

SBR830 thru SBR8100

Schottky Barrier Rectifiers

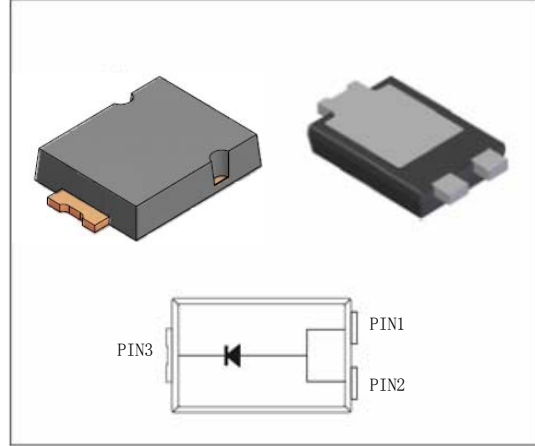
Reverse Voltage 30 to 100V Forward Current 8A

FEATURES

- * Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- * Low power loss,high efficiency
- * For use in low voltage high frequency inverters, free wheeling,and polarity protection applications
- * Guardring for over voltage protection
- * High temperature soldering guaranteed: 260°C/10 seconds at terminals

Mechanical Data

Case: JEDEC TO-277A,
molded plastic over SKY body
Terminals: Plated leads, solderable per
MIL-STD-750, Method 2026
Mounting Position: Any
Weight: 0.108 g
Handling precaution:None



We declare that the material of product is
Halogen free (green epoxy compound)

1.Electrical Characteristic

Maximum & Thermal Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Parameter Symbol	symbol	SBR830	SBR840	SBR845	SBR860	SBR8100	Unit
device marking code		SBR 830	SBR 840	SBR 845	SBR 860	SBR 8100	
Maximum repetitive peak reverse voltage	V_{RRM}	30	40	45	60	100	V
Maximum RMS voltage	V_{RMS}	21	28	31.5	42	70	V
Maximum DC blocking voltage	V_{DC}	30	40	45	60	100	V
Maximum average forward rectified current at $T_c = 75^\circ\text{C}$	$I_{F(AV)}$	8.0					A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	150					A
Typical thermal resistance (Note 1)	$R_{\theta JC}$	8					$^\circ\text{C/W}$
	$R_{\theta JL}$	15					
	$R_{\theta JA}$	31					
Typical thermal resistance (Note 3)	$R_{\theta JA}$	135					$^\circ\text{C/W}$
Operating junction temperature range	T_J	-55 to +150					$^\circ\text{C}$
Storage temperature range	T_{STG}	-55 to +175					$^\circ\text{C}$

Electrical Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Parameter Symbol	symbol	SBR830	SBR840	SBR845	SBR860	SBR8100	Unit
Maximum instantaneous forward voltage at 8A at 25°C	V_F	0.57			0.70	0.87	V
Maximum DC reverse current $T_j = 25^\circ\text{C}$ at rated DC blocking voltage $T_j = 100^\circ\text{C}$ (note2) at rated DC blocking voltage $T_j = 125^\circ\text{C}$ (note2)	IR	0.20				0.070	mA
		10.0				10.0	
		20				15	
Typical junction capacitance at 4.0V, 1MHz	CJ	500					PF

NOTES:

1. Polyimide PCB, 2oz. Copper. Cathode pad dimensions 18.8mm x 14.4mm. Anode pad dimensions 5.6mm x 14.4mm.
- 2.Short duration pulse test used to minimize self-heating effect .
- 3.FR-4 PCB, 2oz.Copper.

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2. Ratings and Characteristic Curves (TA = 25°C unless otherwise noted)

