

US3AF-AT THRU US3MF-AT

SURFACE ULTRAFAST RECOVERY RECTIFIERS

Forward Current-3A

Reverse Voltage-50V to 1000V

FEATURES

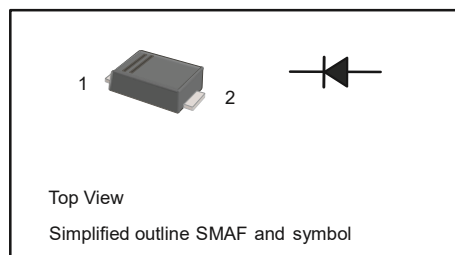
- ◆ For surface mount applications
- ◆ Glass passivated chip junction
- ◆ Low profile package
- ◆ Easy to pick and place
- ◆ Lead free in comply with EU RoHS 2011/65/EU directives

MECHANICAL DATA

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

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



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	US3AF -AT	US3BF -AT	US3DF -AT	US3GF -AT	US3JF -AT	US3KF -AT	US3MF -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 =125°C	I _{F(AV)}	3							A
Peak Forward Surge Current(Note1)	I _{FSM}	100							A
Maximum Forward Voltage at 3.0 A	V _F	1.0			1.3	1.68			V
Maximum DC Reverse Current at Rated DC Blocking Voltage T _A =25°C T _A =125°C	I _R	5 100							uA
Maximum Reverse Recovery Time (Note2)	T _{rr}	50				75			nS
Typical Thermal Resistance (Note3)	R _{θJA} R _{θJC}	50 16							°C/W
Operating and Storage Temperature Range	T _J ,T _{STG}	-55 to +150							°C

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

2. Measured at with $I_F=0.5\text{A}$, $I_{rr}=0.25\text{A}$.

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

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Rev:1.0

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RATINGS AND CHARACTERISTIC CURVES

Fig.1 Maximum Average Forward Current Rating

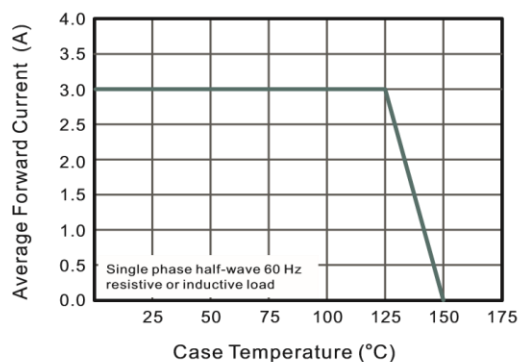


Fig.2 Typical Reverse Characteristics

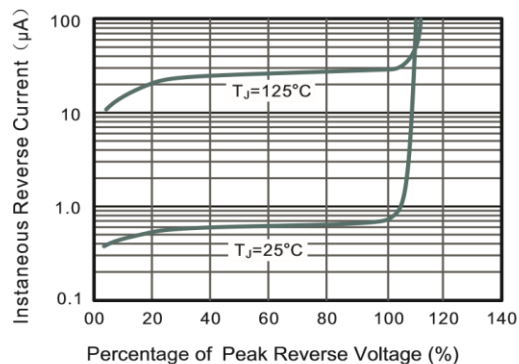


Fig.3 Typical Forward Characteristics

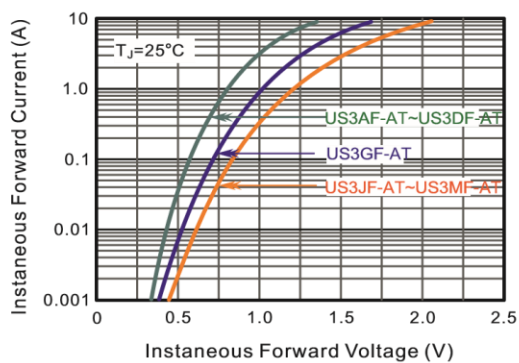
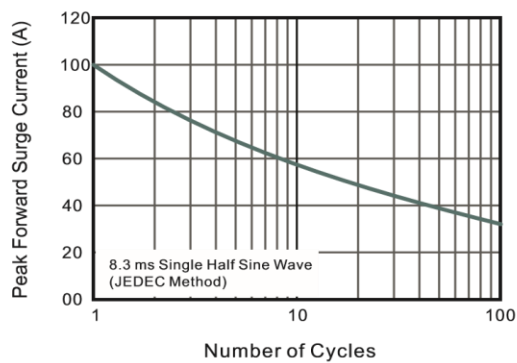


