

## TO- 277 Plastic-Encapsulate Diodes

Schottky Rectifier Diode

### Applications

- Rectifier

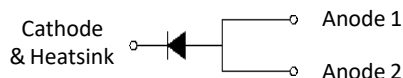
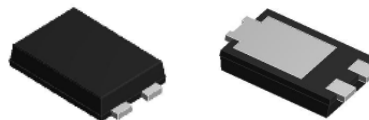
### Features

- $I_{F(AV)}$  5A
- $V_{RRM}$  100V
- High surge current capability
- Low peak forward voltage

### Marking

- SB5100L

TO-277



### Limiting Values(Absolute Maximum Rating)

Item	Symbol	Unit	Test Conditions	KSB5100L
Repetitive Peak Reverse Voltage	$V_{RRM}$	V		100
Maximum RMS Voltage	$V_{RMS}$	V		70
Average Forward Current	$I_{F(AV)}$	A	60Hz Half-sine wave, Resistance load, TL(Fig.1)	5
Surge(Non-repetitive)Forward Current	$I_{FSM}$	A	60Hz Half-sine wave, 1 cycle, $T_a=25^{\circ}C$	120
Junction Temperature	$T_J$	$^{\circ}C$		-55 ~ +150
Storage Temperature	$T_{STG}$	$^{\circ}C$		-55 ~ +150

### Electrical Characteristics (T=25 $^{\circ}C$ Unless otherwise specified)

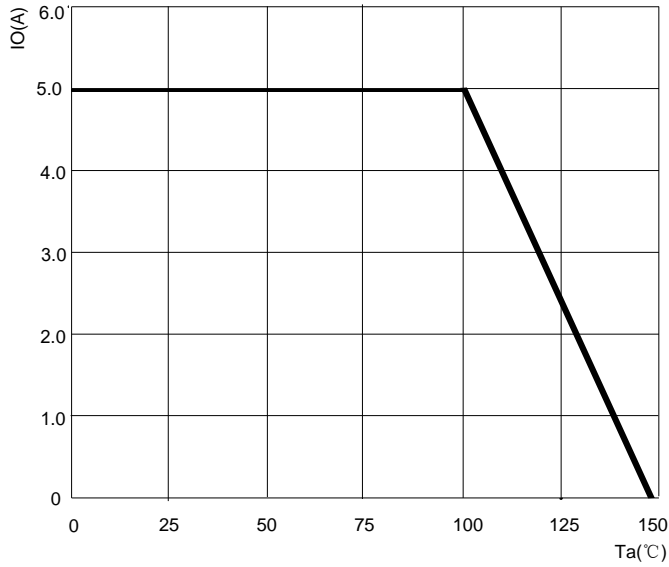
Item	Symbol	Unit	Test Condition		KSB5100L	
Peak Forward Voltage	$V_F$	V	$I_F=5.0A$	$T_a=25^{\circ}C$	0.59(TYP)	0.65(MAX)
				$T_a=125^{\circ}C$	0.54(TYP)	0.57(MAX)
Peak Reverse Current	$I_{RRM1}$	mA	$V_{RM}=V_{RRM}$	$T_a=25^{\circ}C$	0.015(TYP)	0.050(MAX)
	$I_{RRM2}$			$T_a=125^{\circ}C$	15	
Thermal Resistance(Typical)	$R_{\theta J-A}$	$^{\circ}C/W$	Between junction and ambient		80	
	$R_{\theta J-L}$		Between junction and terminal		5	
Typical junction capacitance	$C_J$	pF	$V_R=4.0 V, f=1 MHz$		140	

### Notes:

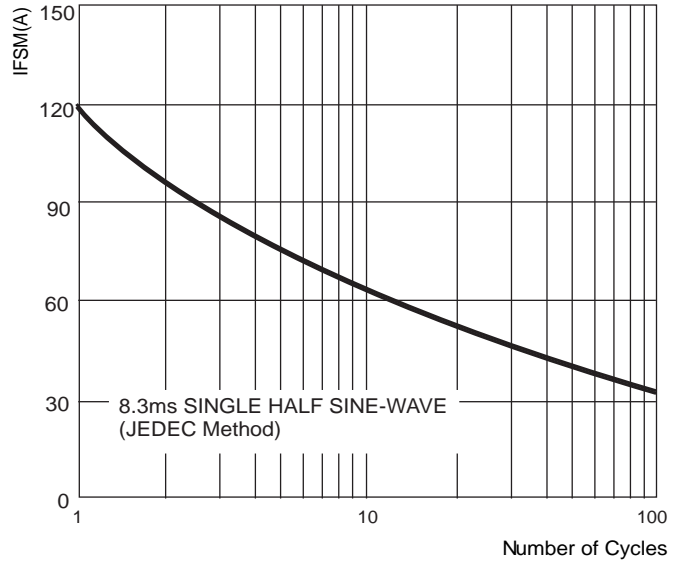
Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.3" x 0.3" (8.0 mm x 8.0 mm) copper pad areas

