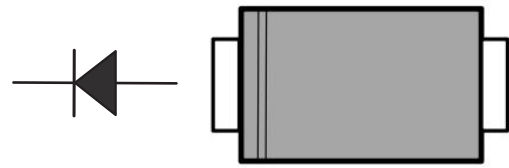


Surface Mount Fast Recovery Rectifier

Parameter	Value	Unit
V_{RRM}	50~1000	V
$I_{F(AV)}$	1.0	A



SMAF

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 applications.

Absolute Maximum Ratings and Characteristics (at $T_J = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	RS1AF	RS1BF	RS1DF	RS1GF	RS1JF	RS1KF	RS1MF	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 $T_C=125^\circ\text{C}$	$I_{F(AV)}$	1.0							A	
Peak Forward Surge Current 8.3ms Single Half Sine Wave Superimposed on Rated Load	I_{FSM}	30							A	
Maximum Forward Voltage at 1A	V_F	1.3							V	
Maximum DC Reverse Current at Rated DC Blocking Voltage $T_a=25^\circ\text{C}$ $T_a=125^\circ\text{C}$	I_R	5 50							μA	
Typical Junction Capacitance at $V_R=4\text{V}$, $f=1\text{MHz}$	C_j	15							pF	
Maximum Reverse Recovery Time (1)	t_{rr}	150				250		500		ns
Typical Thermal Resistance (2)	$R_{\theta JA}$ $R_{\theta JL}$	80 30							$^\circ\text{C/W}$	
Operating and Storage Temperature Range	T_j , T_{stg}	-55 ~ +150							$^\circ\text{C}$	

Notes:

- (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.

