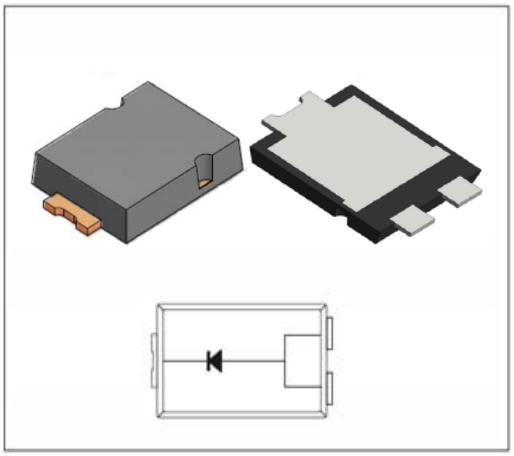
S-SBR15100L

Schottky Barrier Rectifiers

Reverse Voltage 100V Forward Currentc 15A

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
* Low forward voltage drop
* High temperature soldering guaranteed: 260°C/10 seconds at terminals
* S- Prefix for Automotive and Other Applications Requiring Unique Site and Control Change Requirements; AEC-Q101 Qualified and PPAP Capable.



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: 0.095 g
Handling precautin:None

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

1.Electrical Characteristic

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

Parameter Symbol	symbol	S-SBR15100L	Unit
device marking code		S1510L	
Maximum repetitive peak reverse voltage	V_{RRM}	100	V
Maximum RMS voltage	V_{RMS}	70	V
Maximum DC blocking voltage	V_{DC}	100	V
Maximum average forward rectified current at Tc = 70°C	IF(AV)	15.0	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	300	A
Typical thermal resistance (Note 1)	RθJL RθJC RθJA	3 8 60	°C/W
Typical thermal resistance (Note 3)	RθJA	135	°C/W
Operating junction temperature range	TJ	–55 to +150	°C
Storage temperature range	T_{STG}	–55 to +150	°C

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

Parameter Symbol	symbol	S-SBR15100L	Unit
Maximum instantaneous forward voltage at 15A at 25℃	V_F	0.70	V
Maximum DC reverse current Tj = 25°C at rated DC blocking voltage Tj = 100°C(note2)	IR	0.05 10	mA
Typical junction capacitance at 4.0V, 1MHz	CJ	900	PF

NOTES:

1. Polymide 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 sffect .
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

