



# EST1AF SERIES

## 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

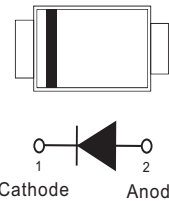
Terminals : Solderable per MIL-STD-750, Method 2026

Polarity : Color band denotes cathode end

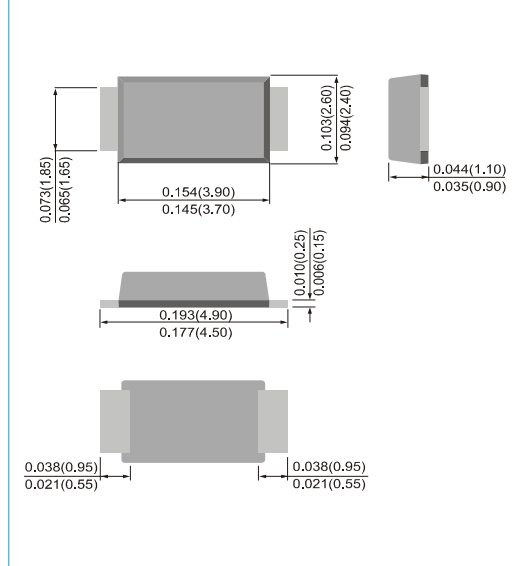
Standard packaging : 12mm tape (EIA-481)

Weight : 0.0011 ounces, 0.0328 grams

Marking : Part number



**SMAF** Unit : inch(mm)



### MAXIMUM RATINGS(T<sub>A</sub>=25°C unless otherwise noted)

PARAMETER	SYMBOL	EST1AF	EST1BF	EST1CF	EST1DF	EST1EF	EST1GF	UNIT
Maximum recurrent peak reverse voltage	V <sub>RRM</sub>	50	100	150	200	300	400	V
Maximum rms voltage	V <sub>RMS</sub>	35	70	105	140	210	280	V
Maximum dc blocking voltage	V <sub>R</sub>	50	100	150	200	300	400	V
Maximum average forward rectified current	I <sub>F(AV)</sub>	1						A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load	I <sub>FSM</sub>	30						A
Maximum forward voltage at 1A	V <sub>F</sub>	0.95			1.25			V
Maximum dc reverse current at rated dc blocking voltage	I <sub>R</sub>	1						μA
Typical junction capacitance (Note 1)	C <sub>J</sub>	20			16			pF
Maximum reverse recovery time (Note 2)	T <sub>RR</sub>	25						nS
Typical thermal resistance (Note 3) (Note 4)	R <sub>θJL</sub> R <sub>θJA</sub>				20 150			°C/W
Operating junction temperature range	T <sub>J</sub>	-55 to + 150						°C
Storage temperature range	T <sub>STG</sub>	-55 to + 150						°C

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

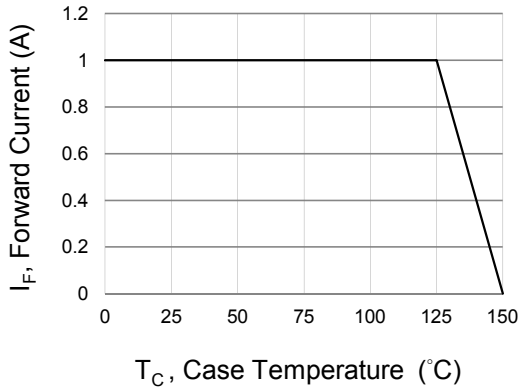
2.Reverse Recovery Test Conditions: I<sub>F</sub>=0.5A, I<sub>R</sub>=1A, Recover to 0.25A.

3.Mounted on a FR4 PCB, single-sided copper, with 10cm\*10cm copper pad area.

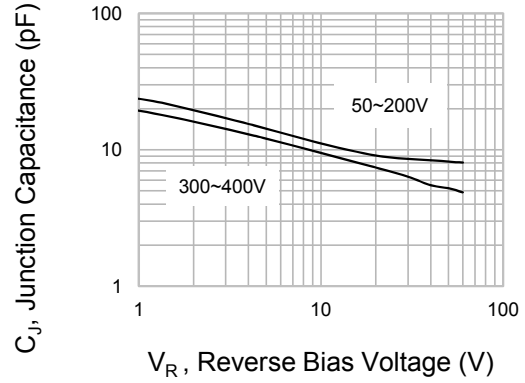
4.Mounted on a FR4 PCB, single-sided copper, mini pad.



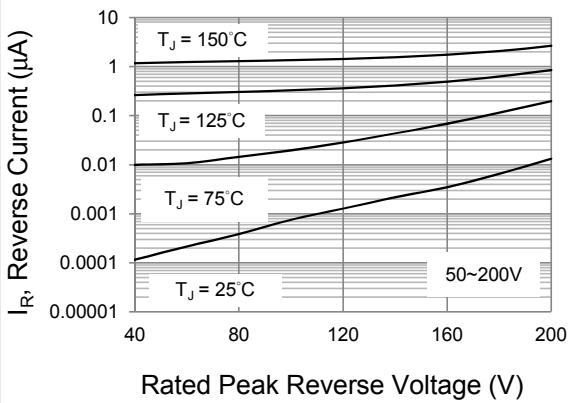
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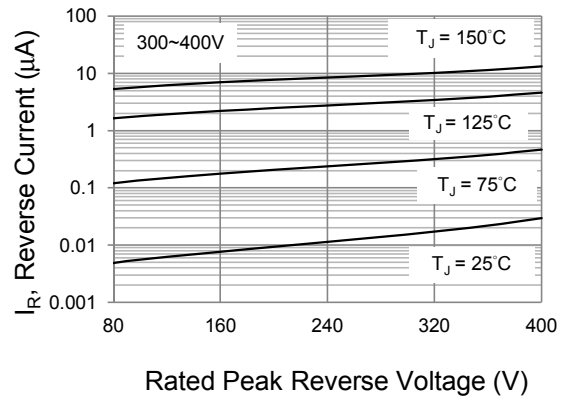
**Fig.1 Forward Current Derating Curve**



