

SBR1045 thru SBR10200

Schottky Barrier Rectifiers

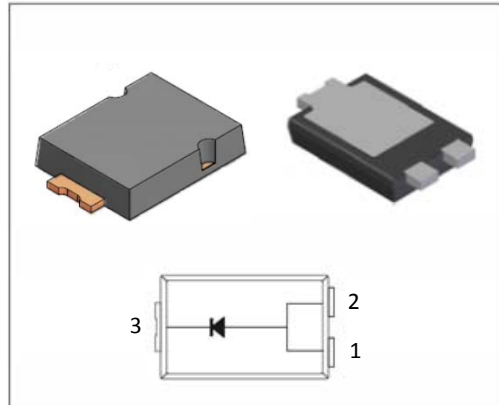
Reverse Voltage 45 to 100V Forward Current 10A

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	SBR1045	SBR1060	SBR10100	SBR10150	SBR10200	Unit
device marking code		S1045	S106	S1010	S1015	S1020	
Maximum repetitive peak reverse voltage	V _{RRM}	45	60	100	150	200	V
Maximum RMS voltage	V _{RMS}	31.5	42	70	105	140	V
Maximum DC blocking voltage	V _{DC}	45	60	100	150	200	V
Maximum average forward rectified current at Tc = 75°C	IF(AV)	10.0					A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	IFSM	300					A
Typical thermal resistance (Note 1)	RθJL	3					°C/W
	RθJC	8					
	RθJA	60					
Typical thermal resistance (Note 2)	RθJA	135					°C/W
Operating junction temperature range	TJ	-55 to +150					°C
Storage temperature range	TSTG	-55 to +150					°C

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

Parameter Symbol	symbol	SBR1045	SBR1060	SBR10100	SBR10150	SBR10200	Unit
Maximum instantaneous forward voltageat 25°C at 5A at10A	V _F	- 0.55	- 0.70	0.82 0.88			V
Maximum DC reverse current TA = 25°C at rated DC blocking voltage Tj = 100°C	IR	0.3 15.0					mA
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. 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

