

SBR540 thru SBR5200

Schottky Barrier Rectifiers

Reverse Voltage 40 to 200V Forward Current 5A

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

1.Electrical Characteristic

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

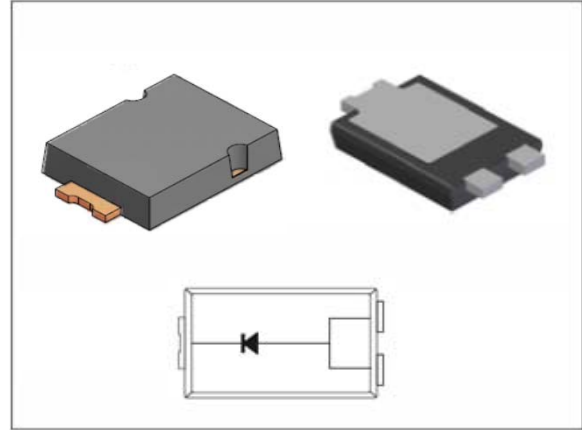
Parameter Symbol	symbol	SBR540	SBR545	SBR560	SBR5100	SBR5150	SBR5200	Unit
device marking code		SBR540	SBR545	SBR560	SBR5100	SBR5150	SBR5200	
Maximum repetitive peak reverse voltage	V _{RRM}	40	45	60	100	150	200	V
Maximum RMS voltage	V _{RMS}	28	31.5	42	70	105	140	V
Maximum DC blocking voltage	V _{DC}	40	45	60	100	150	200	V
Maximum average forward rectified current at Tc = 75°C	IF(AV)	5.0						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)	RθJC	8						°C/W
	RθJL	15						
	RθJA	31						
Typical thermal resistance (Note 3)	RθJA	60						°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	SBR540	SBR545	SBR560	SBR5100	SBR5150	SBR5200	Unit
Maximum instantaneous forward voltage at 5A at 25°C	V _F	0.5	0.5	0.7	0.87			V
Maximum DC reverse current T _j = 25°C at rated DC blocking voltage T _j = 100°C(note2) at rated DC blocking voltage T _j = 125°C(note2)	IR	0.3 15.0 25			0.015 10.0 20			mA
Typical junction capacitance at 4.0V, 1MHz	CJ	260						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.