Fig. 1 - Forward Current Derating

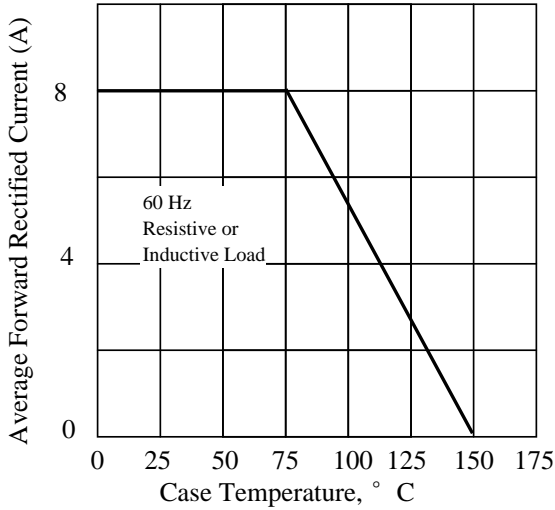


Fig. 2 - Maximum Non-repetitive Peak Forward Surge Current

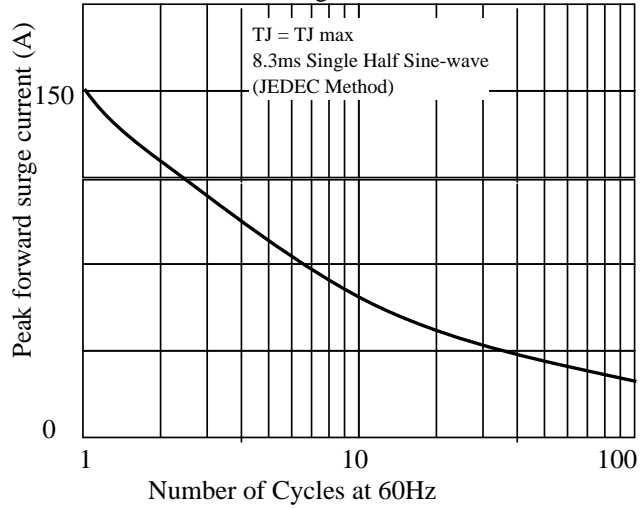


Fig. 3 - Typical Instantaneous Forward Characteristics

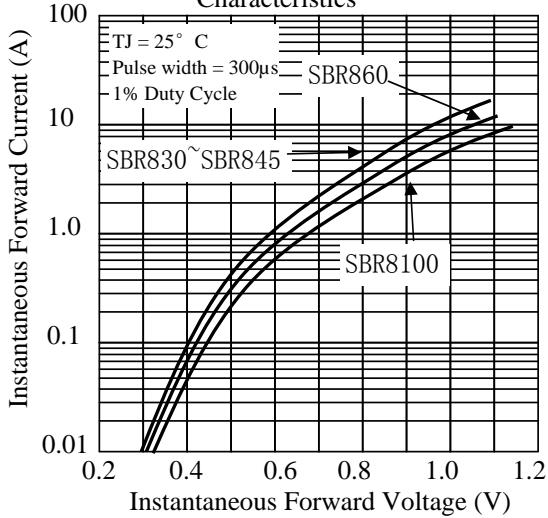


Fig. 4 - Typical Reverse Characteristics

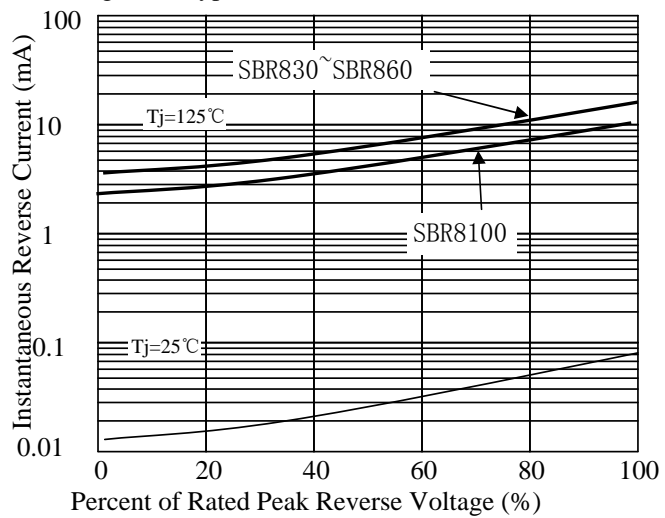


Fig. 5 - typical transient thermal impedance (Note 3)

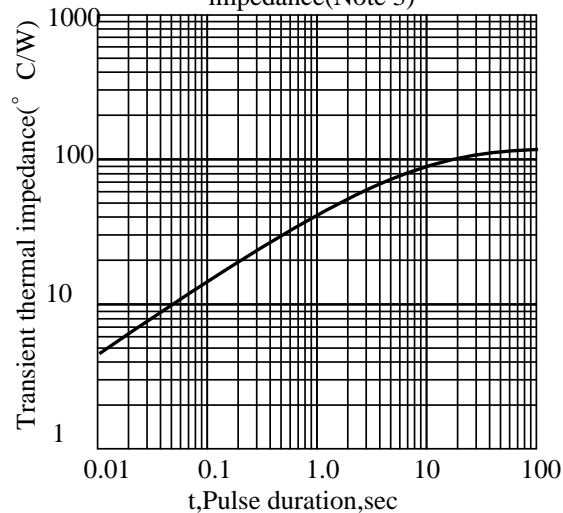
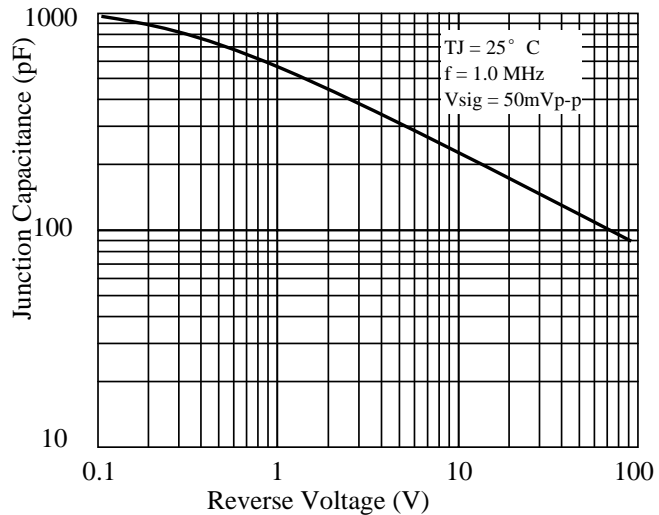


