

SBR2040 thru SBR2060

Schottky Barrier Rectifiers

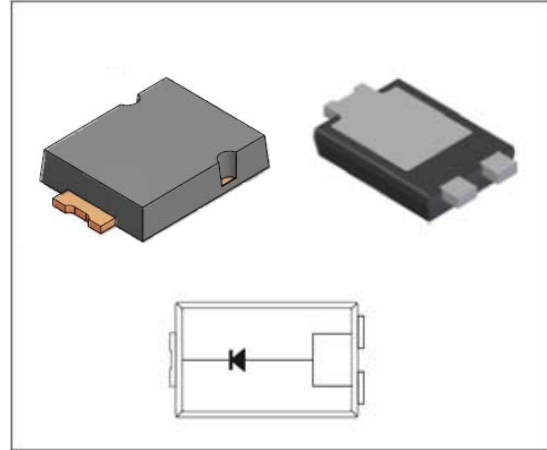
Reverse Voltage 40V to 60V Forward Current 20A

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	SBR2040	SBR2045	SBR2060	Unit
device marking code		SBR 2040	SBR 2045	SBR 2060	
Maximum repetitive peak reverse voltage	V_{RRM}	40	45	60	V
Maximum RMS voltage	V_{RMS}	28	31.5	42	V
Maximum DC blocking voltage	V_{DC}	40	45	60	V
Maximum average forward rectified current at $T_c = 110^\circ\text{C}$	$I_{F(AV)}$	20.0			A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	350			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	SBR2040	SBR2045	SBR2060	Unit
Maximum instantaneous forward voltage at 20A at 25°C	V_F	0.55		0.70	V
Maximum DC reverse current $T_A = 25^\circ\text{C}$ at rated DC blocking voltage $T_A = 100^\circ\text{C}$ (note2) at rated DC blocking voltage $T_A = 125^\circ\text{C}$ (note2)	IR	0.20			mA
		15.0			
		80			
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 Curve