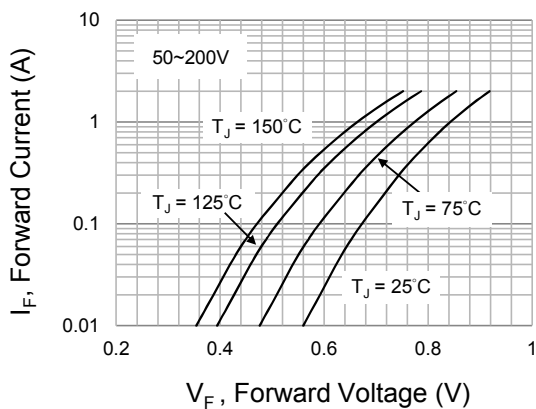
**Fig.2 Typical Junction Capacitance**



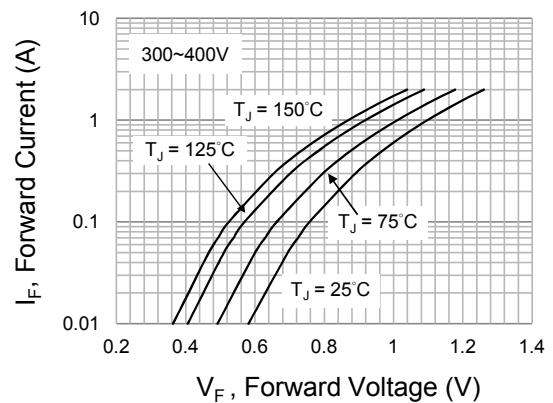
**Fig.3 Typical Reverse Characteristics**



**Fig.4 Typical Reverse Characteristics**



**Fig.5 Typical Forward Characteristics**

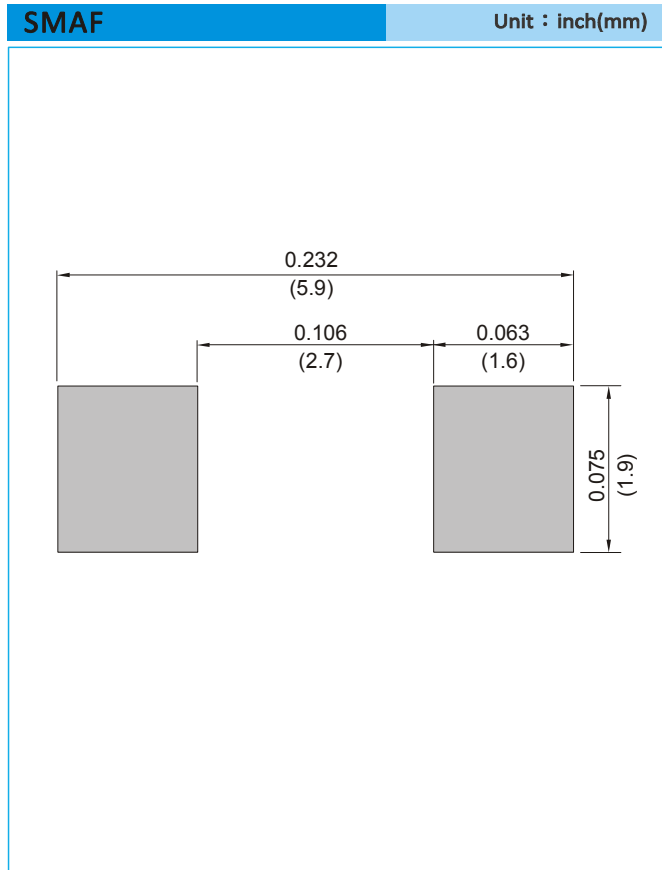


**Fig.6 Typical Forward Characteristics**



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### MOUNTING PAD LAYOUT



### ORDER INFORMATION

- Packing information
  - T/R - 10K per 13" plastic Reel
  - T/R - 3K per 7" plastic Reel



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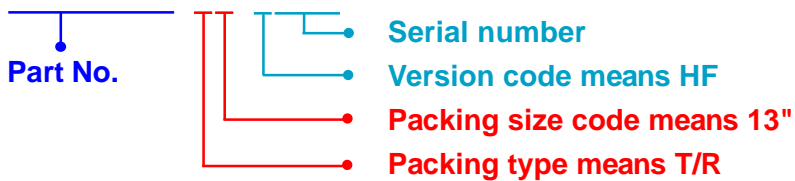
### Part No\_packing code\_Version

EST1AF\_R1\_00001

EST1AF\_R2\_00001

For example :

**RB500V-40\_R2\_00001**



Packing Code <b>XX</b>				Version Code <b>XXXXX</b>		
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)	<b>A</b>	N/A	<b>0</b>	<b>HF</b>	<b>0</b>	serial number
Tape and Reel (T/R)	<b>R</b>	7"	<b>1</b>	<b>RoHS</b>	<b>1</b>	serial number
Bulk Packing (B/P)	<b>B</b>	13"	<b>2</b>			
Tube Packing (T/P)	<b>T</b>	26mm	<b>X</b>			
Tape and Reel (Right Oriented) (TRR)	<b>S</b>	52mm	<b>Y</b>			
Tape and Reel (Left Oriented) (TRL)	<b>L</b>	PANASERT T/B CATHODE UP (PBCU)	<b>U</b>			
FORMING	<b>F</b>	PANASERT T/B CATHODE DOWN (PBCD)	<b>D</b>			



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