



# SB820D SERIES

## SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

<b>VOLTAGE</b>	<b>20 to 60 Volt</b>	<b>CURRENT</b>	<b>8 Ampere</b>
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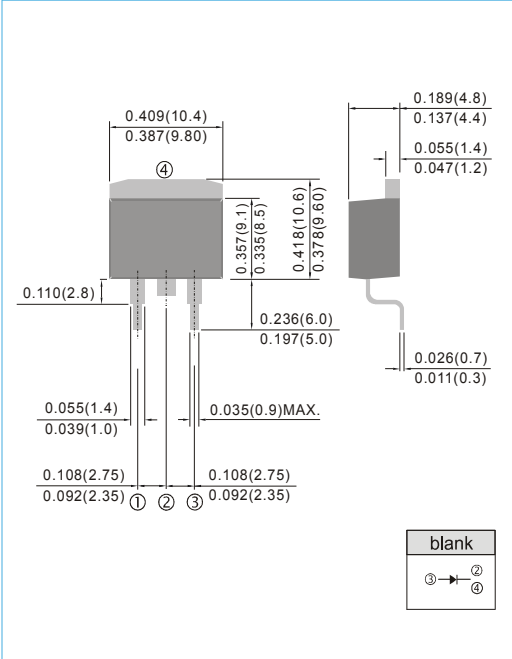
<b>TO-263 / D<sup>2</sup>PAK</b>	Unit : inch(mm)
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### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O utilizing Flame Retardant Epoxy Molding Compound.
- Low power loss, high efficiency.
- Low forward voltage, high current capability
- High surge capacity.
- For use in low voltage,high frequency inverters free wheeling , and polarity protection applications.
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

### MECHANICAL DATA

- Case: TO-263 / D<sup>2</sup>PAK molded plastic package
- Terminals: Lead solderable per MIL-STD-750, Method 2026
- Polarity: As marked.
- Weight: 0.049 ounces, 1.38 grams



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load.  
For capacitive load, derate current by 20%

PARAMETER	SYMBOL	SB820D	SB830D	SB840D	SB850D	SB860D	UNITS
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	20	30	40	50	60	V
Maximum RMS Voltage	$V_{RMS}$	14	21	28	35	42	V
Maximum DC Blocking Voltage	$V_{DC}$	20	30	40	50	60	V
Maximum Average Forward Current at $T_c = 75^\circ C$	$I_{F(AV)}$	8					A
Peak Forward Surge Current :8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	150					A
Maximum Forward Voltage at 8.0A	$V_F$	0.55			0.75		V
Maximum DC Reverse Current at Rated DC Blocking Voltage $T_J = 25^\circ C$ $T_J = 100^\circ C$	$I_R$	0.2 50					mA
Typical Thermal Resistance	$R_{\theta JC}$	3					$^\circ C / W$
Operating Junction Temperature Range	$T_J$	-55 to +125			-55 to +150		$^\circ C$
Storage Temperature Range	$T_{STG}$	-55 to +150					$^\circ C$

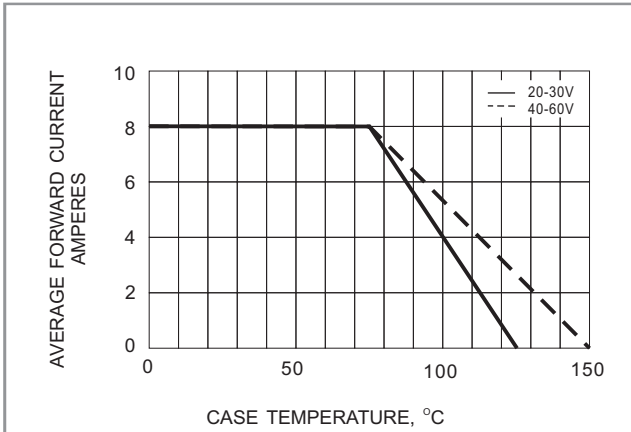
**NOTE:**

Both Bonding and Chip structure are available.

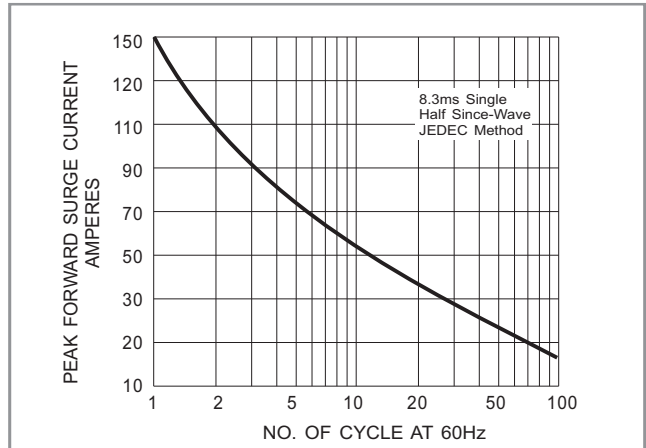


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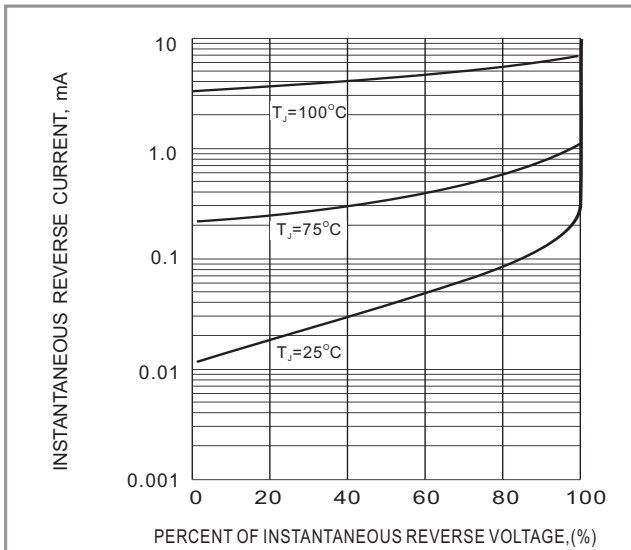
## RATING AND CHARACTERISTIC CURVES