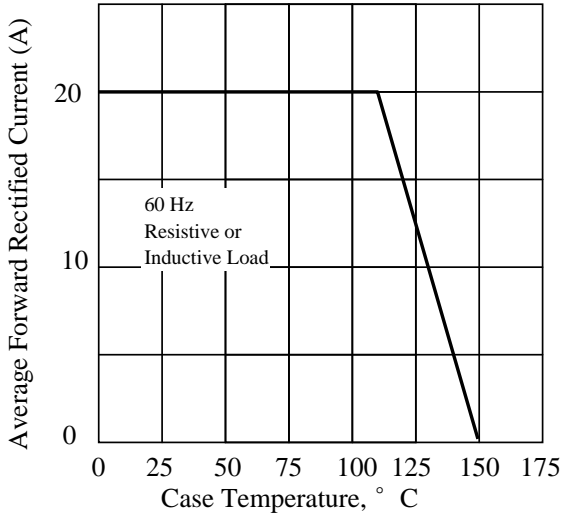


Fig. 2 - Maximum Non-repetitive Peak Forward Surge Current

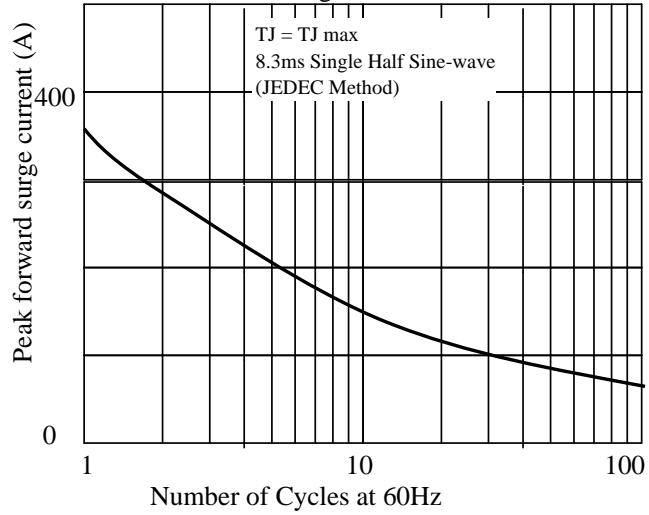


Fig. 3 - Typical Instantaneous Forward Characteristics

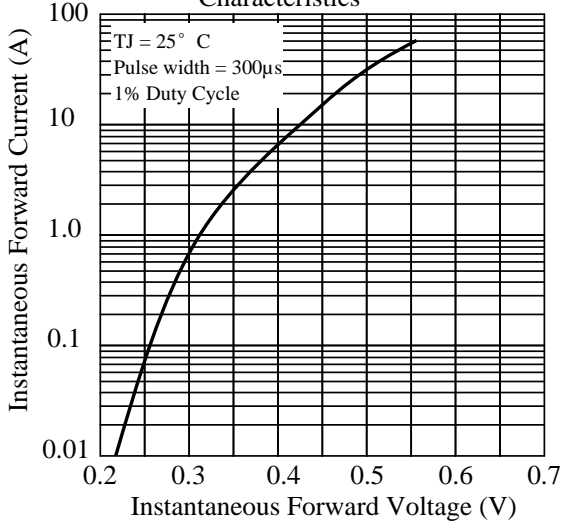


Fig. 4 - Typical Reverse Characteristics

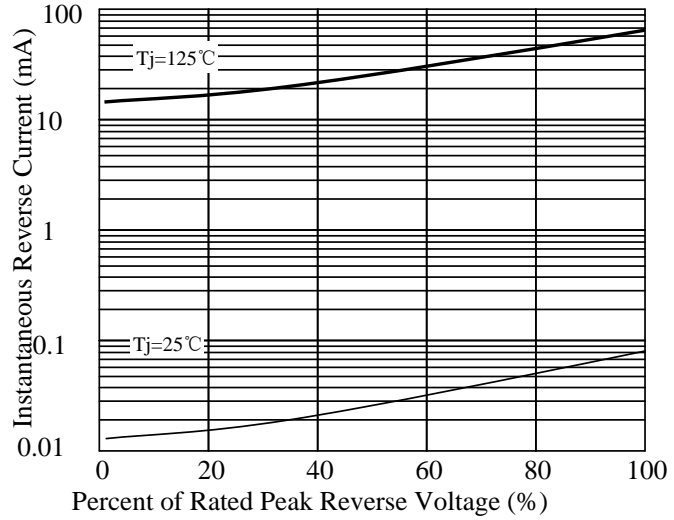


Fig. 5 - typical transient thermal impedance(Note 3)

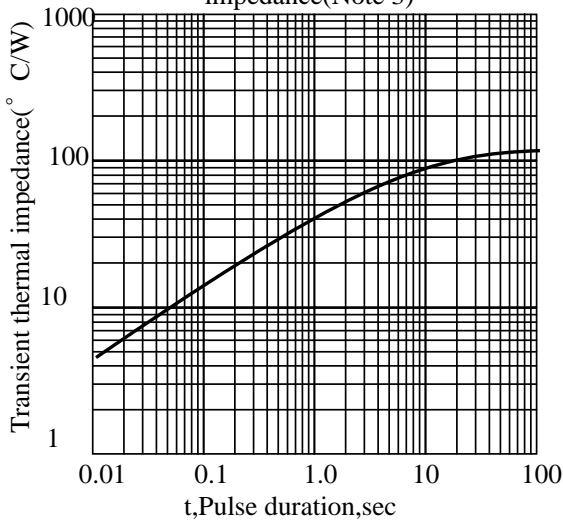
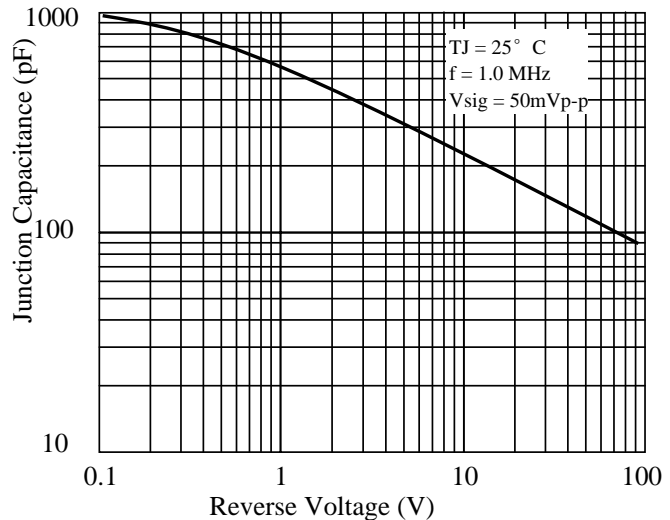


