



# ER2AF SERIES

## SURFACE MOUNT SUPERFAST RECTIFIER

**VOLTAGE** 50~600 Volt **CURRENT** 2 Ampere

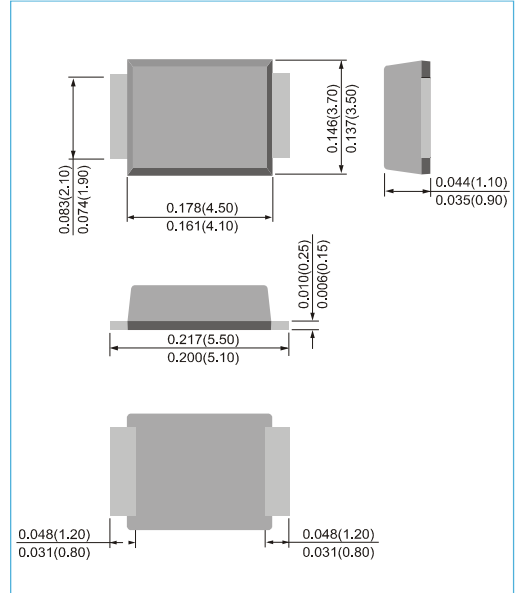
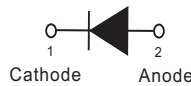
**SMBF** Unit : inch(mm)

### FEATURES

- For surface mounted applications in order to optimize board space
- High temperature metallurgically bonded-no compression
- Easy pick and place
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- Glass passivated junction
- Lead free in compliance with EU RoHS 2011/65/EU directive.
- Green molding compound as per IEC61249 Std. . (Halogen Free)

### MECHANICAL DATA

- Case: SMBF molded plastic
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.0018 ounces, 0.05 grams
- Polarity: Color band denotes cathode end



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (Ta=25°C unless otherwise noted)

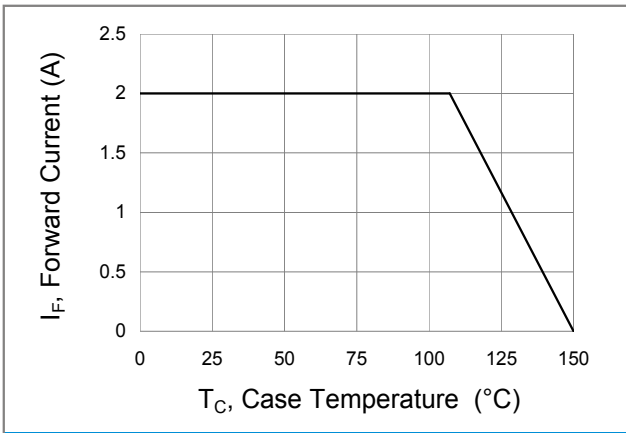
PARAMETER	SYMBOL	ER2AF	ER2BF	ER2CF	ER2DF	ER2EF	ER2GF	ER2JF	UNITS	
Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	150	200	300	400	600	V	
RMS Voltage	$V_{RMS}$	35	70	105	140	210	280	420	V	
DC Blocking Voltage	$V_R$	50	100	150	200	300	400	600	V	
Average Forward Current	$I_{F(AV)}$	2							A	
Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	50							A	
Forward Voltage at 2A	$V_F$	0.95			1.25		1.7		V	
DC Reverse Current at Rated DC Blocking Voltage $T_j=25^\circ\text{C}$	$I_R$	1							$\mu\text{A}$	
Typical Junction capacitance $V_R=4\text{V}, f=1\text{MHz}$	$C_j$	30			20			pF		
Typical Thermal Resistance ,Junction to Lead (Note 1) Junction to Ambient (Note 2)	$R_{\theta JL}$ $R_{\theta JA}$	18				135				$^\circ\text{C} / \text{W}$
Reverse Recovery Time ( $I_F=0.5\text{A}, I_R=1\text{A}, I_{tr}=0.25\text{A}$ )	$T_{rr}$	35							ns	
Operating Junction Temperature and Storage Temperature Range	$T_j, T_{STG}$	-55 to +150							$^\circ\text{C}$	

NOTES : 1. Mounted on a FR4 PCB, single-sided copper, with 48cm<sup>2</sup> copper pad area  
2. Mounted on a FR4 PCB, single-sided copper, mini pad.

