Surface Mount Fast Recovery Rectifiers

Parameter	Value	Unit
V_{RRM}	50~1000	V
$I_{F(AV)}$	3.0	A

SMBF

Features

- For surface mounted applications
- Low profile package
- Glass Passivated Chip Junction
- Easy to pick and place
- Fast reverse recovery time

Applications

- For use in fast-switching rectification in power supplies, inverters, converters, and as free-wheeling diodes in consumer and telecommunications equipment.

Absolute Maximum Ratings and Characteristics (at TJ = 25°C unless otherwise specified)

Parameter	Symbol	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℃	$I_{F(AV)}$	3.0							A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load	I_{FSM}	80							A
Maximum Forward Voltage at 3A	V_F	1.3							V
Maximum DC Reverse Current Ta =25℃ at Rated DC Blocking Voltage Ta=125℃	I_R	5 100							μA
Typical Junction Capacitance at VR=4V, f=1MHz	C_j	40							pF
Maximum Reverse Recovery Time（1）	t_{rr}	150				250	500		ns
Typical Thermal Resistance（2）	$R_{\theta JA}$ $R_{\theta JC}$	45 15							℃/W
Operating and Storage Temperature Range	T_j , T_{stg}	-55 ~ +150							℃

Notes：

（1）Measured with IF = 0.5A, IR = 1A, Irr = 0.25A.

