

## Surface Mount Fast Recovery Rectifiers

### FEATURES:

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

### Circuit Diagram & Pin Configuration:



### SMBF

### Marking

Type number	Marking code
RS5ABF	R5AB
RS5BBF	R5BB
RS5DBF	R5DB
RS5GBF	R5GB
RS5JBF	R5JB
RS5KBF	R5KB
RS5MBF	R5MB

### Absolute Maximum Ratings and Characteristics

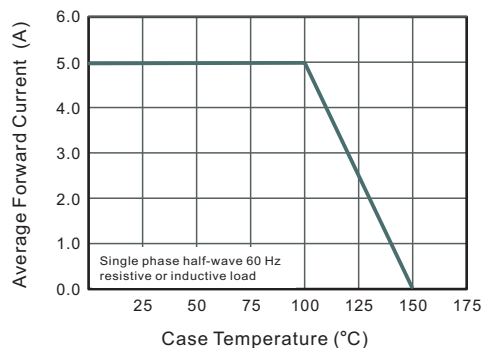
Ratings at 25 °C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Parameter	Symbols	RS5ABF	RS5BBF	RS5DBF	RS5GBF	RS5JBF	RS5KBF	RS5MBF	Units
Maximum Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current at T <sub>c</sub> = 100 °C	I <sub>F(AV)</sub>	5							A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load	I <sub>FSM</sub>	150							A
Maximum Forward Voltage at 5 A	V <sub>F</sub>	1.3							V
Maximum DC Reverse Current at Rated DC Blocking Voltage	I <sub>R</sub>	10 150							μA
Typical Junction Capacitance at V <sub>R</sub> =4V, f=1MHz	C <sub>j</sub>	45							pF
Maximum Reverse Recovery Time <sup>(1)</sup>	t <sub>rr</sub>	150				250	500		ns
Typical Thermal Resistance <sup>(2)</sup>	R <sub>θJA</sub> R <sub>θJC</sub>	40 12							°C/W
Operating and Storage Temperature Range	T <sub>j</sub> , T <sub>stg</sub>	-55 ~ +150							°C

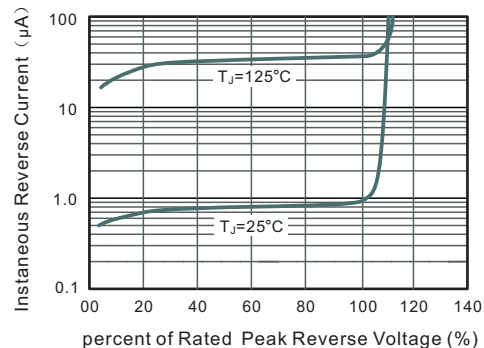
( 1 ) Measured with  $I_F = 0.5\text{ A}$ ,  $I_R = 1\text{ A}$ ,  $I_{rr} = 0.25\text{ A}$ .

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

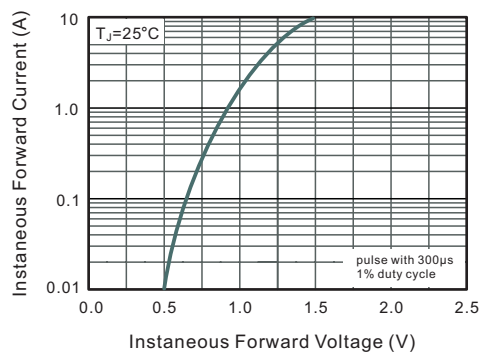
**Fig.1 Maximum Average Forward Current Rating**



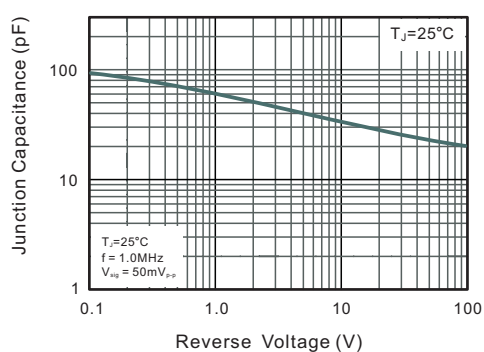
**Fig.2 Typical Reverse Characteristics**



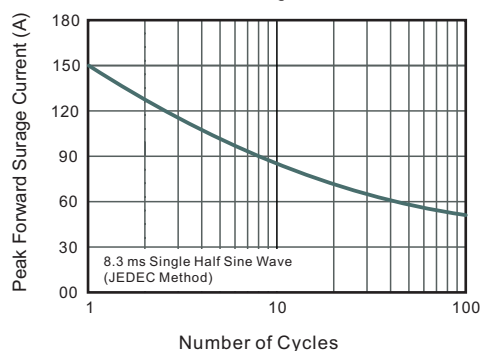
**Fig.3 Typical Instantaneous Forward Characteristics**



**Fig.4 Typical Junction Capacitance**



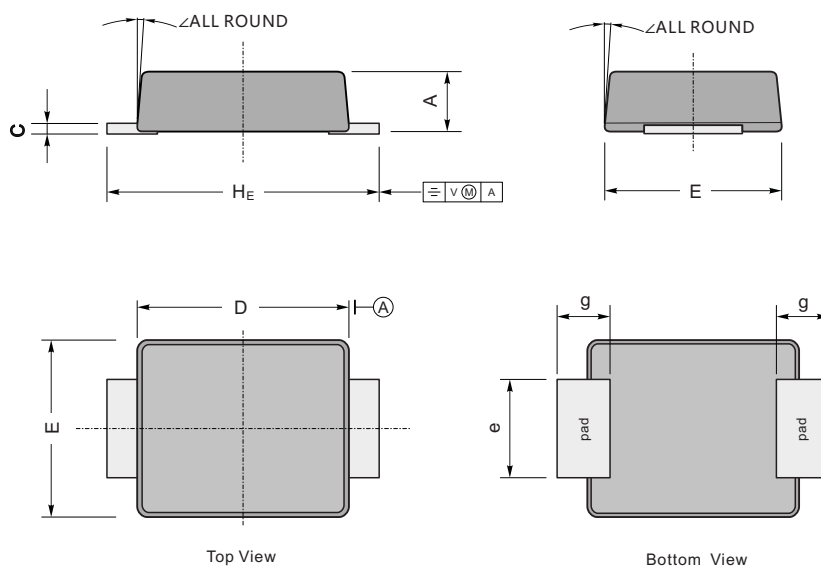
**Fig.5 Maximum Non-Repetitive Peak Forward Surge Current**



### PACKAGE OUTLINE

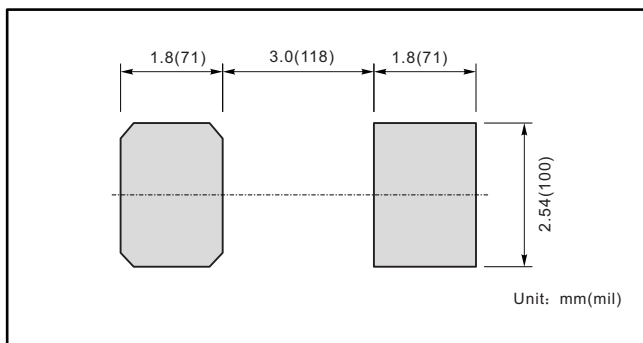
Plastic surface mounted package; 2 leads

SMBF



UNIT		A	C	D	E	H <sub>E</sub>	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



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