

TO- 277 Plastic-Encapsulate Diodes

Schottky Rectifier Diode

Features

- $I_{F(AV)}$ 5A
- V_{RRM} 150V
- High surge current capability
- Low peak forward voltage

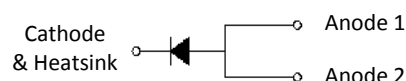
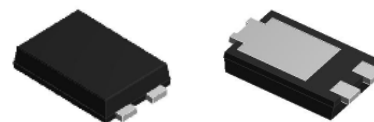
Applications

- Rectifier

Marking

- KSB5150:SB5150

TO- 277



Limiting Values(Absolute Maximum Rating)

Item	Symbol	Unit	Test Conditions	KSB5150
Repetitive Peak Reverse Voltage	V_{RRM}	V		150
Maximum RMS Voltage	V_{RMS}	V		150
Maximum DC blocking Voltage	V_{DC}	V		105
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, $T_a=25^\circ\text{C}$	120
Junction Temperature	T_J	$^\circ\text{C}$		-55 ~ +150
Storage Temperature	T_{STG}	$^\circ\text{C}$		-55 ~ +150

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

Item	Symbol	Unit	Test Condition		KSB5150	
Peak Forward Voltage	V_F	V	$I_F = 5.0\text{A}$	$T_a = 25^\circ\text{C}$	0.80(TYP)	0.90(MAX)
				$T_a = 125^\circ\text{C}$	0.65(TYP)	0.78(MAX)
Peak Reverse Current	I_{RRM1}	μA	$V_{RM} = V_{RRM}$	$T_a = 25^\circ\text{C}$	0.2 (TYP)	2.0 (MAX)
	I_{RRM2}			$T_a = 125^\circ\text{C}$	---	3000 (MAX)
Thermal Resistance(Typical)	$R_{\theta J-L}$	$^\circ\text{C/W}$	Between junction and terminal		45	
Typical junction capacitance	C_J	pF	$V_R = 4.0\text{V}$, $f = 1\text{MHz}$		100	

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 Output Current Derating Curve