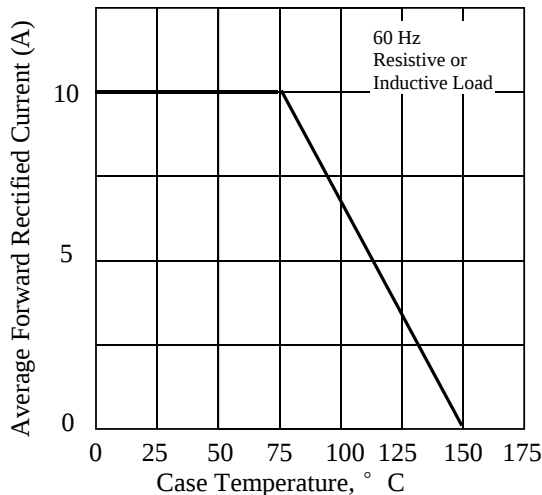


Fig. 2 - Maximum Non-repetitive Peak Forward Surge Current

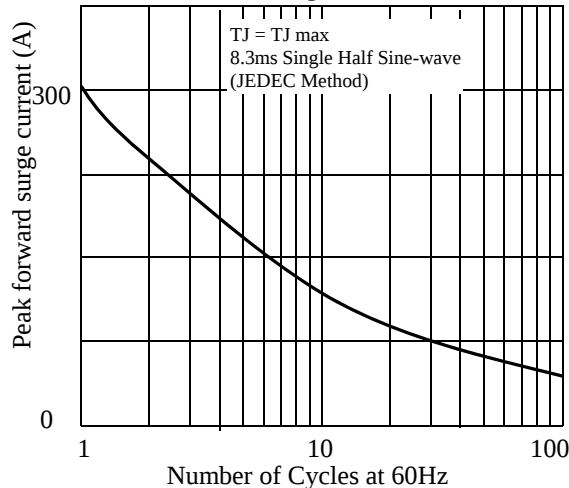


Fig 3. - Typical Instantaneous Forward Characteristics

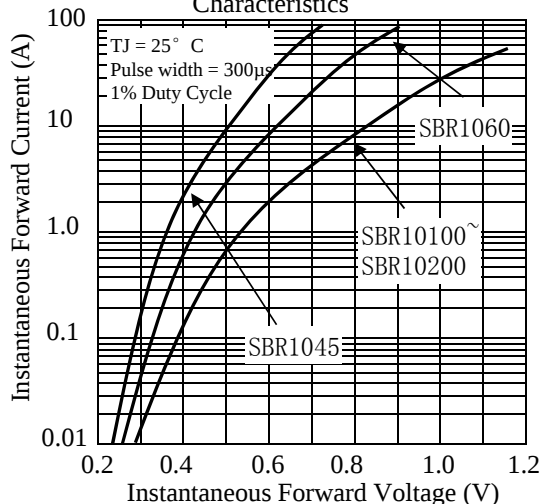


Fig 4. - Typical Reverse Characteristics

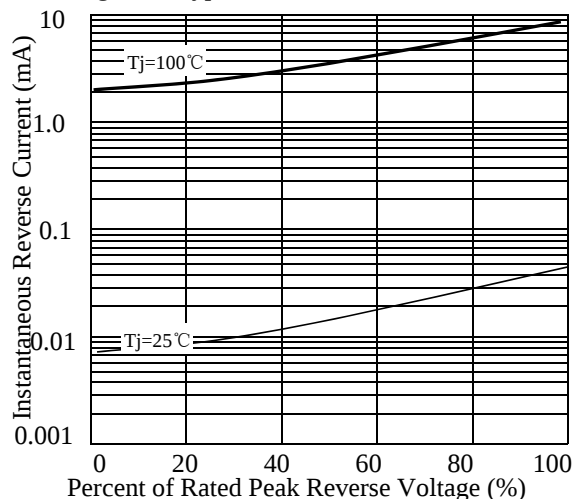


Fig 5. - typical transient thermal impedance (Note 2)

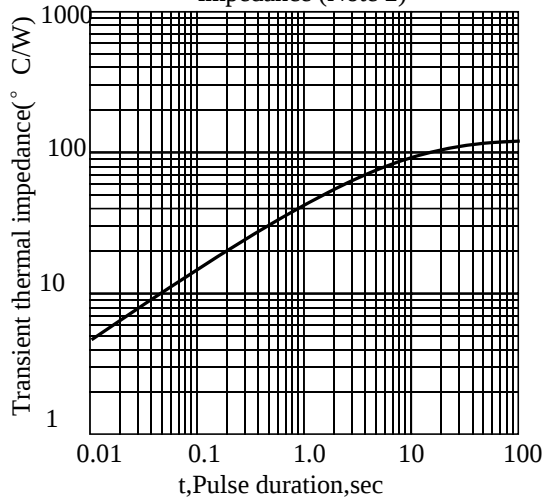
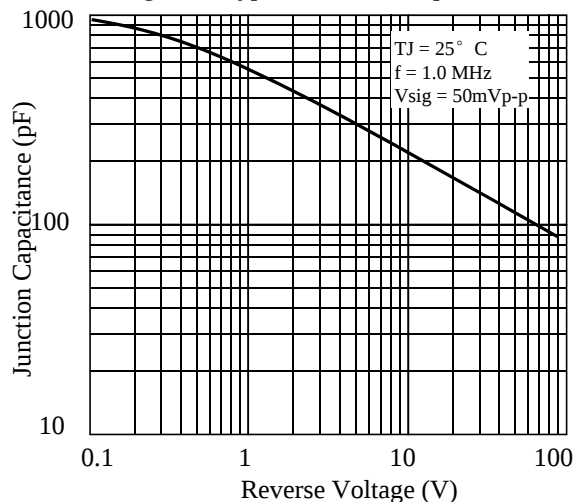