### Typical Characteristics

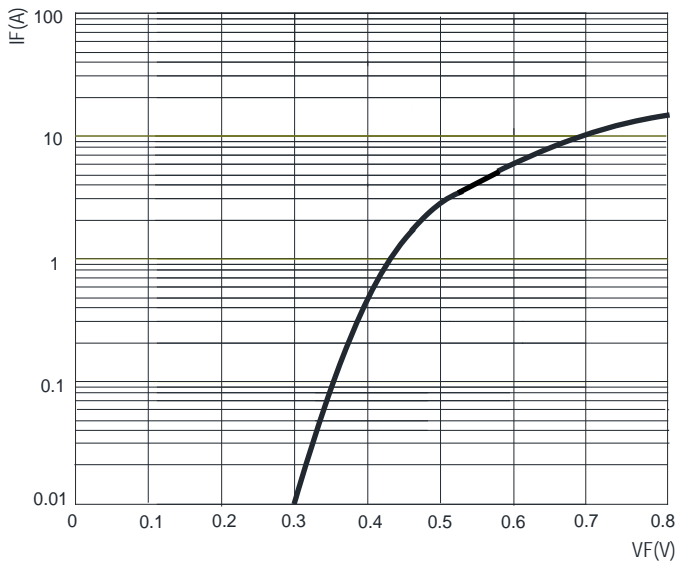
**FIG.1: FORWARD CURRENT DERATING CURVE**



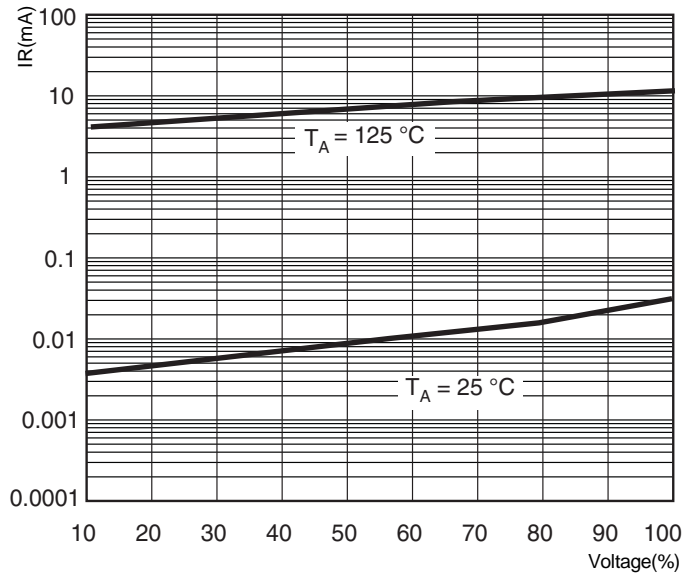
**FIG.2: MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT**



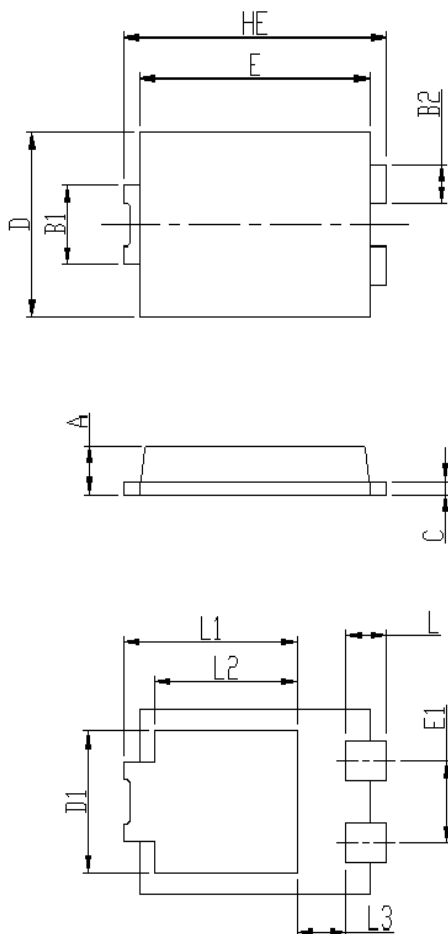
**FIG.3: INSTANTANEOUS FORWARD CHARACTERISTICS**



**FIG.4: TYPICAL REVERSE CHARACTERISTICS**

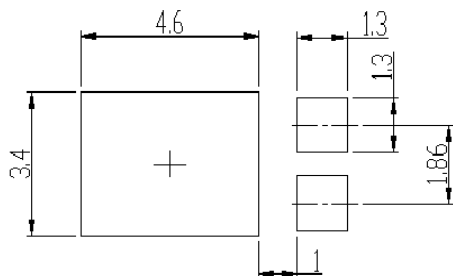


**TO-277 Package Outline Dimensions**



DIM	Unit: mm		Unit: inch	
	MIN	MAX	MIN	MAX
HE	6.4	6.6	0.252	0.260
E	5.6	5.8	0.220	0.228
D	4.	4.	0. 61	0. 69
B1	1.7	1.9	0.067	0.075
B2	0.8	1	0.031	0.039
A	1.05	1.2	0.041	0.047
C	0.3	0.4	0.012	0.016
L	0.85	1.1	0.033	0.043
L1	4.2	4.4	0.165	0.173
L2	3.52 Typ.		0.139 Typ.	
L3	1.1	1.4	0.043	0.055
D1	3	3.3	0.118	0.130
E1	1.86 Typ.		0.073 Typ.	

**TO-277 Suggested Pad Layout**



**Note:**

1. Controlling dimension: in millimeters.
2. General tolerance:  $\pm 0.05$  mm.
3. The pad layout is for reference purposes only.