



# EST1DF

## SURFACE MOUNT RECTIFIER

**VOLTAGE** 200 Volts **CURRENT** 2 Amperes

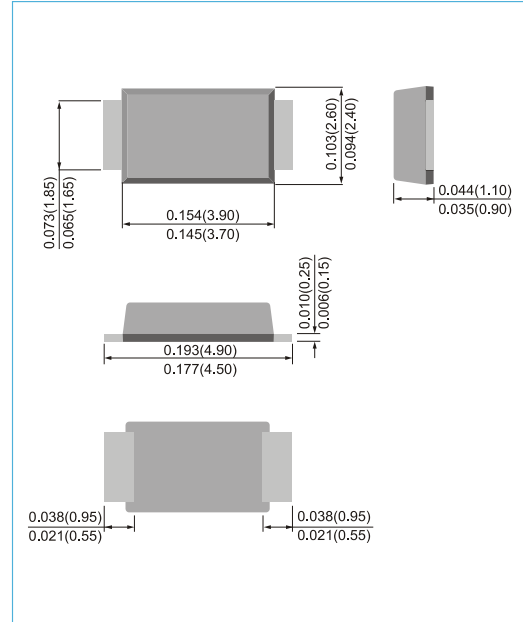
**SMAF** Unit : inch(mm)

### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- For surface mounted applications
- Glass passivated junction
- Easy pick and place
- High temperature metallurgically bonden-no compression contacts as found in other diode-constructed rectifiers
- 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: Epoxy molded
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.0011 ounces, 0.0328 grams
- Polarity : Color band denotes cathode end



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

PARAMETER	SYMBOL	EST1DF	UNITS
Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	200	V
RMS Voltage	V <sub>RMS</sub>	140	V
DC Blocking Voltage	V <sub>R</sub>	200	V
Average Forward Current	I <sub>F(AV)</sub>	2	A
Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load(JEDEC method)	I <sub>FSM</sub>	50	A
Forward Voltage at 2.0A	V <sub>F typ</sub>	0.95	V
	V <sub>F max</sub>	1.05	V
DC Reverse Current at Rated DC Blocking Voltage T <sub>J</sub> =25°C	I <sub>R</sub>	1	μA
Reverse Recovery Time (Note 3)	t <sub>rr</sub>	16	ns
Typical Junction capacitance V <sub>R</sub> =4V, 1MHz	C <sub>J</sub>	30	pF
Typical Thermal Resistance ,Junction to Lead (Note 1) Junction to Ambient (Note 2)	R <sub>θJL</sub>	25	°C / W
	R <sub>θJA</sub>	150	
Operating Junction Temperature and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55 to +150	°C

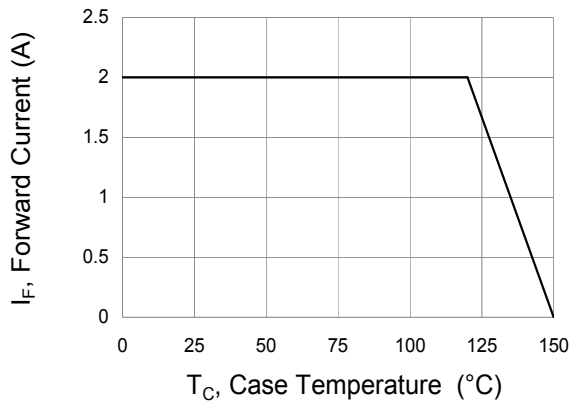
#### NOTES :

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>=1.0A, Recover to 0.25A.

