



#### SUPERFAST RECOVERY RECTIFIERS

VOLTAGE 50~400 Volt **CURRENT** 1 Ampere

#### **FEATURES**

- · Plastic package has Underwriters Laboratory Flammability Classification 94V-O Flame Retardant Epoxy Molding Compound
- Exceeds environmental standards of MIL-S-19500/228
- · Super fast recovery times, high voltage
- Ultra thin profile package for space constrained utilization
- · Package suitable for automated handling
- Lead free in compliance with EU RoHS 2011/65/EU directive
- Green molding compound as per IEC61249 Std. . (Halogen Free)

#### **MECHANICAL DATA**

Case: SMAF Molded Plastic

Terminals: Solderable per MIL-STD-750, Method 2026

Polarity: Color band denotes cathode end Standard packaging: 12mm tape (EIA-481)

Weight: 0.0011 ounces, 0.0328 grams

Marking: Part number



Cathode Anode

### MAXIMUM RATINGS(TA=25°C unless otherwise noted)

| PARAMETER   |                      | SYMBOL          | EST1AF       | EST1BF | EST1CF | EST1DF | EST1EF | EST1GF | UNIT |
|---|----------------------|-----------------|--------------|--------|--------|--------|--------|--------|------|
| Maximum recurrent peak reverse voltage  |                      | VRRM            | 50           | 100    | 150    | 200    | 300    | 400    | V    |
| Maximum rms voltage   |                      | VRMS            | 35           | 70     | 105    | 140    | 210    | 280    | V    |
| Maximum dc blocking voltage   |                      | Vr              | 50           | 100    | 150    | 200    | 300    | 400    | V    |
| Maximum average forward rectified current   |                      | l F(AV)         | 1            |        |        |        |        |        | Α    |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load |                      | İFSM            | 30           |        |        |        |        | Α      |      |
| Maximum forward voltage at 1A   |                      | VF              | 0.95 1.25    |        |        |        |        | 25     | V    |
| Maximum dc reverse current at rated dc blocking voltage                           |                      | IR              | 1            |        |        |        |        | μА     |      |
| Typical junction capacitance  | (Note 1)             | Сл              |              | 2      | 20     |        | 16     |        | pF   |
| Maximum reverse recovery time   | (Note 2)             | T <sub>RR</sub> | 25           |        |        |        |        |        | nS   |
| Typical thermal resistance  | (Note 3)<br>(Note 4) | Røjl<br>Røja    | 20<br>150    |        |        |        |        | °C/W   |      |
| Operating junction temperature range  |                      | TJ              | -55 to + 150 |        |        |        |        | °C     |      |
| Storage temperature range   |                      | Тѕтс            | -55 to + 150 |        |        |        |        | °C     |      |

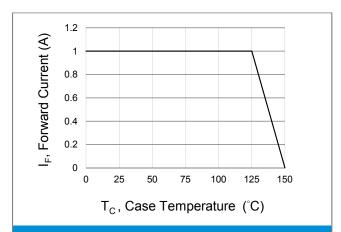
Note:1.Measured at 1 MHz and Applied Reverse Voltage of 4 Volts.

- 2.Reverse Recovery Test Conditions: IF=0.5A, IR=1A, Recover to 0.25A.
- 3. Mounted on a FR4 PCB, single-sided copper, with 10cm\*10cm copper pad area.
- 4. Mounted on a FR4 PCB, single-sided copper, mini pad.

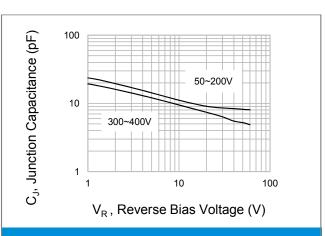
SMAF Unit: inch(mm) .65) 0.044(1.10) 0.035(0.90) 0.193(4.90) 0.177(4.50) 0.038(0.95)







**Fig.1 Forward Current Derating Curve** 



**Fig.2 Typical Junction Capacitance** 

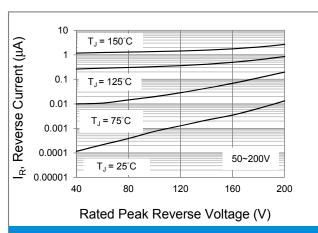


Fig.3 Typical Reverse Characteristics

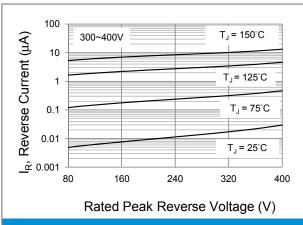


Fig.4 Typical Reverse Characteristics

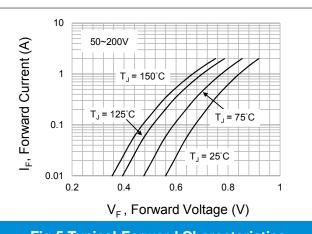


Fig.5 Typical Forward Characteristics

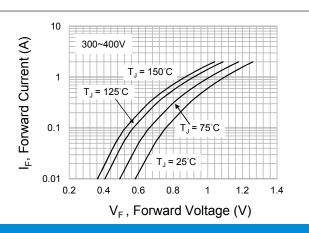
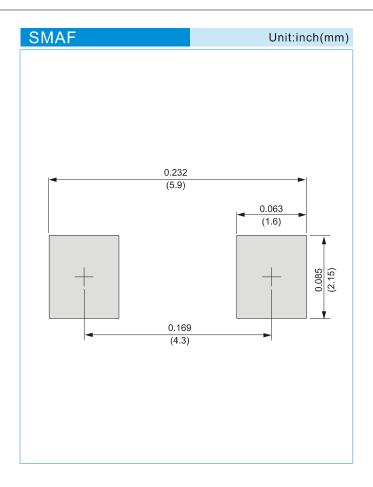


Fig.6 Typical Forward Characteristics





### **MOUNTING PAD LAYOUT**



### **ORDER INFORMATION**

· Packing information

T/R - 10K per 13" plastic Reel

T/R - 3K per 7" plastic Reel





### Part No\_packing code\_Version

EST1AF\_R1\_00001 EST1AF\_R2\_00001

### For example:



|                                      | Version Code XXXXX   |                                   |                      |            |                      |                                       |
|--------------------------------------|----------------------|-----------------------------------|----------------------|------------|----------------------|---------------------------------------|
| Packing type                         | 1 <sup>st</sup> Code | Packing size code                 | 2 <sup>nd</sup> Code | HF or RoHS | 1 <sup>st</sup> Code | 2 <sup>nd</sup> ~5 <sup>th</sup> Code |
| Tape and Ammunition Box (T/B)        | Α                    | N/A                               | 0                    | HF         | 0                    | serial number                         |
| Tape and Reel<br>(T/R)               | R                    | 7"                                | 1                    | RoHS       | 1                    | serial number                         |
| Bulk Packing<br>(B/P)                | В                    | 13"                               | 2                    |            |                      |                                       |
| Tube Packing<br>(T/P)                | Т                    | 26mm                              | X                    |            |                      |                                       |
| Tape and Reel (Right Oriented) (TRR) | S                    | 52mm                              | Y                    |            |                      |                                       |
| Tape and Reel (Left Oriented) (TRL)  | L                    | PANASERT T/B CATHODE UP<br>(PBCU) | U                    |            |                      |                                       |
| FORMING                              | F                    | PANASERT T/B CATHODE DOWN (PBCD)  | D                    |            |                      |                                       |





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