



# SS3020HE SERIES

## SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

**VOLTAGE** 20~200 Volts **CURRENT** 3 Amperes

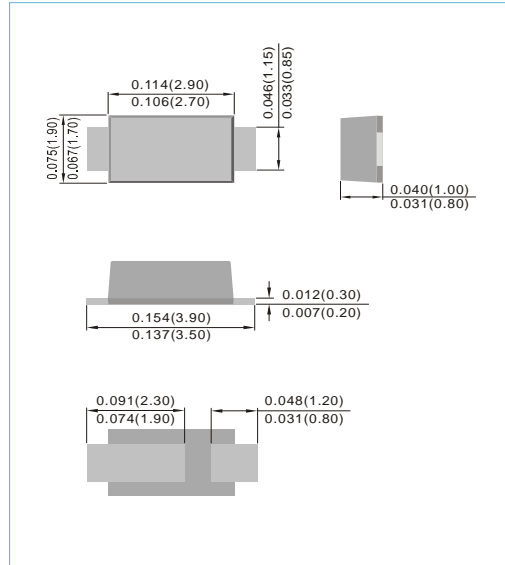
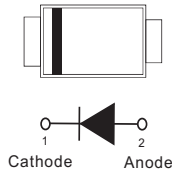
**SOD-123HE** Unit : inch(mm)

### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- For surface mounted applications in order to optimize board space
- Low power loss,high efficiency
- High surge capacity
- Lead free in comply with EU RoHS 2011/65/EU directives.
- Green molding compound as per IEC61249 Std. . (Halogen Free)

### MECHANICAL DATA

Case: SOD-123HE molded plastic  
 Terminals: Solder plated, solderable per MIL-STD-750,Method 2026  
 Polarity: Color band denotes cathode end  
 Approx weight: 0.00015 ounces, 0.004 grams



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.  
 Resistive or inductive load.

PARAMETER	SYMBOL	SS3020-HE	SS3030-HE	SS3040-HE	SS3060-HE	SS30100-HE	SS30150-HE	SS30200-HE	UNITS
Marking Code	-	EA	EB	EC	ED	EF	EH	EJ	-
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	20	30	40	60	100	150	200	V
Maximum RMS Voltage	$V_{RMS}$	14	21	28	42	70	105	140	V
Maximum DC Blocking Voltage	$V_{DC}$	20	30	40	60	100	150	200	V
Maximum Average Forward Current at $T_L=75^\circ\text{C}$	$I_{F(AV)}$	3							A
Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	80							A
Maximum Forward Voltage at 3A (Note 1)	$V_F$	0.52			0.65	0.8	0.86	0.86	V
Maximum DC Reverse Current $T_J=25^\circ\text{C}$	$I_R$	160			100	20	20	20	$\mu\text{A}$
Typical Thermal Resistance (Note 2)	$R_{\theta JL}$ $R_{\theta JA}$	20 105							$^\circ\text{C} / \text{W}$
Operating Junction Temperature Range	$T_J$	-55 to +125			-55 to +150				$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-55 to +125			-55 to +150				$^\circ\text{C}$

**NOTES :**

1. Pulse Test with  $PW = 300\mu\text{sec}$ , 1% Duty Cycle.
2. Mounted on 50cm<sup>2</sup> FR-4 PCB Board.



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## RATING AND CHARACTERISTIC CURVES