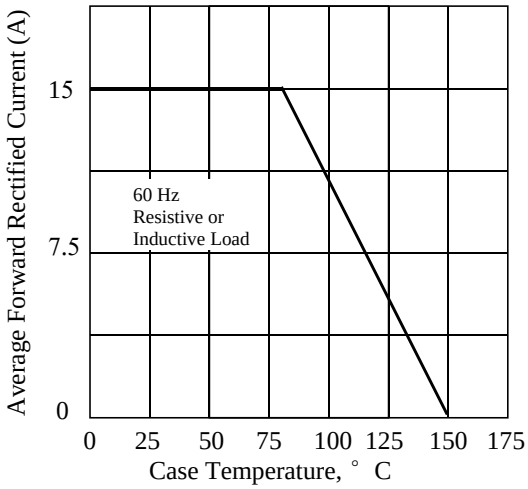


Fig. 2 – Maximum Non-repetitive Peak Forward Surge Current

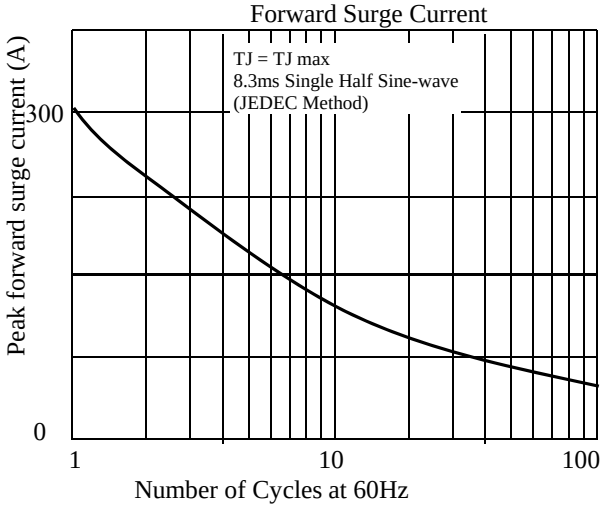


Fig 3. – Typical Instantaneous Forward Characteristics

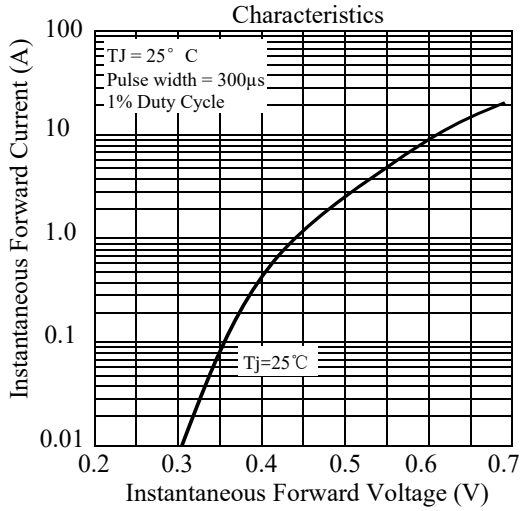


Fig 4. – Typical Reverse Characteristics

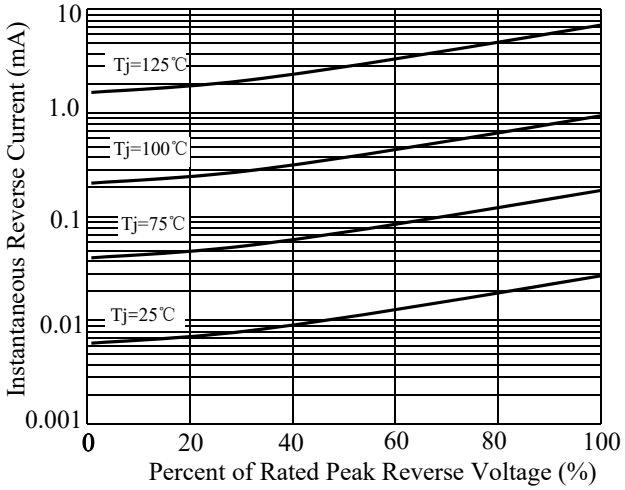


Fig 5. – typical transient thermal impedance (Note 3)

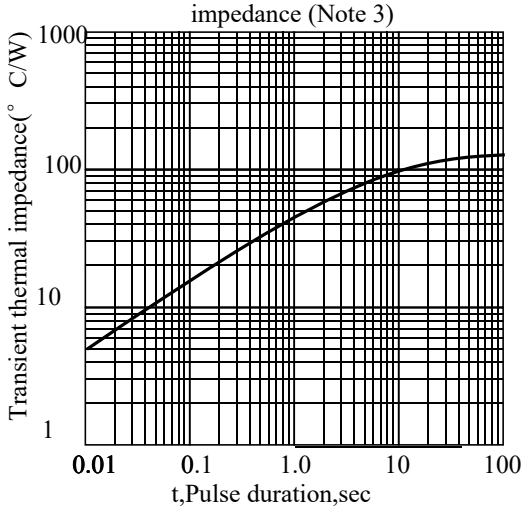
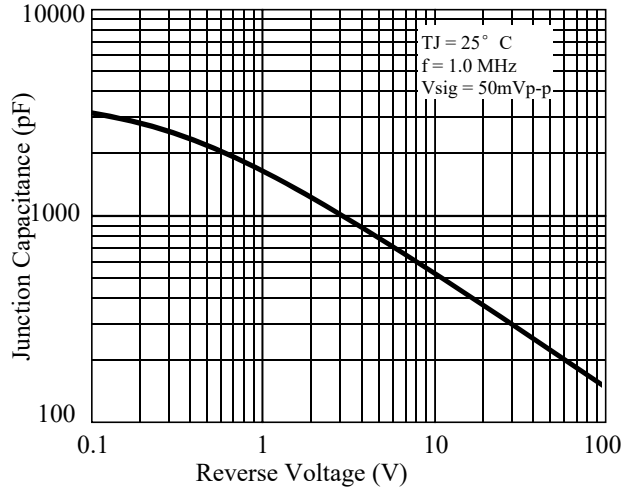


