

S3AF-AT THRU S3MF-AT

SURFACE MOUNT GENERAL PURPOSE SILICON RECTIFIERS

Forward Current-3.0A

Reverse Voltage-50V to 1000V

FEATURES

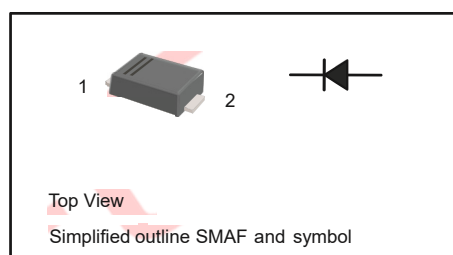
- ◆ For surface mount applications
- ◆ Glass passivated chip junction
- ◆ Low profile package
- ◆ Easy to pick and place
- ◆ Lead free in comply with EU RoHS 2011/65/EU directives

PINNING

| PIN | DESCRIPTION |
|-----|-------------|
| 1 | Cathode |
| 2 | Anode |

MECHANICAL DATA

- ◆ Case: SMAF molded plastic body
- ◆ Terminals: Solderable per MIL-STD- 750, Method 2026
- ◆ Weight: Approximated 0.027 grams



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

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

| PARAMETER | SYMBOL | S3AF-AT | S3BF-AT | S3DF-AT | S3GF-AT | S3JF-AT | S3KF-AT | S3MF-AT | UNIT |
|---|------------------------------------|-------------|---------|---------|---------|---------|---------|---------|--------------------|
| 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 $T_C=115^\circ\text{C}$ | $I_{F(AV)}$ | 3.0 | | | | | | | A |
| Peak Forward Surge Current (Note1) | I_{FSM} | 90 | | | | | | | A |
| Maximum Forward Voltage at 3.0 A | V_F | 1.2 | | | | | | | V |
| Maximum DC Reverse Current at Rated DC Blocking Voltage $T_A=25^\circ\text{C}$ $T_A=125^\circ\text{C}$ | I_R | 5 125 | | | | | | | μA |
| Typical Junction Capacitance (Note2) | C_J | 32 | | | | | | | pF |
| Typical Thermal Resistance (Note3) | $R_{\theta JA}$ $R_{\theta JC}$ | 50 16 | | | | | | | $^\circ\text{C/W}$ |
| Operating and Storage Temperature Range | T_J, T_{STG} | -55 to +150 | | | | | | | $^\circ\text{C}$ |

Notes: 1. Measured at 8.3 ms single half sine wave superimposed on rated load (JEDEC Method).

2. Measured at 1MHz and applied reverse voltage of 4V.D.C.

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

Dated: 06/2016

Rev:1.0

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RATINGS AND CHARACTERISTIC CURVES