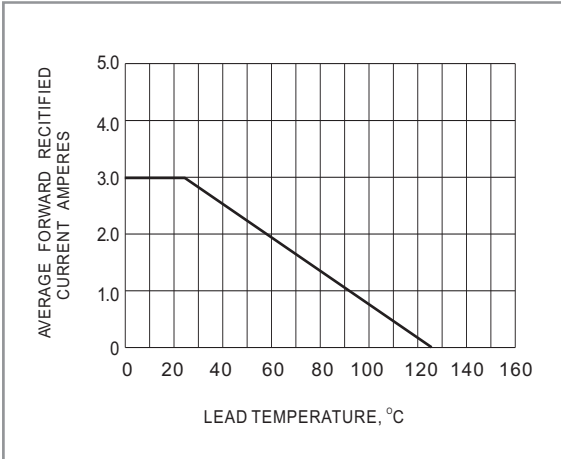


Fig.1- FORWARD CURRENT DERATING CURVE

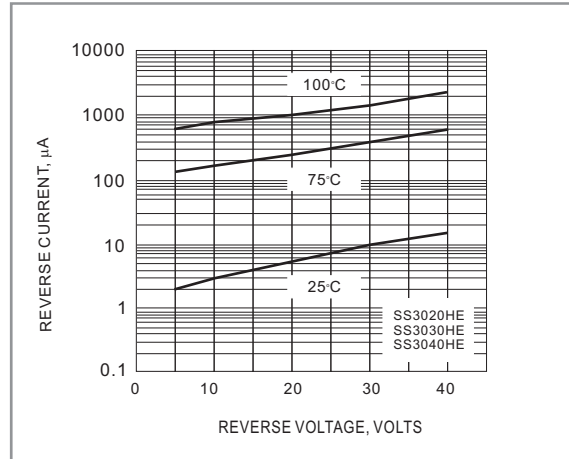


Fig.2- TYPICAL REVERSE CHARACTERISTICS

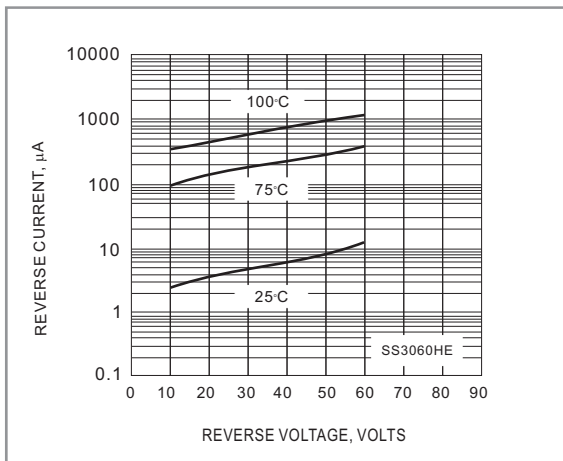


Fig.3- TYPICAL REVERSE CHARACTERISTICS

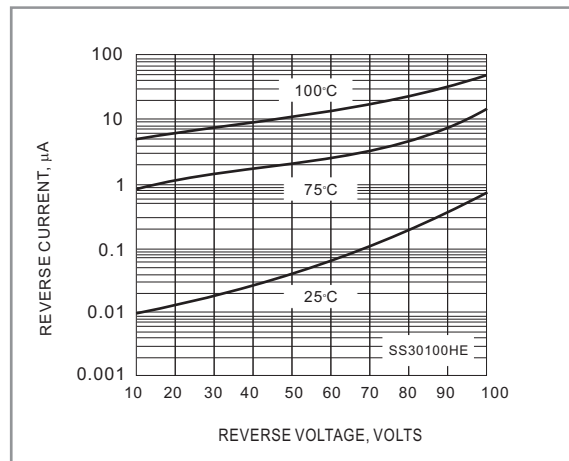


Fig.4- TYPICAL REVERSE CHARACTERISTICS

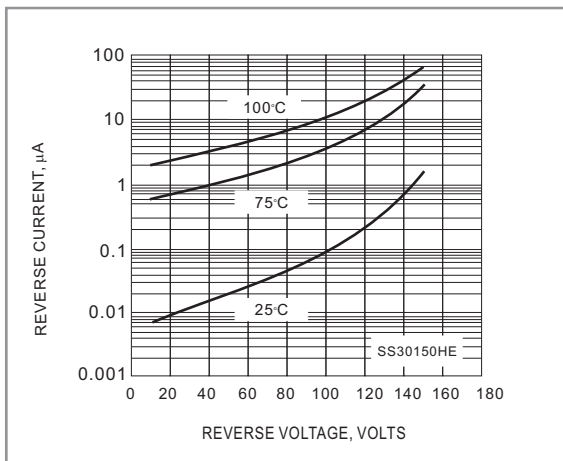


Fig.5- TYPICAL REVERSE CHARACTERISTICS

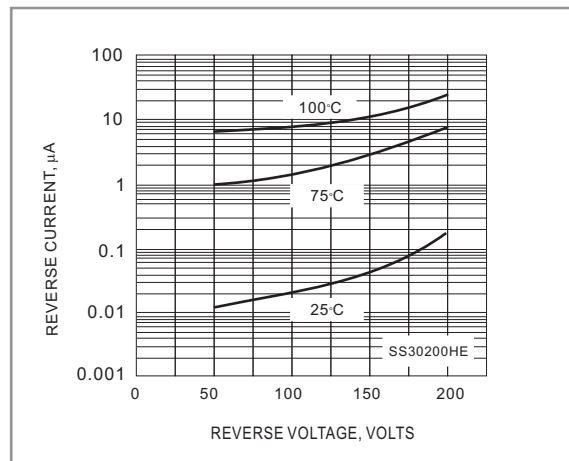
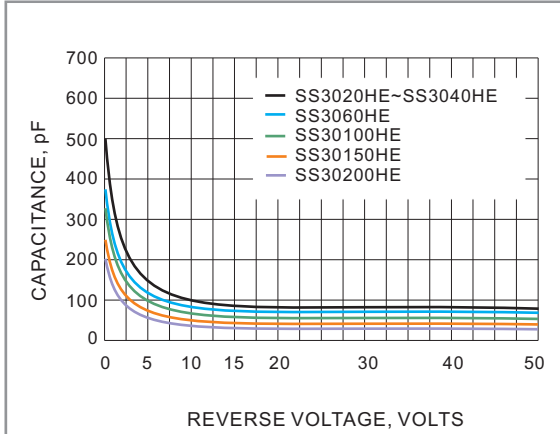


