Surface Mount General Purpose Silicon 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

Applications

- For use in general purpose rectification in power supplies, inverters, converters, and as freewheeling diodes for consumer and telecommunications applications.

Absolute Maximum Ratings and Characteristics (Ta=25℃ unless otherwise noted)

Parameter	Symbol	S3ABF	S3BBF	S3DBF	S3GBF	S3JBF	S3KBF	S3MBF	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=115℃	$I_{F(AV)}$	3.0							A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load	I_{FSM}	90							A
Maximum Instantaneous Forward Voltage at 3A	V_F	1.1							V
Maximum DC Reverse Current Ta = 25℃ at Rated DC Blocking Voltage Ta = 125℃	I_R	5 100							μA
Typical Junction Capacitance（1）	C_j	35							pF
Typical Thermal Resistance（2）	$R_{\theta JA}$ $R_{\theta JC}$	45 15							℃/W
Operating and Storage Temperature Range	T_j , T_{stg}	-55 ~ +150							℃

（1）Measured at 1 MHz and applied reverse voltage of 4 VD.C
（2）P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas.

Typical characteristics

Fig.1 Forward Current Derating Curve

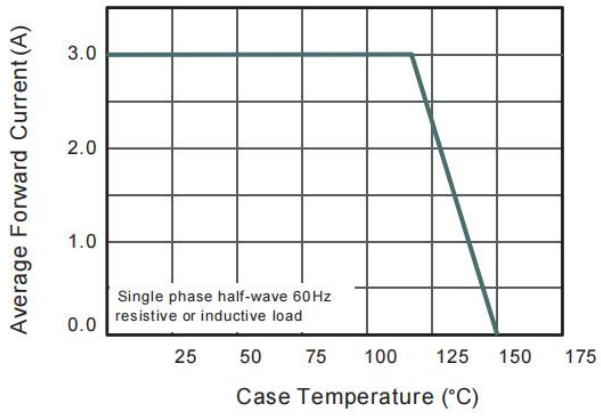


Fig.2 Typical Reverse Characteristics

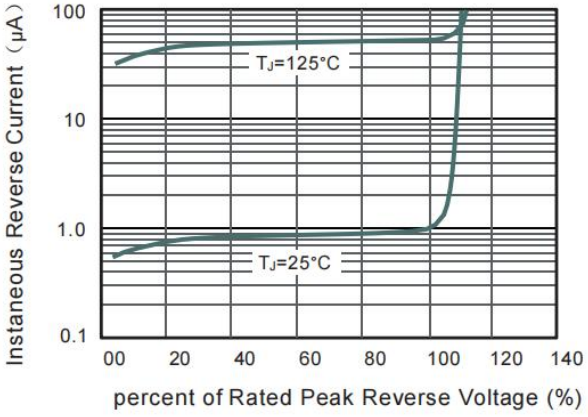


Fig.3 Typical Forward Characteristic

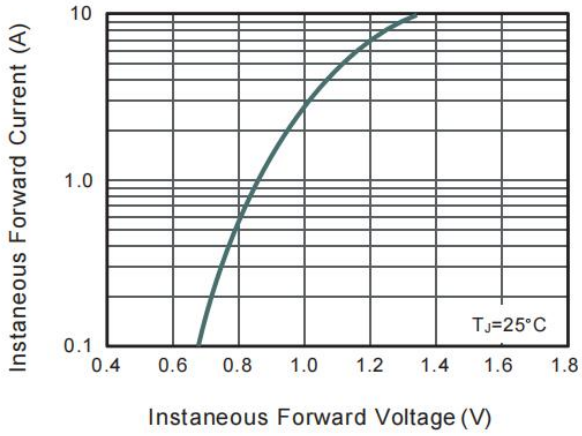


Fig.4 Typical Junction Capacitance

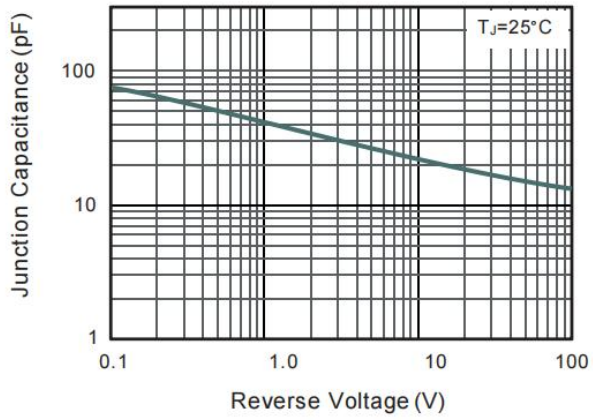
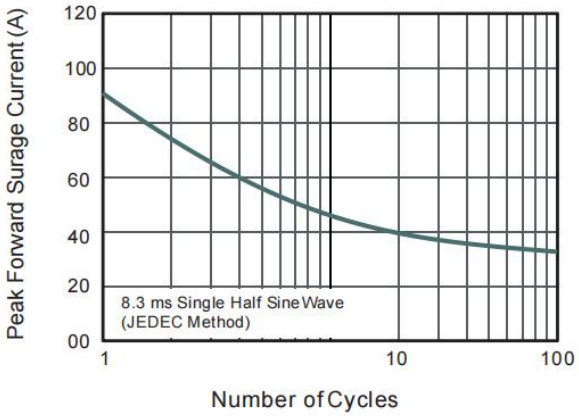


Fig.6 Maximum Non-Repetitive Peak Forward Surage Current



Package Outlines

Plastic surface mounted package; 2 leads

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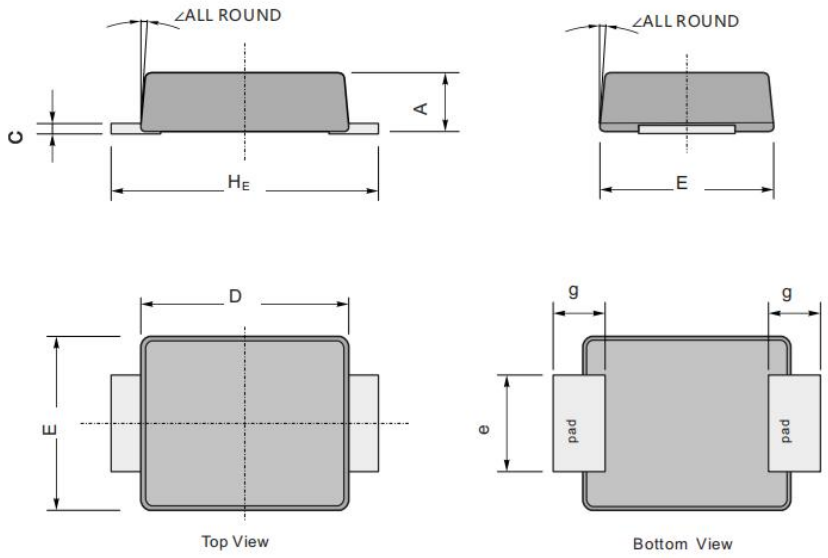
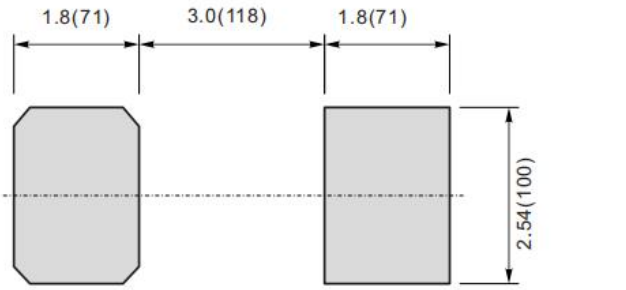


UNIT		A	C	D	E	H_E	e	g	∠
mm	max	1.45	0.26	4.4	3.7	5.5	2.2	0.9	6°
	min	1.25	0.18	4.2	3.5	5.1	1.9		
mil	max	57	10	173	146	216	86	35	
	min	49	7	165	138	200	75		

The recommended mounting pad size



Marking

Type number	Marking code
S3ABF	S3AB
S3BBF	S3BB
S3DBF	S3DB
S3GBF	S3GB
S3JBF	S3JB
S3KBF	S3KB
S3MBF	S3MB

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