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

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

Fig. 1 - Forward Current Derating

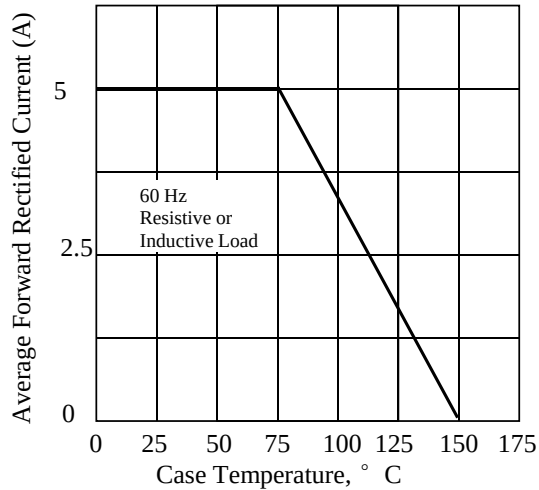


Fig. 2 - Maximum Non-repetitive Peak Forward Surge Current

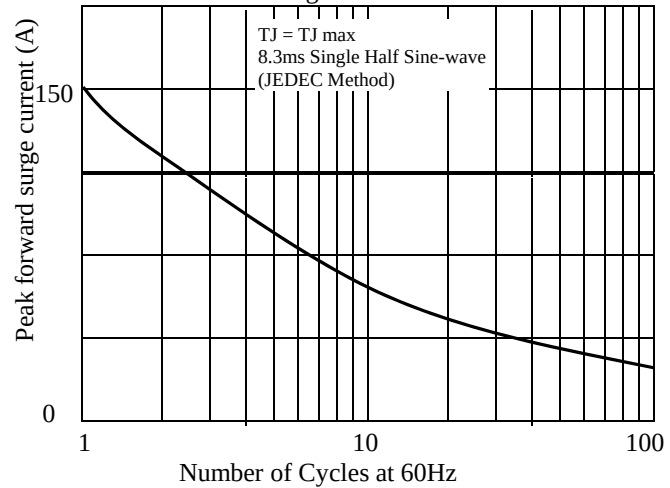


Fig. 3 - Typical Instantaneous Forward Characteristics

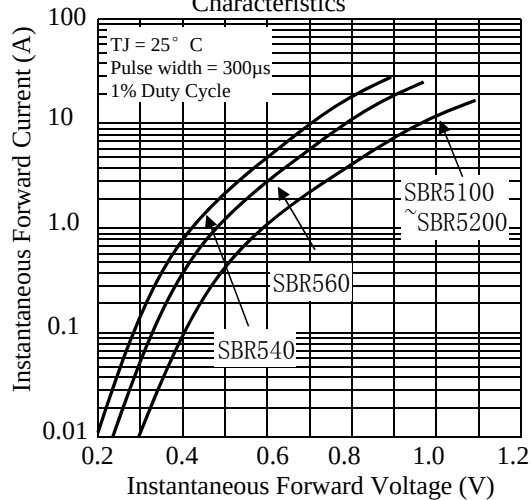


Fig. 4 - Typical Reverse Characteristics

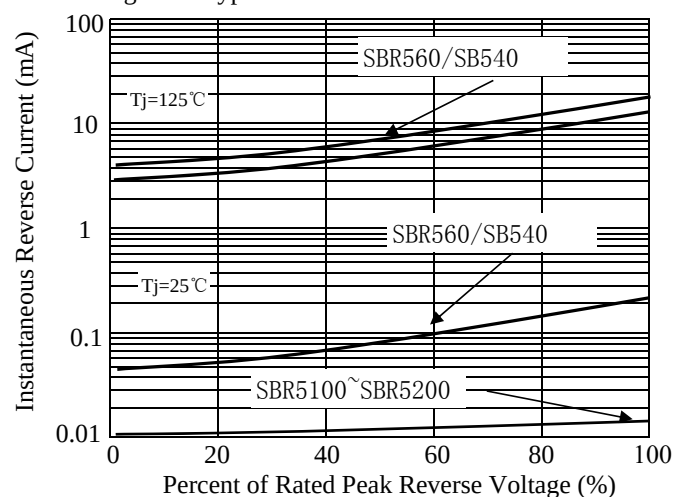


Fig. 5 - typical transient thermal impedance(Note 3)

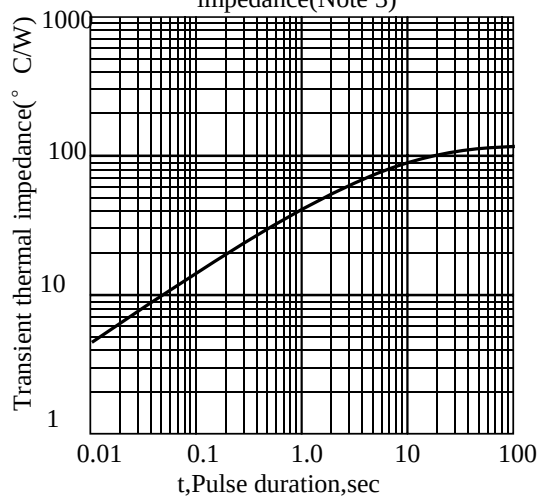
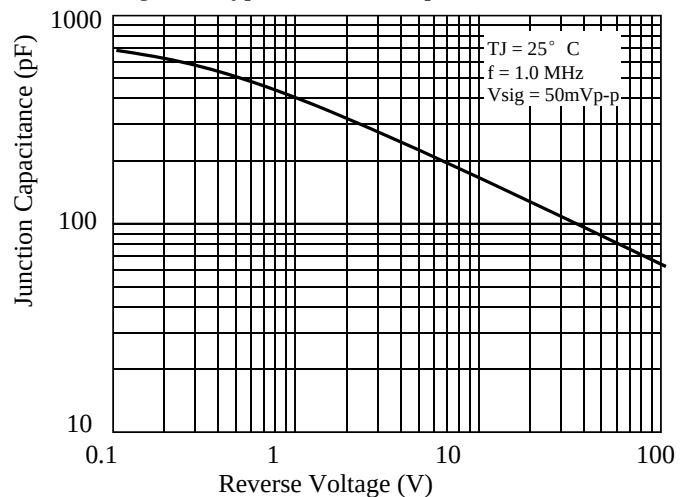


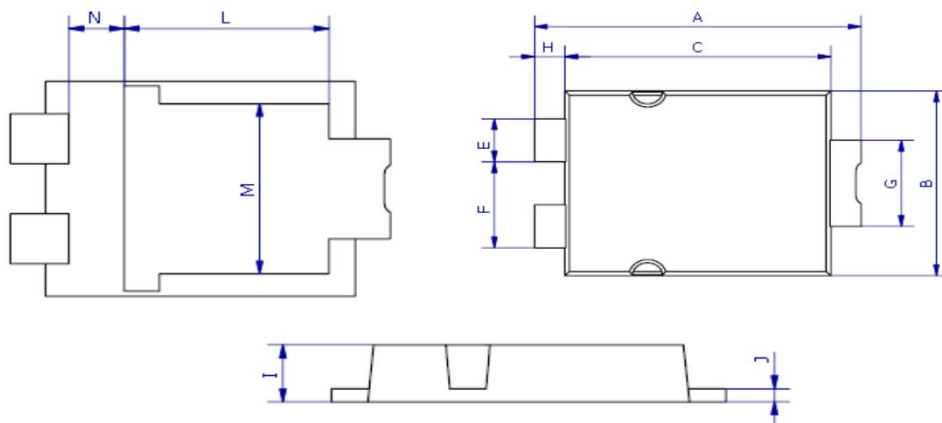
Fig. 6 - Typical Junction Capacitance



SBR540 thru SBR5200

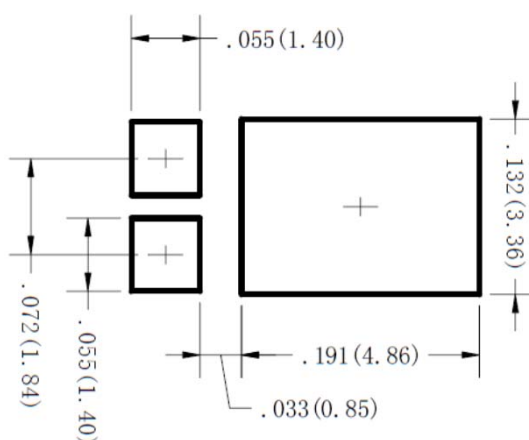
3. dimension:

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



SBR540 thru SBR5200

4. Update Record

版次	更新记录	更新作者
1	第一版	周杰
2	更新产品尺寸为T0-277A	周杰
3	标注外形尺寸公差	周杰
4	增加SBR540/SBR560	周杰
5	增加SBR51500/SBR5200	周杰
6	增加印字说明	周杰
7	增加SBR545	谭志伟