

# EST1GF

## SUPERFAST RECOVERY RECTIFIERS

|                |                  |                |                  |
|----------------|------------------|----------------|------------------|
| <b>VOLTAGE</b> | <b>400 Volts</b> | <b>CURRENT</b> | <b>1 Amperes</b> |
|----------------|------------------|----------------|------------------|

### 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 comply with EU RoHS 2011/65/EU directives
- Green molding compound as per IEC61249 Std. . (Halogen Free)

### MECHANICAL DATA

Case : SMAF Molded Plastic

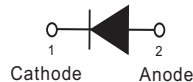
Terminals : Solderable per MIL-STD-750, Method 2026

Polarity : Color band denotes cathode end

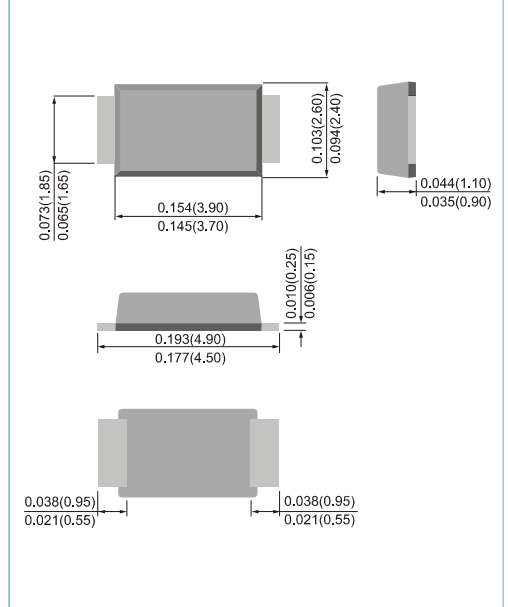
Standard packaging : 12mm tape (EIA-481)

Weight : 0.0011 ounces, 0.0328 grams

Marking : EST1GF



### SMAF Unit : inch(mm)



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

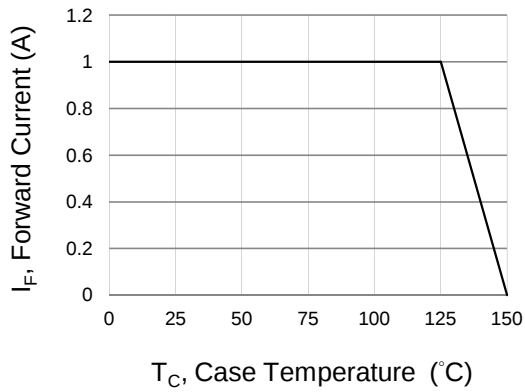
| PARAMETER                                                                         | SYMBOL                               | VALUE        | UNIT |
|-----------------------------------------------------------------------------------|--------------------------------------|--------------|------|
| Maximum recurrent peak reverse voltage                                            | V <sub>RRM</sub>                     | 400          | V    |
| Maximum rms voltage                                                               | V <sub>RMS</sub>                     | 280          | V    |
| Maximum dc blocking voltage                                                       | V <sub>R</sub>                       | 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>                       | 1.25         | V    |
| Maximum dc reverse current                                                        | I <sub>R</sub>                       | 1            | μA   |
| Typical junction capacitance<br>Measured at 1MHz and applied V <sub>R</sub> =4V   | C <sub>J</sub>                       | 16           | pF   |
| Typical thermal resistance<br>(Note 1)<br>(Note 2)                                | R <sub>θJL</sub><br>R <sub>θJA</sub> | 20<br>150    | °C/W |
| Maximum reverse recovery time<br>(Note 3)                                         | T <sub>RR</sub>                      | 25           | nS   |
| 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.Mounted on an FR4 PCB, single-sided copper, with 100cm<sup>2</sup> copper pad area

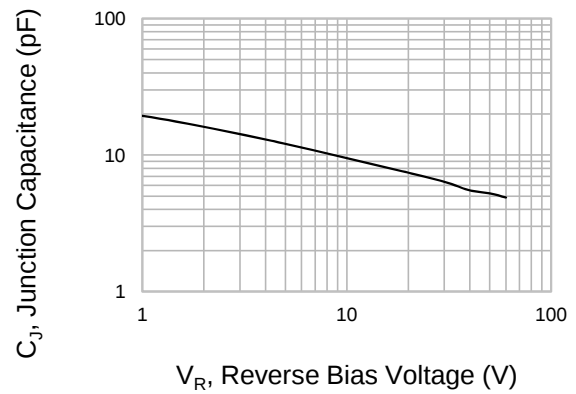
2.Mounted on an FR4 PCB, single-sided copper, mini pad.