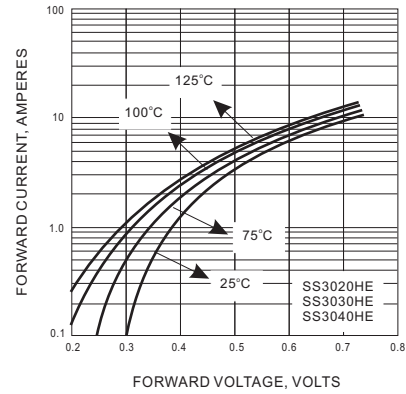
Fig.6- TYPICAL REVERSE CHARACTERISTICS



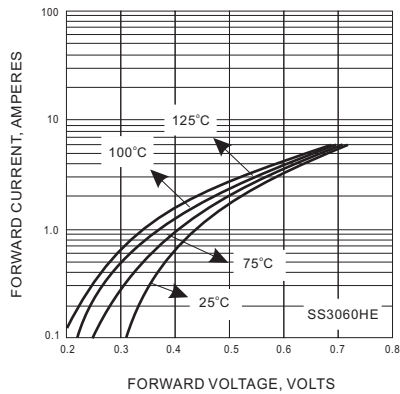
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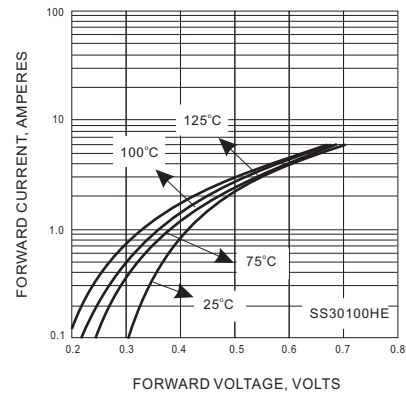
**Fig.7- TYPICAL JUNCTION CAPACITANCE**



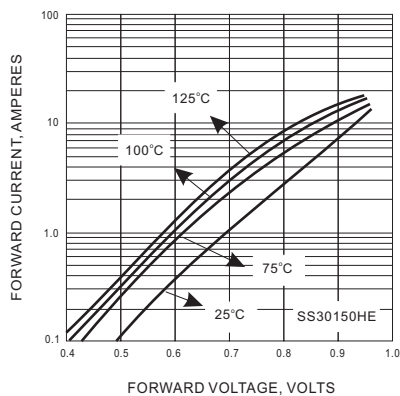
**Fig.8- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



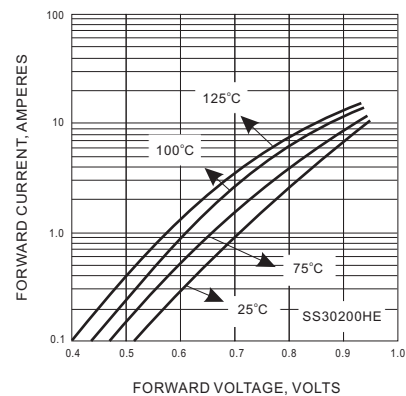
**Fig.9- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



**Fig.10- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



**Fig.11- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



**Fig.12- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**

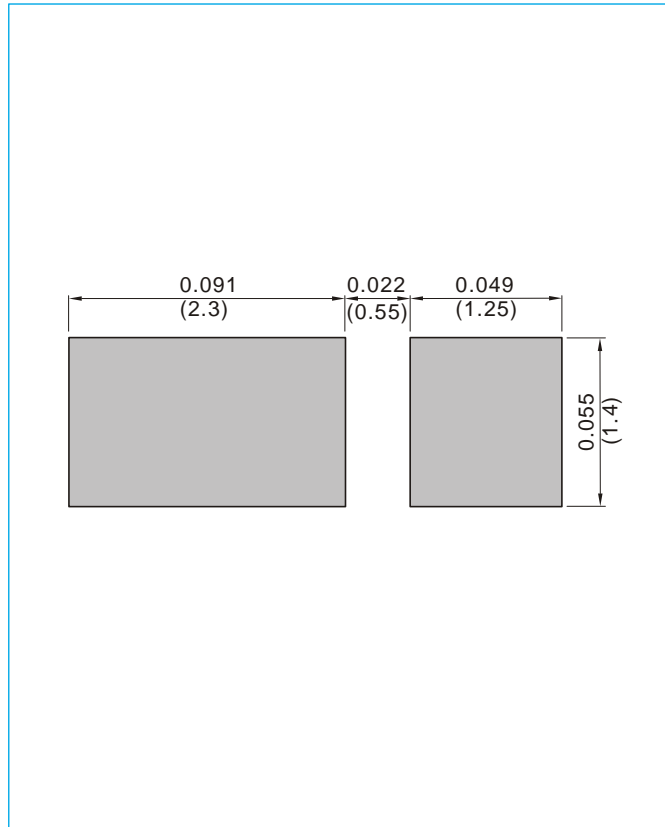


## SS3020HE SERIES

### MOUNTING PAD LAYOUT

SOD-123HE

Unit : inch(mm)



### 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

SS3020HE\_R1\_00001

SS3020HE\_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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