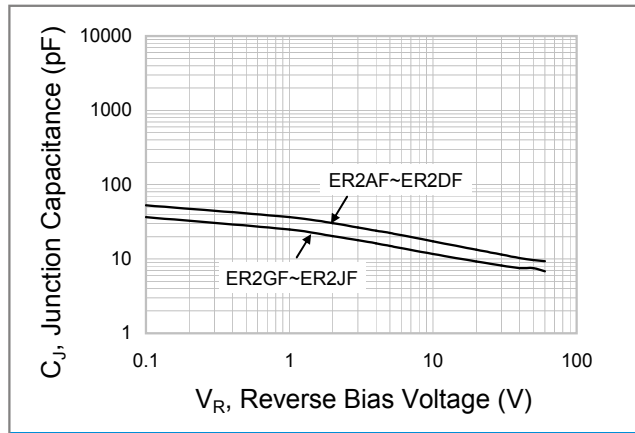


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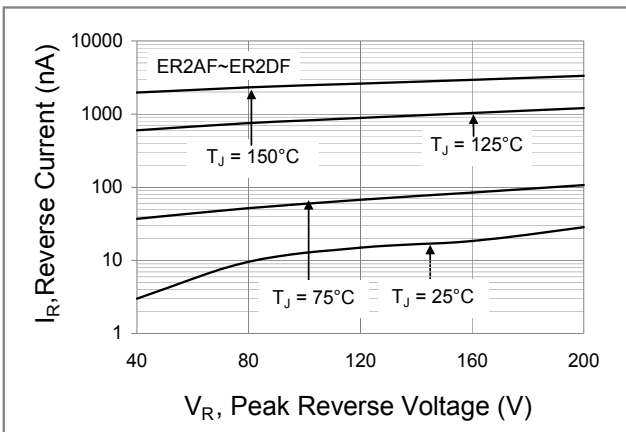
## RATING AND CHARACTERISTIC CURVES



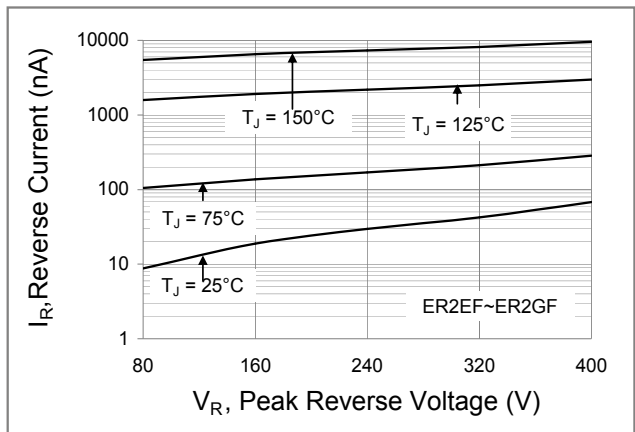
**Fig.1 Forward Current Derating Curve**



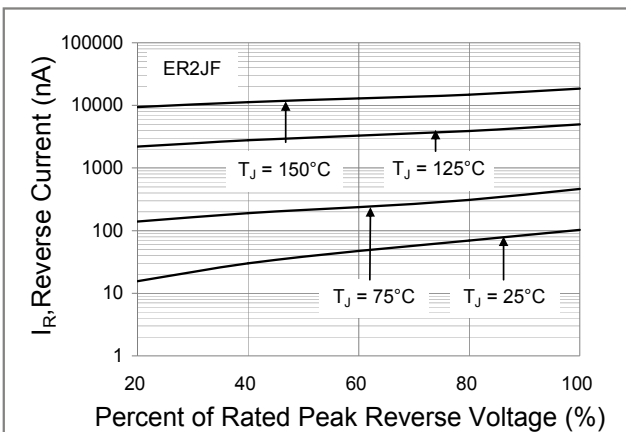
**Fig.2 Typical Junction Capacitance**



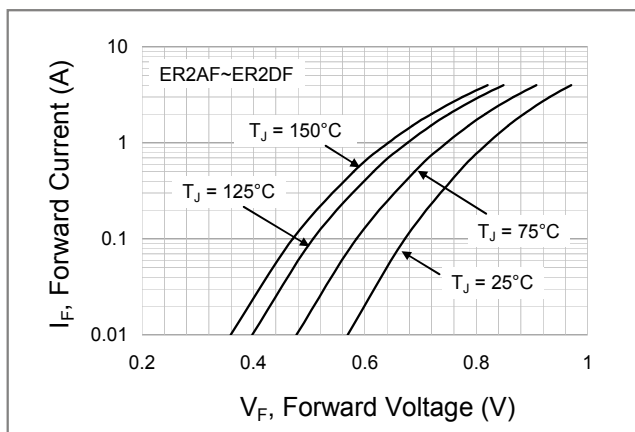
**Fig.3 Typical Reverse Characteristics**