Typical Characteristics

Fig.1 Forward Current Derating Curve

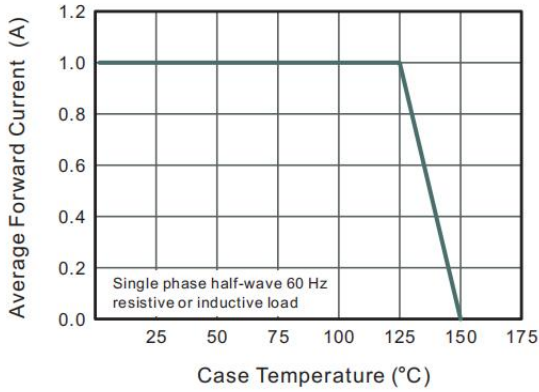


Fig.2 Typical Reverse Characteristics

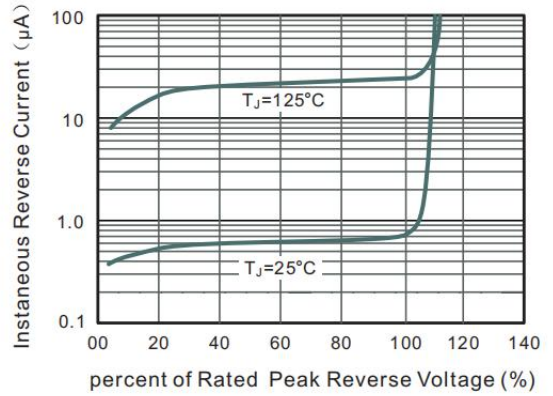


Fig.3 Typical Instantaneous Forward Characteristics

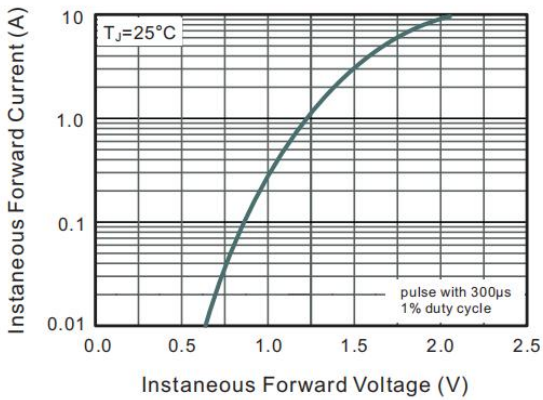


Fig.4 Typical Junction Capacitance

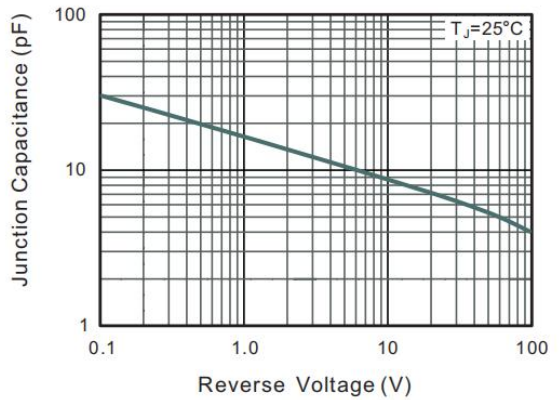
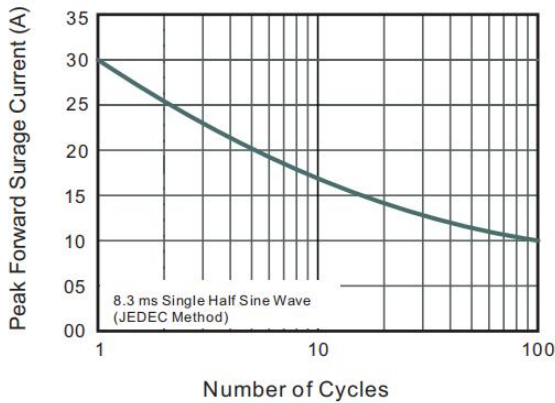
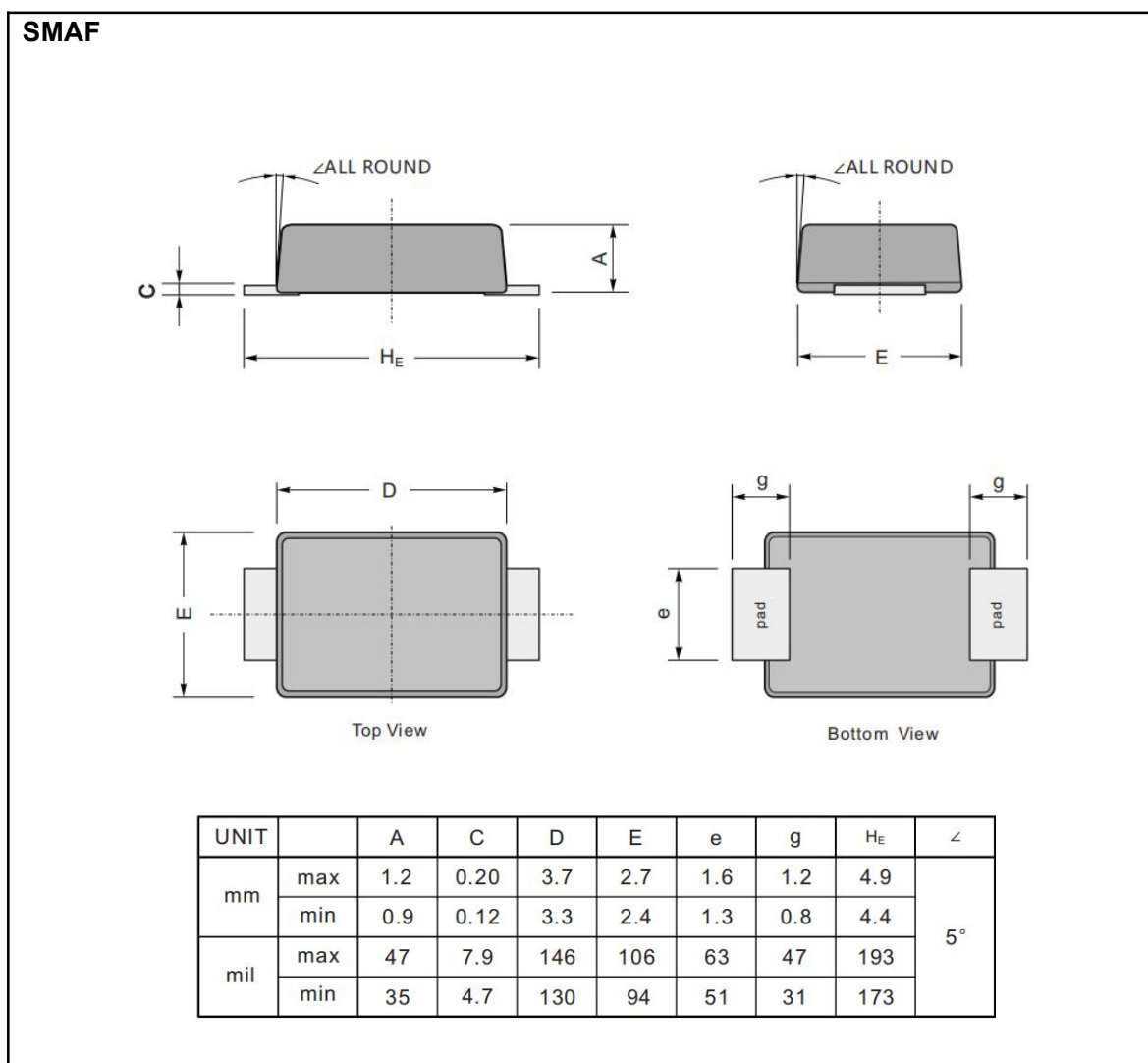


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

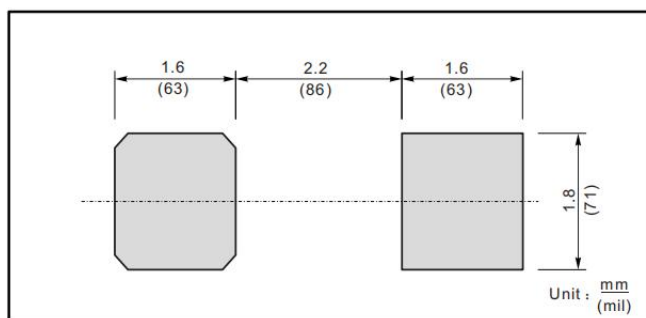


Package Outlines

Plastic surface mounted package; 2 leads



The recommended mounting pad size



Marking

Type number	Marking code
RS1AF	RS1A
RS1BF	RS1B
RS1DF	RS1D
RS1GF	RS1G
RS1JF	RS1J
RS1KF	RS1K
RS1MF	RS1M

***Important Usage Information and Disclaimer**

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