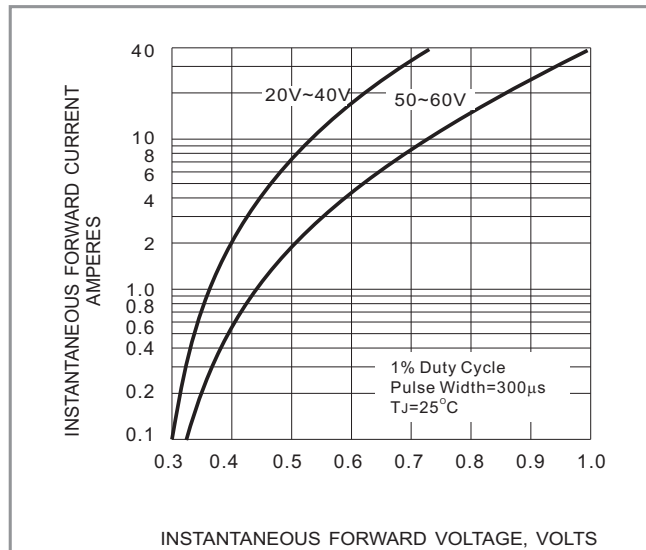
**Fig.1 FORWARD CURRENT DERATING CURVE**



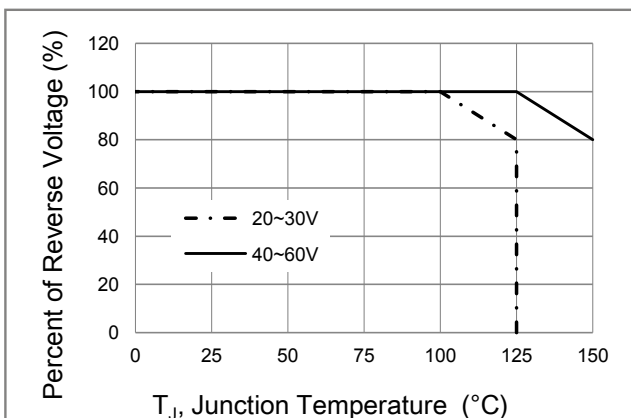
**Fig.2 MAXIMUM NON-REPETITIVE SURGE CURRENT**



**Fig.3 TYPICAL REVERSE CHARACTERISTIC**



**Fig.4 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC**



**Fig.5 Operating Temperature Derating Curve**

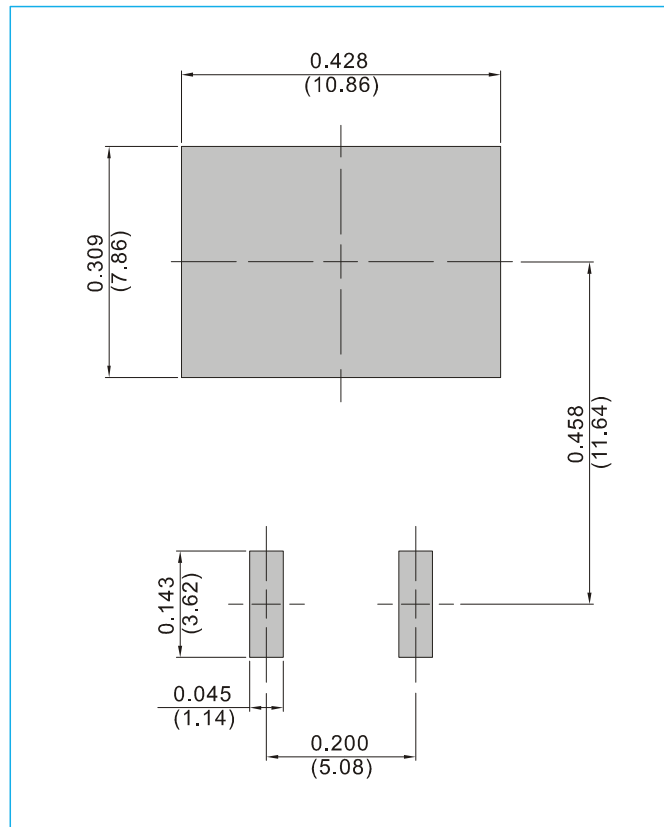


## SB820D SERIES

### MOUNTING PAD LAYOUT

TO-263 / D<sup>2</sup>PAK

Unit : inch(mm)



### ORDER INFORMATION

- Packing information

T/R - 0.8K per 13" plastic Reel



## SB820D SERIES

Part No\_packing code\_Version

SB820D\_R2\_00001

For example :

RB500V-40\_R2\_00001



Packing type	Packing Code <b>XX</b>			Version Code <b>XXXX</b>		
	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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