Fig 6. – Typical Junction Capacitance



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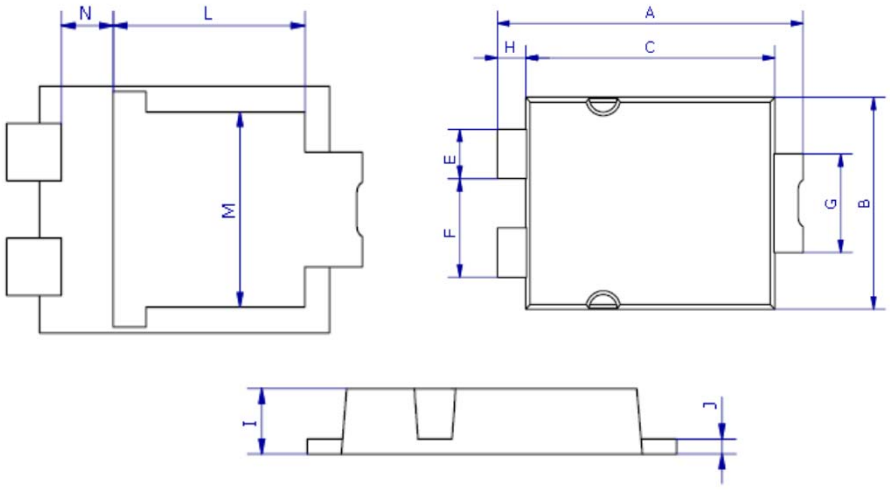
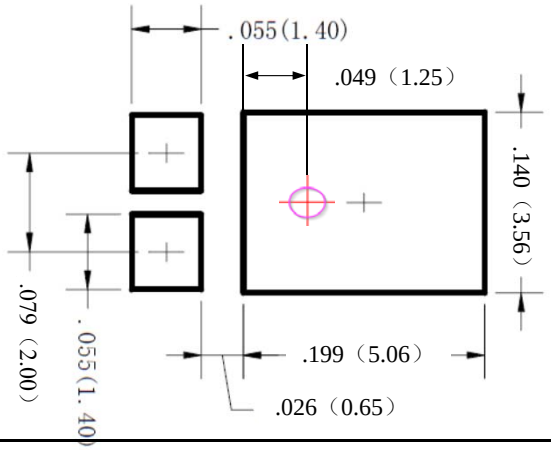
3. dimension:

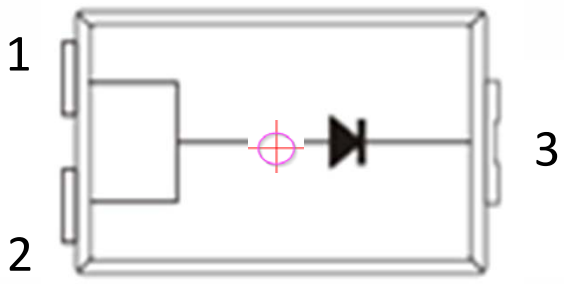
TO-277A



DIM	MILLIMETERS		INCHES		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

DISCLAIMER

- Curve guarantee in the specification. The curve of test items with electric parameter is used as quality guarantee. The curve of test items without electric parameter is used as reference only.

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