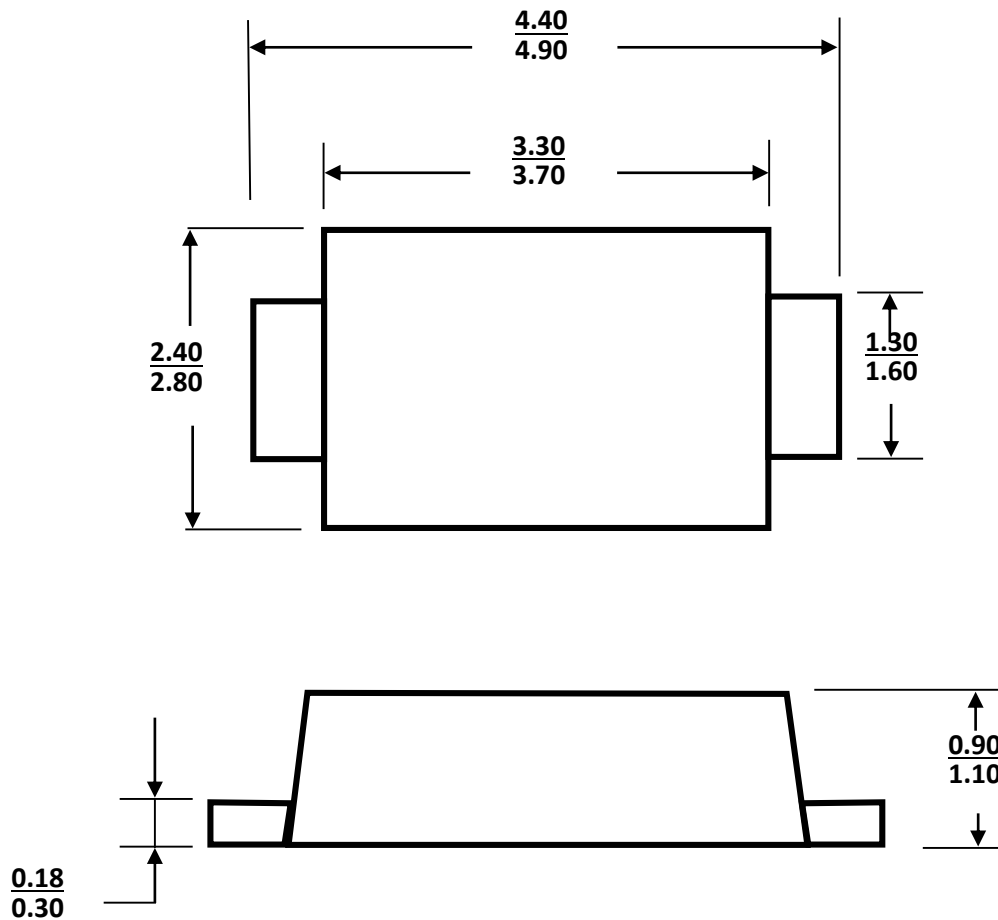
Fig.4 Maximum Non-Repetitive Peak Forward Surge Current



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PACKAGE OUTLINE

SMAF



Dimensions in millimeters

ORDERING INFORMATION

Device	Package	Shipping
US3AF-AT thru US3MF-AT	SMAF	3,000/Tape & Reel (7 inches)
		10,000/ Tape & Reel (13 inches)

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