

**Surface Mount General Purpose Silicon Rectifiers**

**Reverse Voltage - 50 to 1000 V**

**Forward Current - 5 A**

**FEATURES**

- ◆ For surface mounted applications
- ◆ Low profile package
- ◆ Glass Passivated Chip Junction
- ◆ Ideal for automated placement
- ◆ Lead free in comply with EU RoHS 2011/65/EU directives



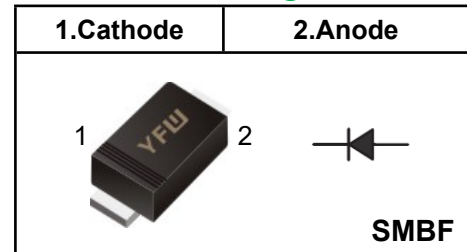
**MECHANICAL DATA**

- ◆ Case: SMBF
- ◆ Terminals: Solderable per MIL-STD-750, Method 2026
- ◆ Approx. Weight: 57mg / 0.002oz

**Maximum Ratings and Electrical characteristics**

Ratings at 25 °C ambient temperature unless otherwise specified.  
Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derate by 20 %.

**Pinning**



**Marking Code**

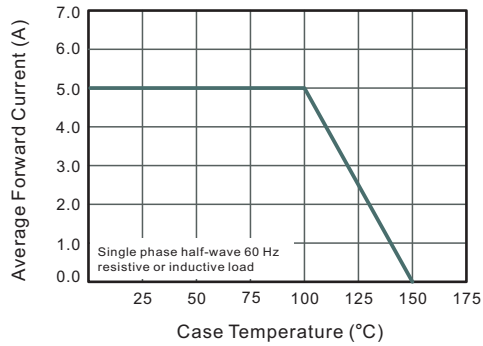
<b>S5ABF</b>	<b>S5AB</b>
<b>S5BBF</b>	<b>S5BB</b>
<b>S5DBF</b>	<b>S5DB</b>
<b>S5GBF</b>	<b>S5GB</b>
<b>S5JBF</b>	<b>S5JB</b>
<b>S5KBF</b>	<b>S5KB</b>
<b>S5MBF</b>	<b>S5MB</b>

Parameter	Symbols	S5ABF	S5BBF	S5DBF	S5GBF	S5JBF	S5KBF	S5MBF	Units
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum RMS voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current at $T_c = 125\text{ }^\circ\text{C}$	$I_{F(AV)}$	5							A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load	$I_{FSM}$	125							A
Maximum Instantaneous Forward Voltage at 5 A	$V_F$	1.1							V
Maximum DC Reverse Current $T_a = 25\text{ }^\circ\text{C}$ at Rated DC Blocking Voltage $T_a = 125\text{ }^\circ\text{C}$	$I_R$	5 150							$\mu\text{A}$
Typical Junction Capacitance <sup>(1)</sup>	$C_j$	45							pF
Typical Thermal Resistance <sup>(2)</sup>	$R_{\theta JA}, R_{\theta JC}$	40/12							$^\circ\text{C/W}$
Operating and Storage Temperature Range	$T_j, T_{stg}$	-55 ~ +150							$^\circ\text{C}$

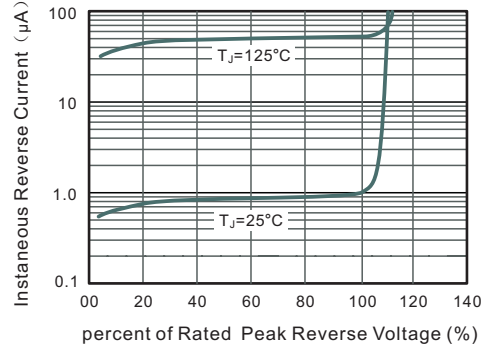
(1) Measured at 1 MHz and applied reverse voltage of 4 V D.C

(2) P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas.

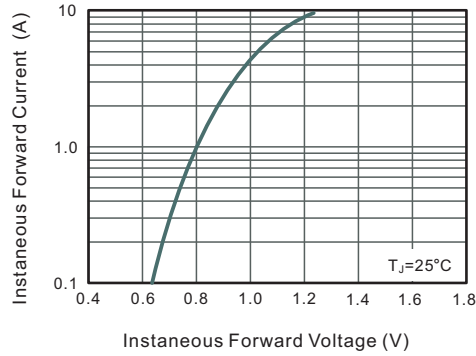
**Fig.1 Forward Current Derating Curve**



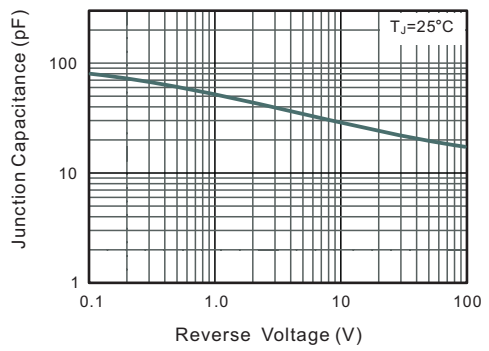
**Fig.2 Typical Reverse Characteristics**



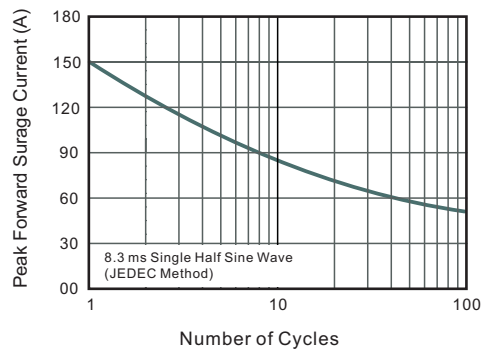
**Fig.3 Typical Forward Characteristic**



**Fig.4 Typical Junction Capacitance**



**Fig.5 Maximum Non-Repetitive Peak Forward Surge Current**



**Package Outline**

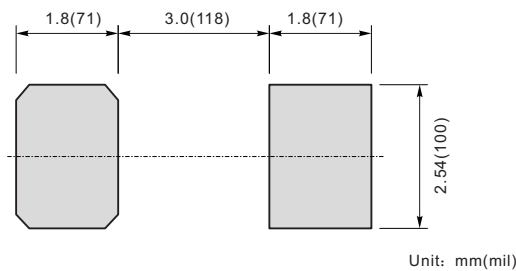
**SMBF**

Plastic surface mounted package; 2 leads



UNIT		A	C	D	E	$H_E$	e	g	$\angle$
mm	max	1.3	0.26	4.4	3.7	5.5	2.2	1.0	9°
	min	1.1	0.18	4.2	3.5	5.1	1.9		
mil	max	51	10	173	146	216	86	40	
	min	43	7	165	138	200	75		

**The recommended mounting pad size**



**Summary of Packing Options**

Package	Packing Description	Packing Quantity	Industry Standard
SMBF	Tape/Reel, 13" reel	5000	EIA-481-1