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

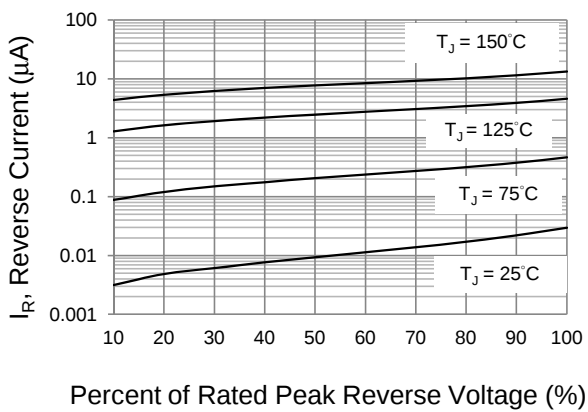
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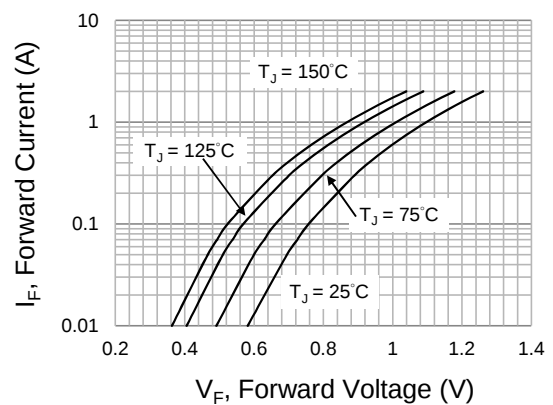
**Fig.1 Forward Current Derating Curve**



**Fig.2 Typical Junction Capacitance**



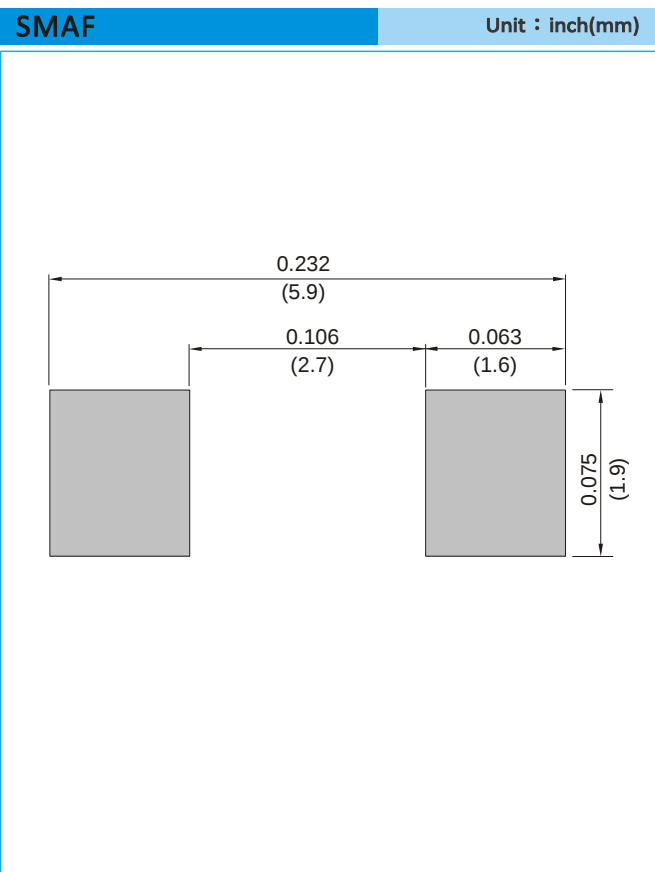
**Fig.3 Typical Reverse Characteristics**



**Fig.4 Typical Forward Characteristics**

## EST1GF

### MOUNTING PAD LAYOUT



### ORDER INFORMATION

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

## EST1GF

### Part No\_packing code\_Version

EST1GF\_R1\_00001

EST1GF\_R2\_00001

For example :

RB500V-40\_R2\_00001

Part No.

Serial number

Version code means HF

Packing size code means 13"

Packing type means T/R

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



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