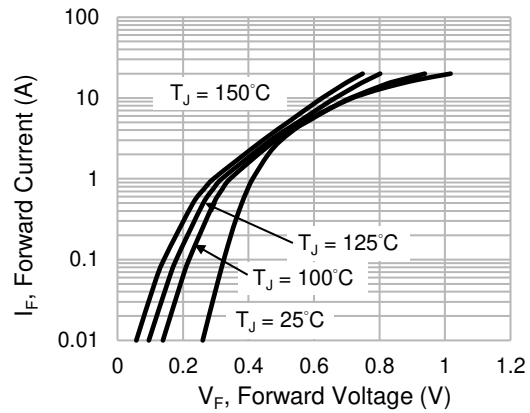**Fig.3 Typical Reverse Characteristics**
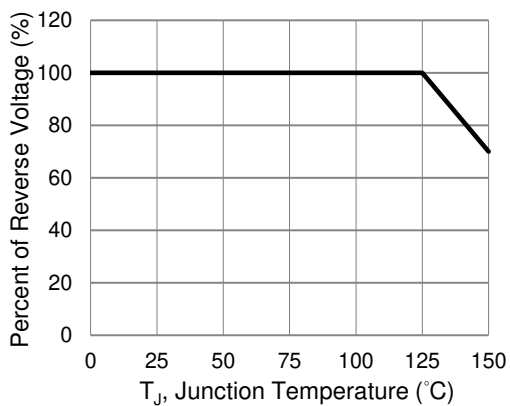

Fig.4 Typical Forward Characteristics
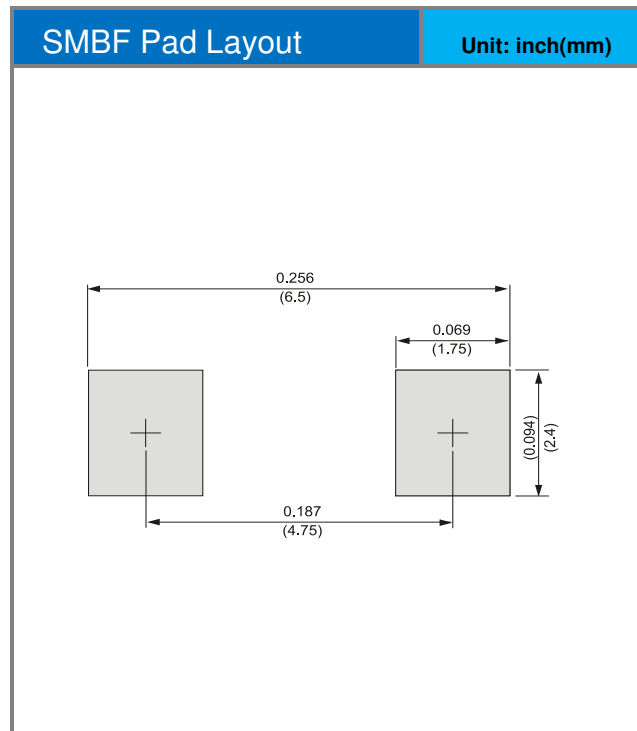

Fig.5 Operating Temperature Derating Curve

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

SMBF Dimension
Unit: inch(mm)

0.146(3.70)
0.137(3.50)

0.083(2.10)
0.074(1.90)

0.178(4.50)
0.161(4.10)

0.044(1.10)
0.035(0.90)

0.010(0.25)
0.006(0.15)

0.217(5.50)
0.200(5.10)

0.048(1.20)
0.031(0.80)

0.048(1.20)
0.031(0.80)

SMBF Pad Layout
Unit: inch(mm)

0.256
(6.5)

0.069
(1.75)

(0.094)
(2.4)

0.187
(4.75)
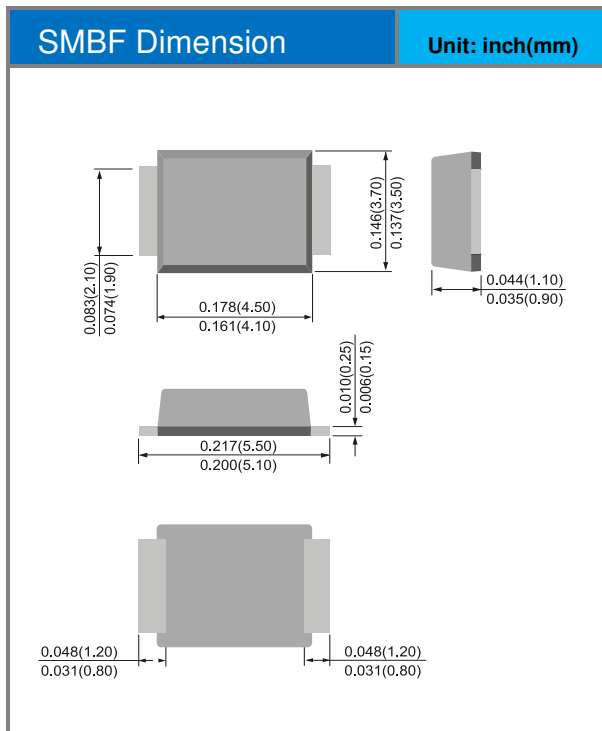
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