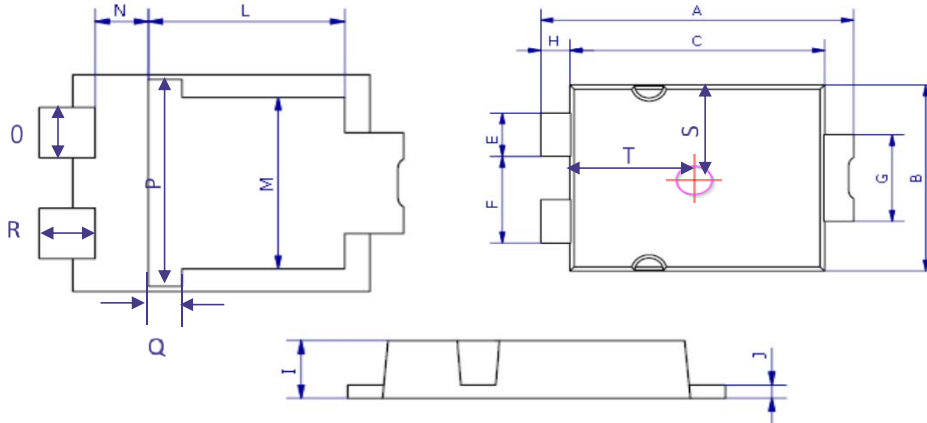
Fig. 6 - Typical Junction Capacitance



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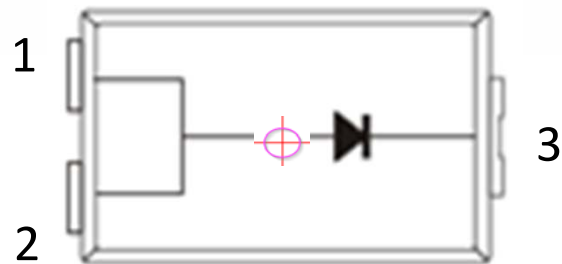
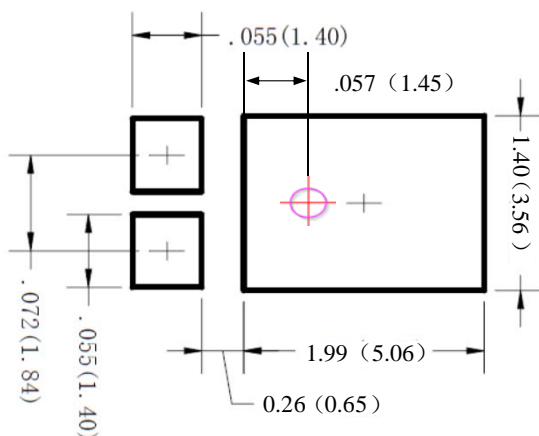
3. dimension:

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	3.30	3.70	0.130	0.146
M	3.20	3.60	0.126	0.142
N	0.80	1.10	0.033	0.043
O	0.90	1.10	0.035	0.043
P	3.90	4.30	0.154	0.169
Q	0.50	0.80	0.020	0.031
R	0.85	1.15	0.033	0.045
S	2.00	2.30	0.079	0.091
T	2.50	2.80	0.098	0.110

Mounting PAD layout



- 1: Anode
- 2: Anode
- 3: Cathode

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4. Update Record

版次	更新记录	更新作者	更新日期
1	第一版	周杰	2015.07.16
2	增加SBR2040	周杰	2015.11.11
3	增加SBR2045和印字说明	周杰	2016.01.26

单击下面可查看定价，库存，交付和生命周期等信息

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