

## Surface Mount Fast Recovery Rectifiers

Reverse Voltage - 50 to 1000 V

Forward Current - 3 A

### FEATURES

- ◆ For surface mounted applications
- ◆ Low profile package
- ◆ Glass Passivated Chip Junction
- ◆ Easy to pick and place
- ◆ Fast reverse recovery time
- ◆ Lead free in comply with EU RoHS 2011/65/EU directives

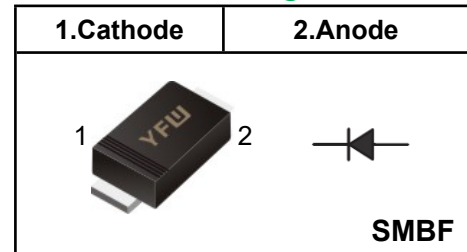
### MECHANICAL DATA

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

### Absolute Maximum Ratings and 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

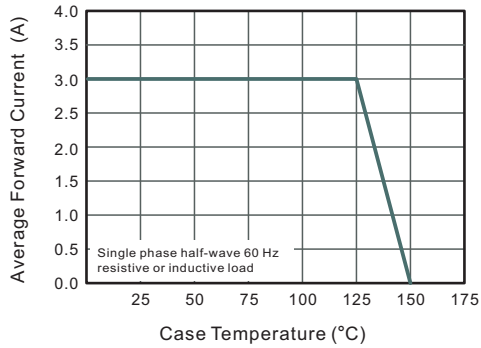
RS3ABF	R3AB
RS3BBF	R3BB
RS3DBF	R3DB
RS3GBF	R3GB
RS3JBF	R3JB
RS3KBF	R3KB
RS3MBF	R3MB

Parameter	Symbols	RS3ABF	RS3BBF	RS3DBF	RS3GBF	RS3JBF	RS3KBF	RS3MBF	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 $T_c = 125\text{ }^\circ\text{C}$	$I_{F(AV)}$	3							A	
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load	$I_{FSM}$	100							A	
Maximum Instantaneous Forward Voltage at 3 A	$V_F$	1.3							V	
Maximum DC Reverse Current $T_a = 25\text{ }^\circ\text{C}$ at Rated DC Blocking Voltage $T_a = 125\text{ }^\circ\text{C}$	$I_R$	5 100							$\mu\text{A}$	
Typical Junction Capacitance at $V_R=4\text{V}, f=1\text{MHz}$	$C_j$	40							pF	
Maximum Reverse Recovery Time <sup>(1)</sup>	$T_{rr}$	150				250		500		nS
Typical Thermal Resistance <sup>(2)</sup>	$R_{\theta JA} / R_{\theta JC}$	45/15							$^\circ\text{C/W}$	
Operating and Storage Temperature Range	$T_j, T_{stg}$	-55 ~ +150							$^\circ\text{C}$	

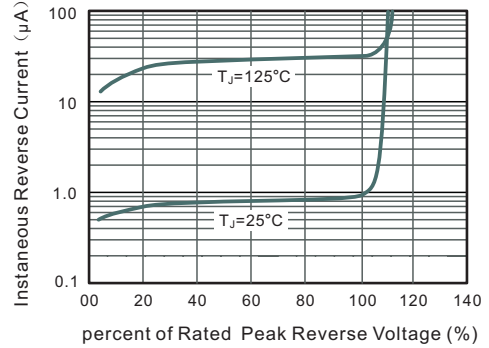
(1) Measured with  $I_F=0.5\text{A}, I_R=1\text{A}, I_n=0.25\text{A}$

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

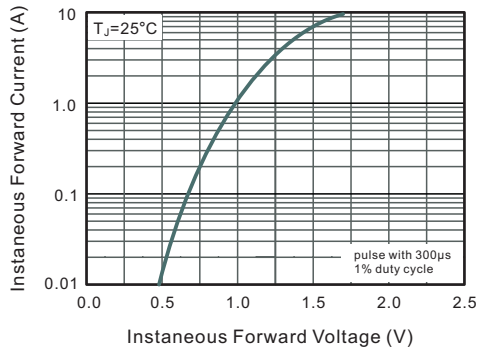
**Fig.1 Maximum Average Forward Current Rating**



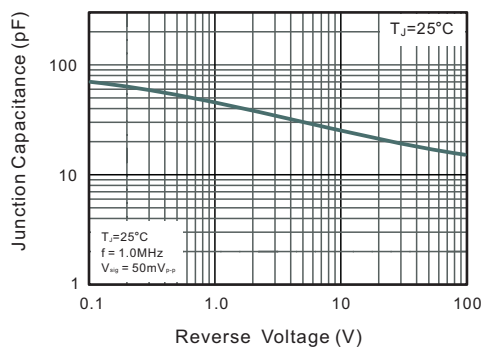
**Fig.2 Typical Reverse Characteristics**



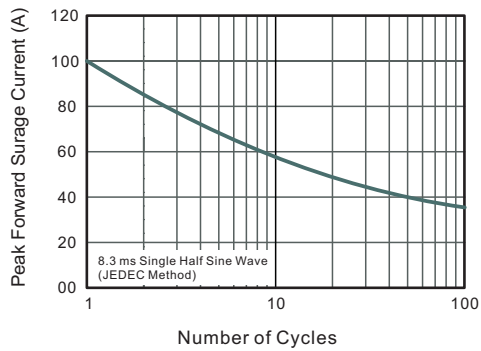
**Fig.3 Typical Instantaneous Forward Characteristics**



**Fig.4 Typical Junction Capacitance**



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



**Package Outline**

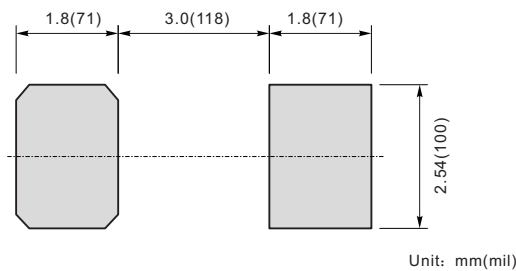
**SMBF**

Plastic surface mounted package; 2 leads



UNIT		A	C	D	E	HE	e	g	∠
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