# S3AF~S3MF

ROHS

## Surface Mount General Purpose Silicon Rectifiers

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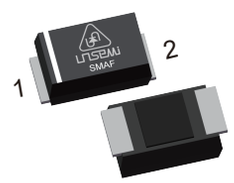
## Features

- 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

## Mechanical Data

- Case: SMAF
- Quantity Per Reel : 3,000pcs
- Approx. Weight : 27mg / 0.00095oz
- Terminals: Solderable per MIL-STD-750, Method 2026

SMAF




1：Cathode

2：Anode

## Maximum Ratings and Electrical Characteristics

Ratings at 25℃ ambient temperature unless otherwise specified.

Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

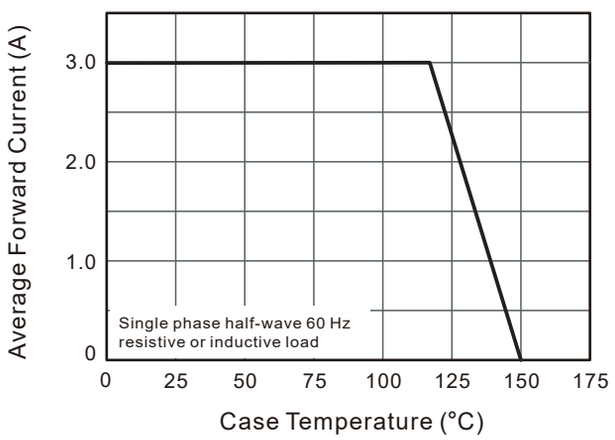
| Parameter | | Symbol | S3AF | S3BF | S3DF | S3GF | S3JF | S3KF | S3MF | Units |
|---|---|---|---|---|---|---|---|---|---|---|
| Maximum Repetitive Peak Reverse Voltage | | $V_{RRM}$ | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum RMS Voltage | | $V_{RMS}$ | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Maximum DC Blocking Voltage | | $V_{DC}$ | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum Average Forward Rectified Current at Tc =125℃ | | $I_{F(AV)}$ | 3.0 | | | | | | | A |
| Peak Forward Surge Current,8.3ms Single Half Sine-wave Superimposed on Rated Load | | $I_{FSM}$ | 80 | | | | | | | A |
| Max Instantaneous Forward Voltage at 3A | | $V_F$ | 1.1 | | | | | | | V |
| Maximum DC Reverse Current at Rated DC Reverse Voltage | Ta=25℃ | $I_R$ | 5.0 | | | | | | | μA |
| | Ta=125℃ | $I_R$ | 125 | | | | | | | |
| Typical Junction Capacitance (1) | | Cj | 32 | | | | | | | pF |
| Typical Thermal Resistance (2) | | $R_{\theta JA}$ | 50 | | | | | | | ℃/W |
| | | $R_{\theta JC}$ | 16 | | | | | | | |
| Operating and Storage Temperature Range | | $T_J$,Tstg | -55 ~ +150 | | | | | | | ℃ |

Note: (1) Measured at 1MHz and applied reverse voltage of 4VDC.

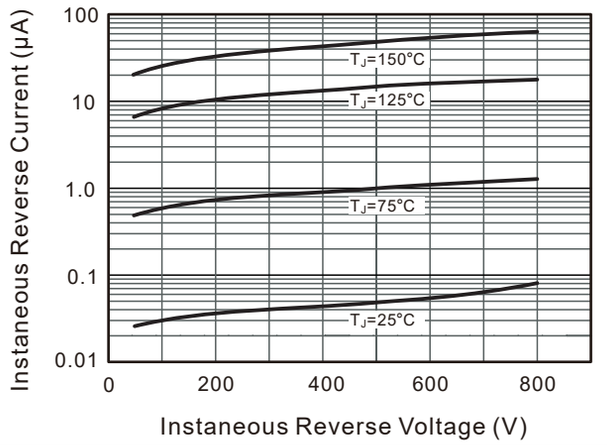
(2) P.C.B. mounted with 2.0" X 2.0" (5 X 5cm) copper pad areas.