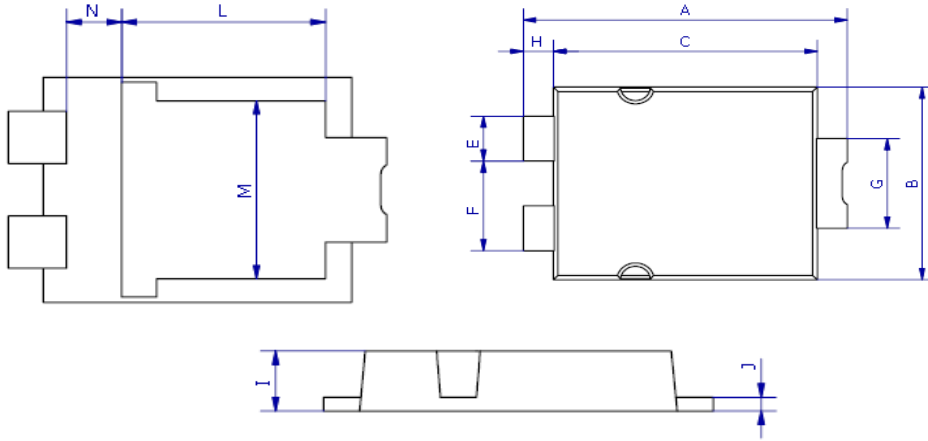
Fig. 6 - Typical Junction Capacitance



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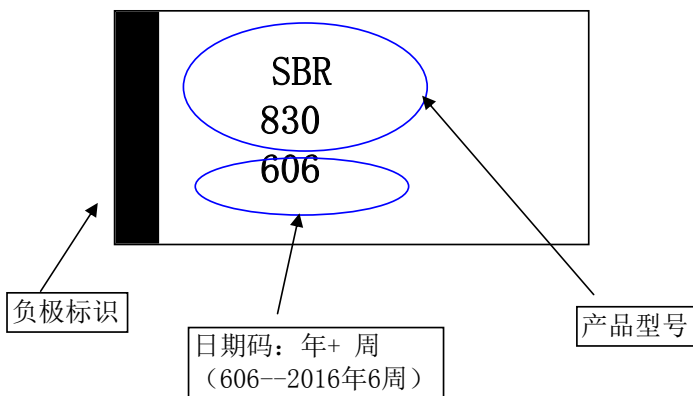
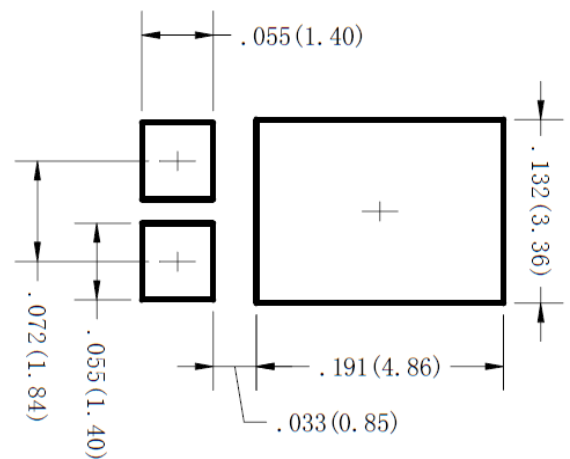
3. dimension:

TO-277A



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	6.3	6.7	0.248	0.264
B	4.1	4.5	0.161	0.177
C	5.1	5.5	0.201	0.217
E	0.9	1.1	0.035	0.043
F	1.9	2.1	0.075	0.083
G	1.9	2.1	0.075	0.083
H	0.50	0.70	0.020	0.028
I	1.00	1.20	0.039	0.047
J	0.15	0.35	0.006	0.014
L	4.35	4.75	0.171	0.187
M	3.20	3.60	0.126	0.142
N	0.85	1.10	0.033	0.043

Mounting PAD layout



SBR845 thru SBR8100

4. Update Record

版次	更新记录	更新作者	更新日期
1	第一版	周杰	2014.06.09
2	增加SBR8100	周杰	2014.10.25
3	增加印字说明	周杰	2016.02.23

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