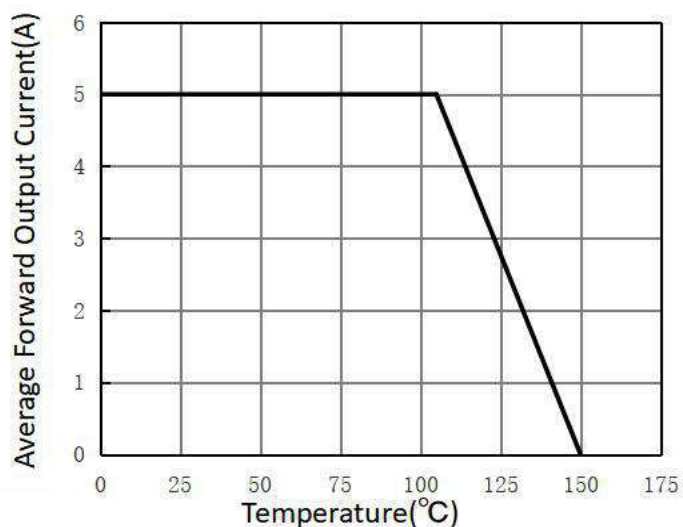


FIG.2: Maximum Non-Repetitive Peak Forward Surge Current

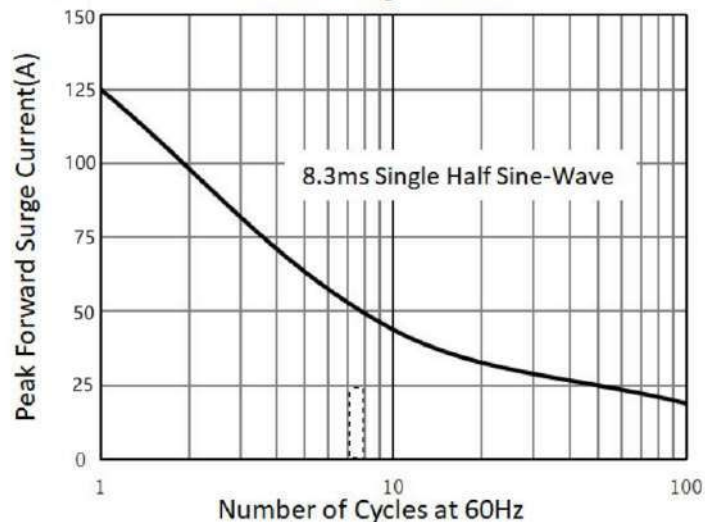


FIG.3: Typical Instantaneous Forward Characteristics

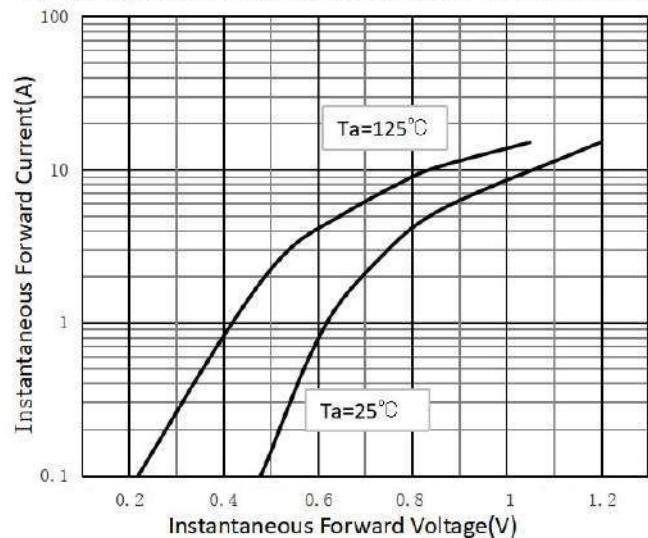
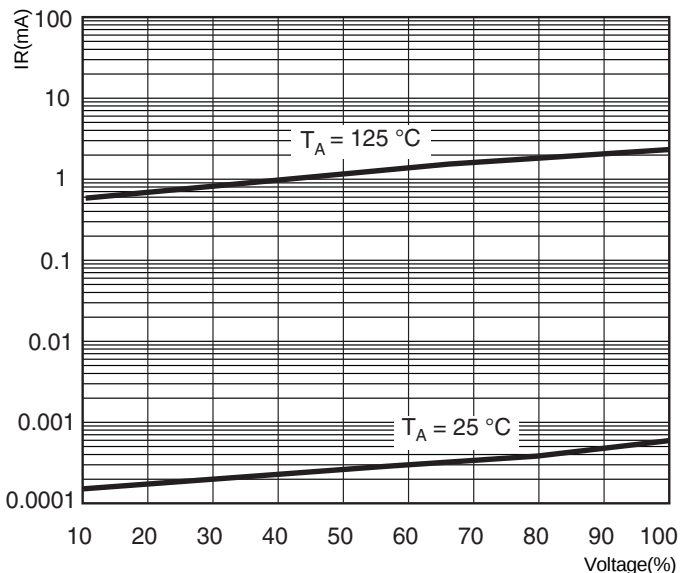
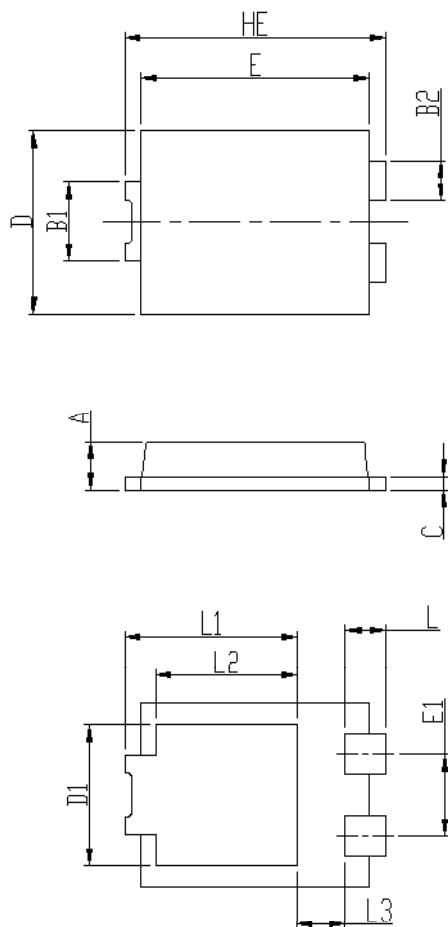


FIG.4: TYPICAL REVERSE CHARACTERISTICS

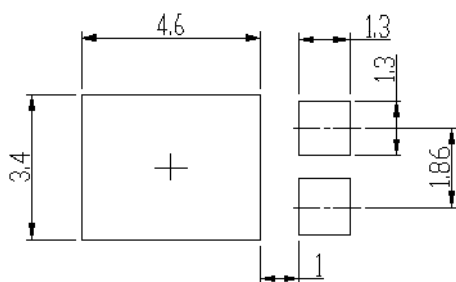


TO- 277 Package Outline Dimensions



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	4.1	4.3	0.161	0.169
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: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.