Fig.1 Forward Current Derating Curve

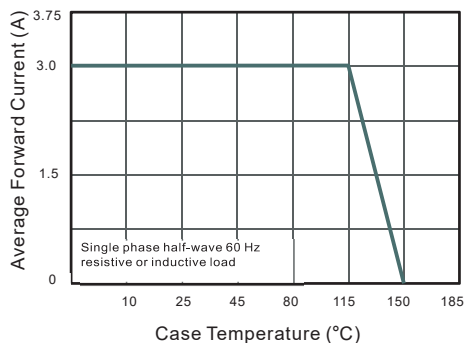


Fig.2 Typical Instantaneous Reverse Characteristics

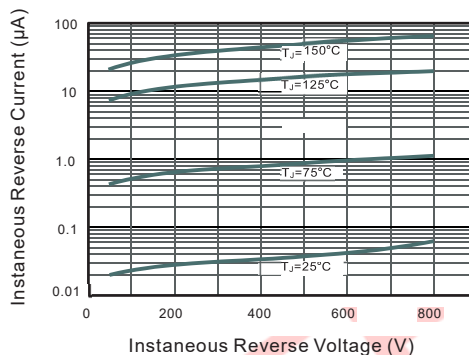


Fig.3 Typical Forward Characteristics

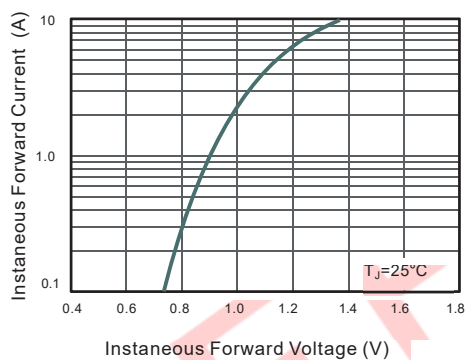


Fig.4 Typical Junction Capacitance

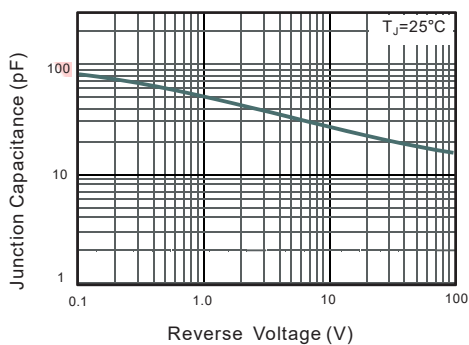
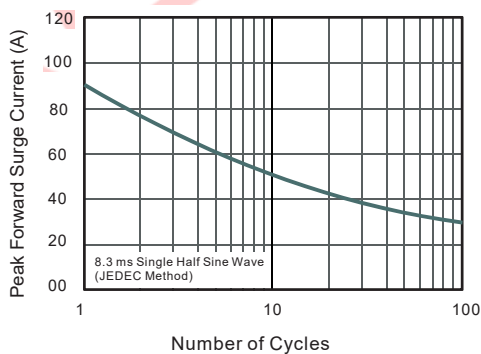


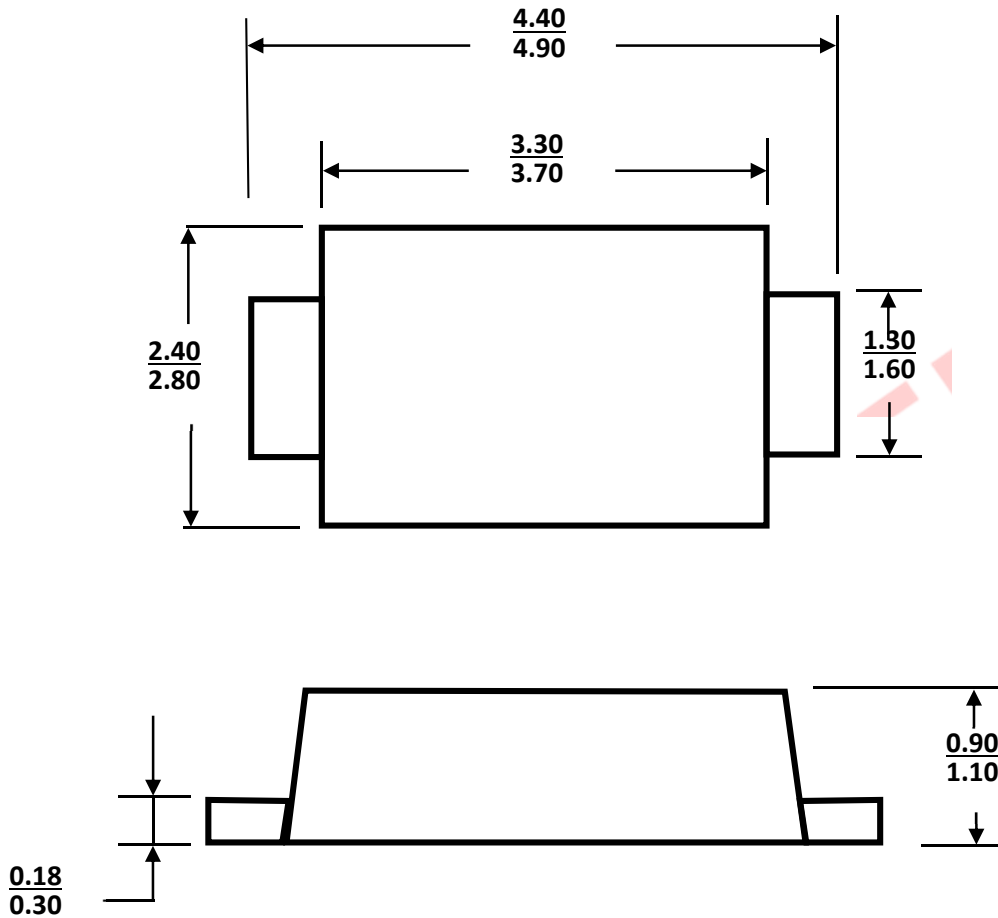
Fig.5 Maximum Non-Repetitive Peak Forward Surge Current



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PACKAGE OUTLINE

SMAF



Dimensions in millimeters

ORDERING INFORMATION

| Device | Package | Shipping |
|----------------------|---------|---------------------------------|
| S3AF-AT thru S3MF-AT | SMAF | 3,000/Tape & Reel (7 inches) |
| | | 10,000/ Tape & Reel (13 inches) |

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