## Electrical Characteristics Curves

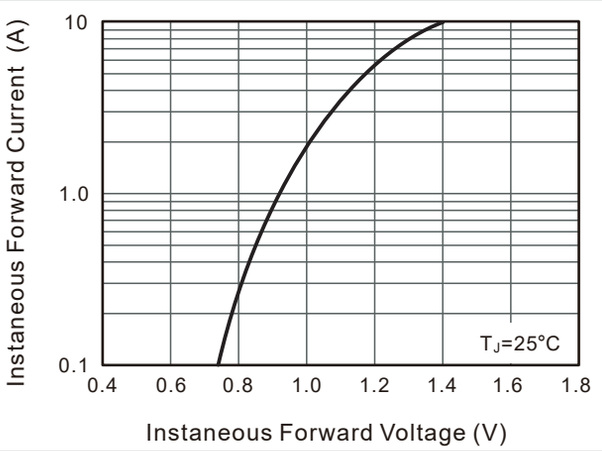
### Fig.1 Forward Current Derating Curve



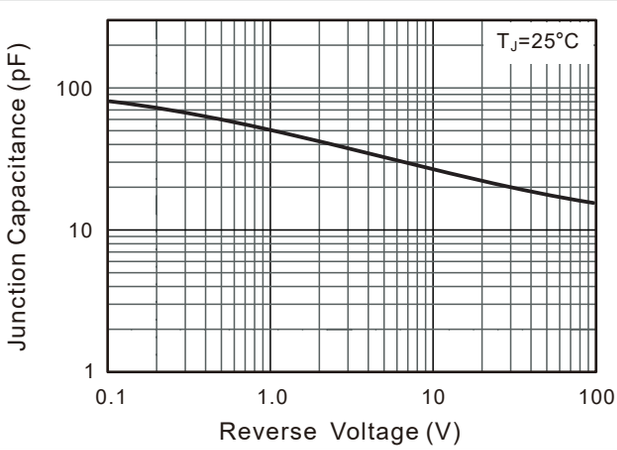

### Fig. 2 Typical Instaneous Reverse Characteristics



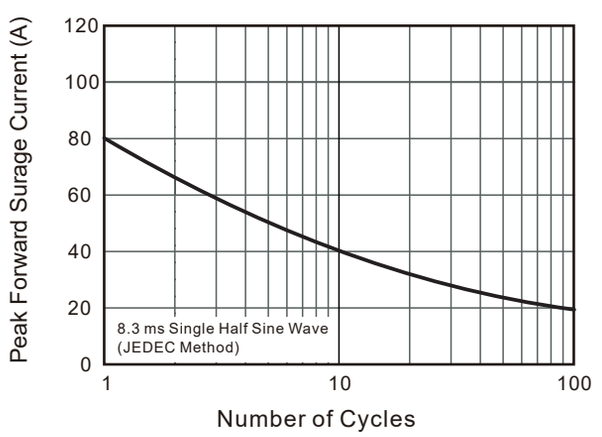

### Fig.3 Typical Forward Characteristic



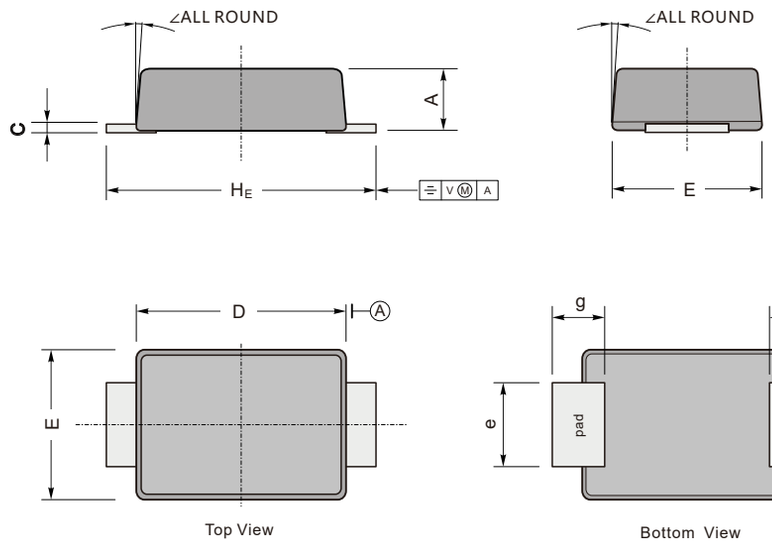

### Fig. 4 Typical Junction Capacitance




### Fig.5 Maximum Non-Repetitive Peak Forward Surage Current



## Package Outline & Dimensions




| UNIT | | A | C | D | E | e | g | HE | ∠ |
|---|---|---|---|---|---|---|---|---|---|
| mm | max | 1.2 | 0.20 | 3.7 | 2.7 | 1.6 | 1.2 | 4.9 | 7° |
| | min | 0.9 | 0.12 | 3.3 | 2.4 | 1.3 | 0.8 | 4.4 | |
| mil | max | 47 | 7.9 | 146 | 106 | 63 | 47 | 193 | |
| | min | 35 | 4.7 | 130 | 94 | 51 | 31 | 173 | |

## Marking

| Type Number | S3AF | S3BF | S3DF | S3GF | S3JF | S3KF | S3MF |
|---|---|---|---|---|---|---|---|
| Making | S3A | S3B | S3D | S3G | S3J | S3K | S3M |

優恩半導體 UNSEMI

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