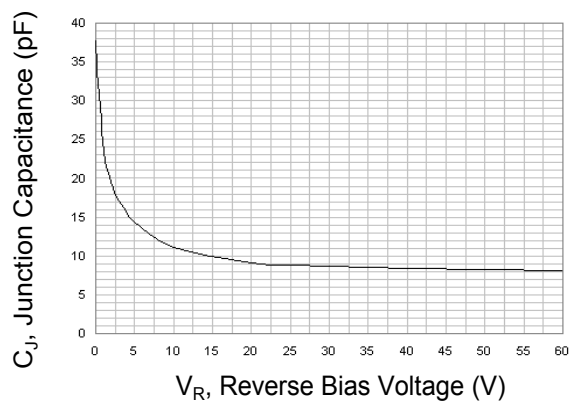


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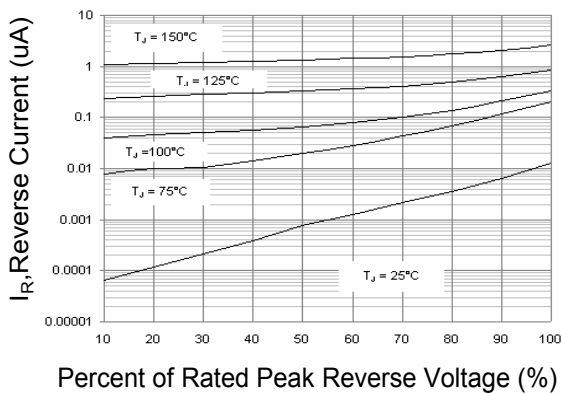
## RATING AND CHARACTERISTIC CURVES



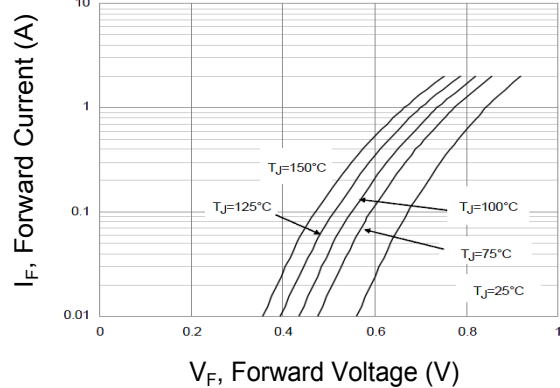
**Fig.1 Forward Current Derating Curve**



**Fig.2 Typical Junction Capacitance**



**Fig.3 Typical Reverse Characteristics**

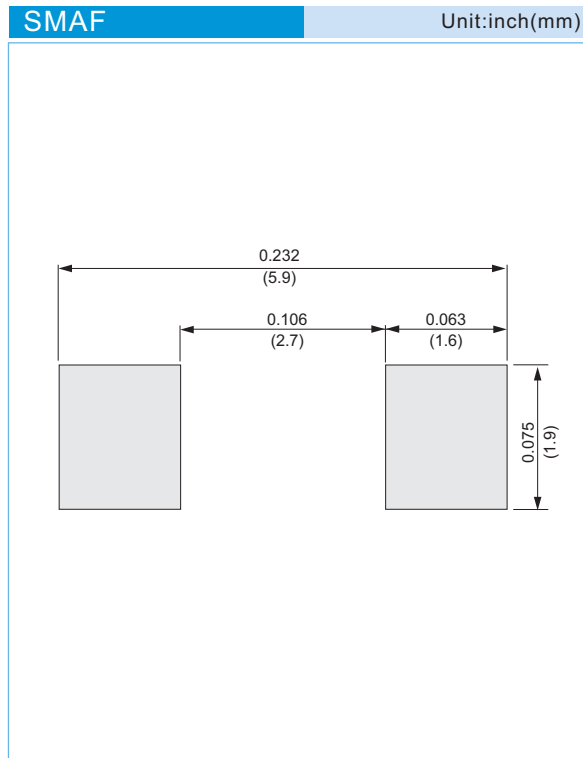


**Fig.4 Typical Forward Characteristics**



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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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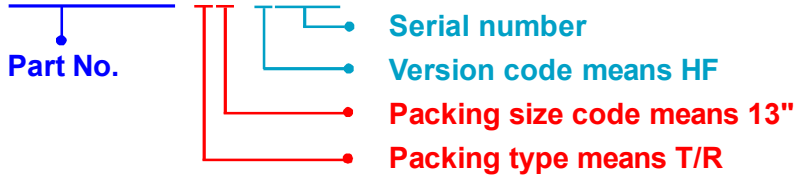
## Part No\_packing code\_Version

EST1DF\_R1\_00001

EST1DF\_R2\_00001

For example :

**RB500V-40\_R2\_00001m**



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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