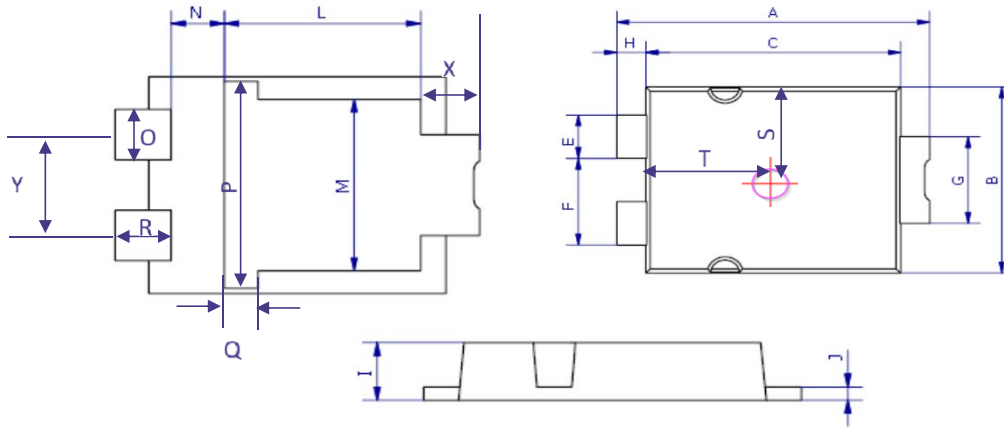
Fig 6. - Typical Junction Capacitance



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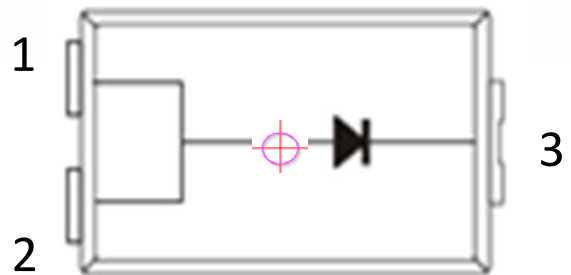
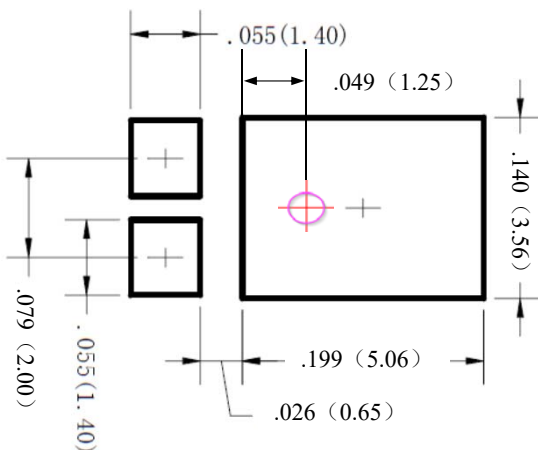
3. dimension:

TO-277A



DIM	MILLIMETERS		INCHES		DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX		MIN	MAX	MIN	MAX
A	6.3	6.7	0.248	0.264	X	0.9	1.2	0.35	0.047
B	4.1	4.5	0.161	0.177	Y	1.9	2.1	0.075	0.083
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	0.031	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	2013-8-7
2	更新产品尺寸为T0-277A	周杰	2014-1-17
3	标注外形尺寸公差	周杰	2014-6-9
4	增加SBR1060 SBR10100 SBR10200	周杰	2014-7-31
5	修正管体L标注尺寸	周杰	2014-9-26
6	增加SBR10150	周杰	2015-9-28
7	增加PIN标示说明	谭志伟	2016-10-8
8	增加包装说明	谭志伟	2016-10-13
9	增加尺寸标注	谭志伟	2017-7-26
10	优化marking	谭志伟	2022-11-21