**Fig.4 Typical Reverse Characteristics**



**Fig.5 Typical Reverse Characteristics**

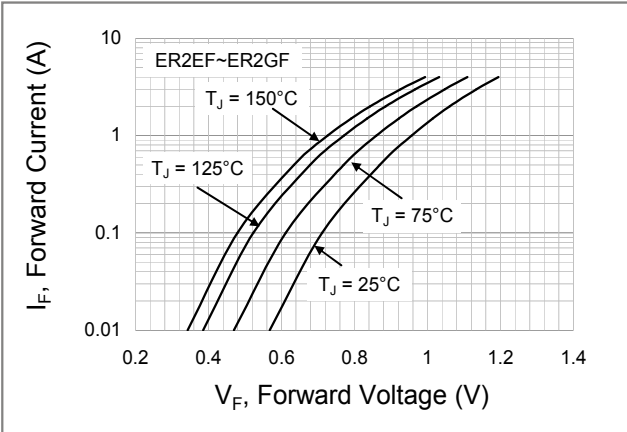


**Fig.6 Typical Forward Characteristics**

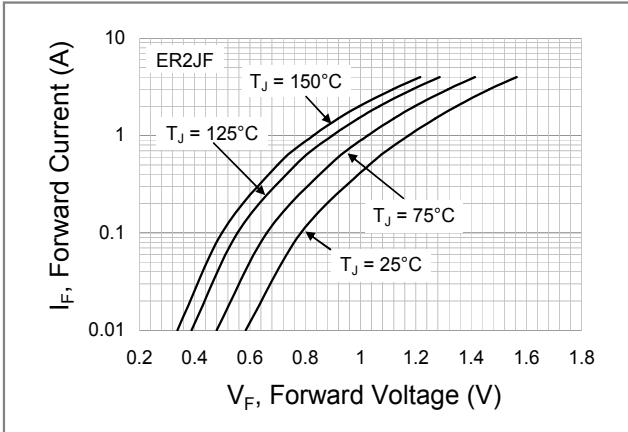


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## RATING AND CHARACTERISTIC CURVES



**Fig.7 Typical Forward Characteristics**

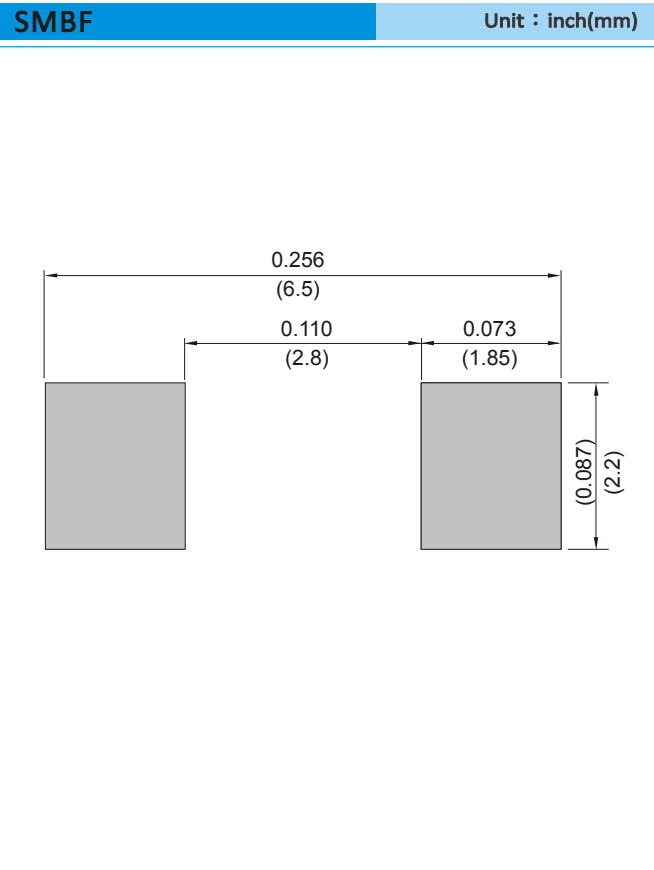


**Fig.8 Typical Forward Characteristics**



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## MOUNTING PAD LAYOUT



## ORDER INFORMATION

- Packing information  
T/R - 5K per 13" plastic Reel



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Part No\_packing code\_Version

ER2AF\_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>	HF	<b>0</b>	serial number
Tape and Reel (T/R)	<b>R</b>	7"	<b>1</b>	RoHS	<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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