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

Typical characteristics

Fig.1 Forward Current Derating Curve

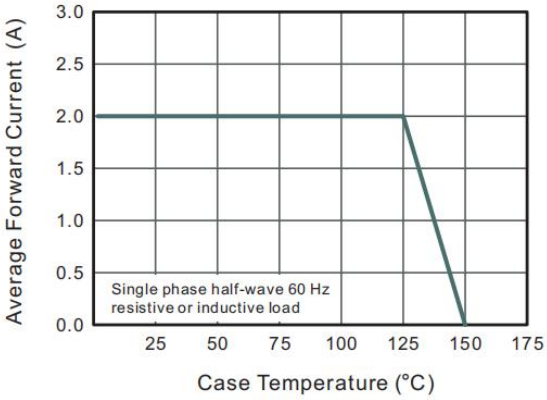


Fig.2 Typical Reverse Characteristics

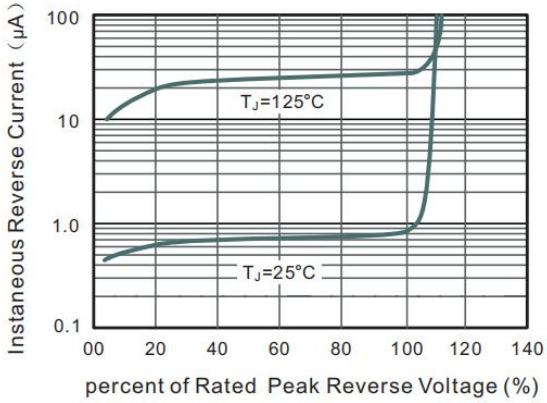


Fig.3 Typical Instaneous Forward Characteristics

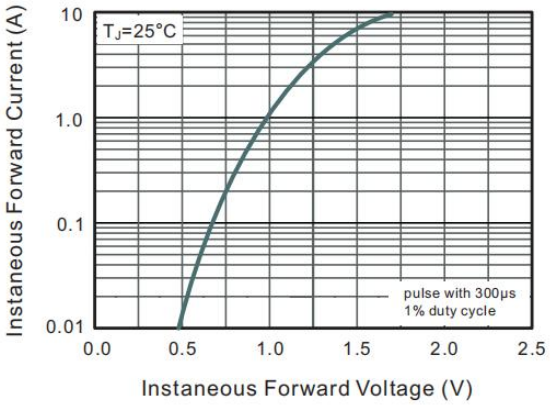


Fig.4 Typical Junction Capacitance

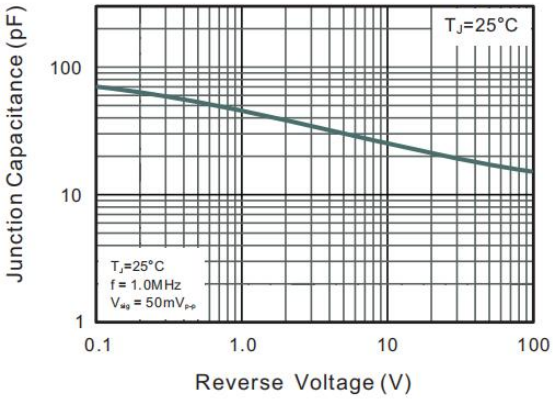
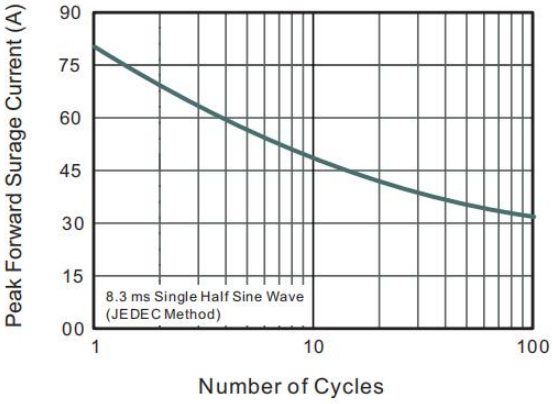


Fig.5 Maximum Non-Repetitive Peak Forward Surage Current



Package outlines

Plastic surface mounted package; 2 leads

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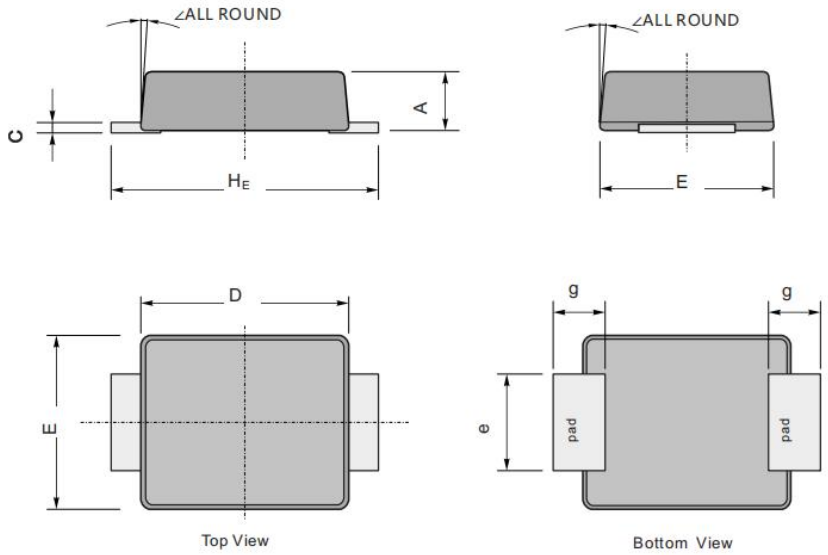
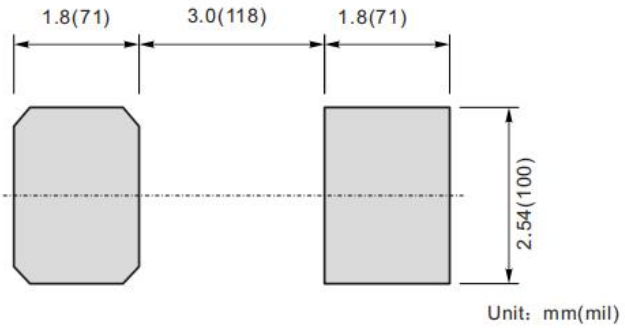


UNIT		A	C	D	E	H_E	e	g	∠
mm	max	1.45	0.26	4.4	3.7	5.5	2.2	0.9	6°
	min	1.25	0.18	4.2	3.5	5.1	1.9		
mil	max	57	10	173	146	216	86	35	
	min	49	7	165	138	200	75		

The recommended mounting pad size



Marking

Type number	Marking code
RS3ABF	R3AB
RS3BBF	R3BB
RS3DBF	R3DB
RS3GBF	R3GB
RS3JBF	R3JB
RS3KBF	R3KB
RS3MBF	R3MB

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