

TO- 277 Plastic-Encapsulate Diodes

Schottky Rectifier Diode

Features

- $I_{F(AV)}$ 10A
- V_{RRM} 150V
- High surge current capability
- Low peak forward voltage

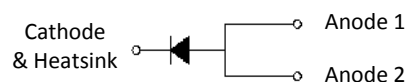
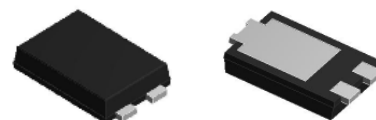
Applications

- Rectifier

Marking

- SB10150

TO-277



Limiting Values(Absolute Maximum Rating)

Item	Symbol	Unit	Test Conditions	KSB10150
Repetitive Peak Reverse Voltage	V_{RRM}	V		150
Maximum RMS Voltage	V_{RMS}	V		105
Maximum DC Blocking Voltage	V_{DC}	V		150
Average Forward Current	$I_{F(AV)}$	A	60Hz Half-sine wave, Resistance load, $T_L=100^\circ\text{C}$	10
Surge(Non-repetitive)Forward Current	I_{FSM}	A	60Hz Half-sine wave, 1 cycle, $T_a=25^\circ\text{C}$	180
Junction Temperature	T_J	$^\circ\text{C}$		-55 ~ +150
Storage Temperature	T_{STG}	$^\circ\text{C}$		-55 ~ +150

Electrical Characteristics (T=25°C Unless otherwise specified)

Item	Symbol	Unit	Test Condition		KSB10150	
Peak Forward Voltage	V_F	V	$I_F=10.0\text{A}$	$T_a=25^\circ\text{C}$	0.80(TYP)	0.90(MAX)
				$T_a=125^\circ\text{C}$	0.67(TYP)	0.74(MAX)
Peak Reverse Current	I_{RRM1}	mA	$V_{RM}=V_{RRM}$	$T_a=25^\circ\text{C}$	0.015(TYP)	0.05(MAX)
	I_{RRM2}			$T_a=125^\circ\text{C}$	10(TYP)	40(MAX)
Thermal Resistance(Typical)	$R_{\theta J-A}$	$^\circ\text{C/W}$	Between junction and ambient		80	
	$R_{\theta J-L}$		Between junction and terminal		5	

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

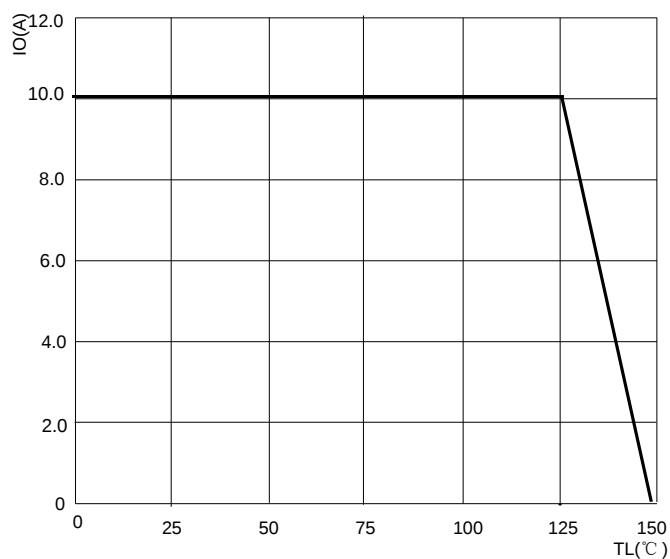


FIG.2: MAXIMUM NON-REPETITIVE FORWARD URGE CURRENT

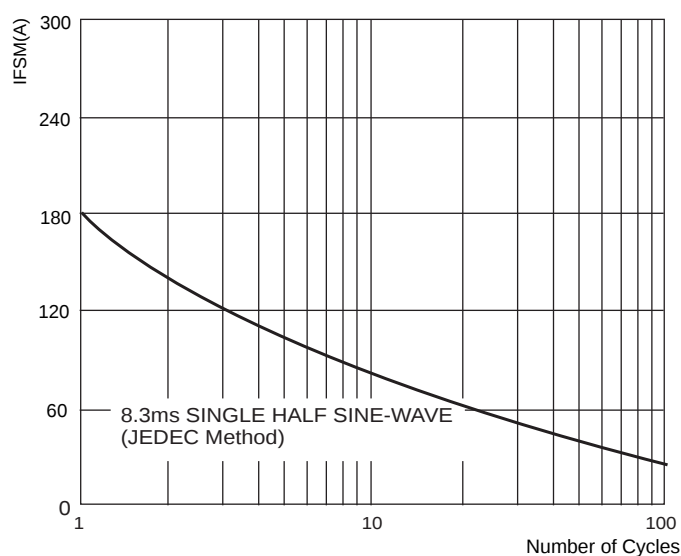


FIG3: Instantaneous Forward Voltage

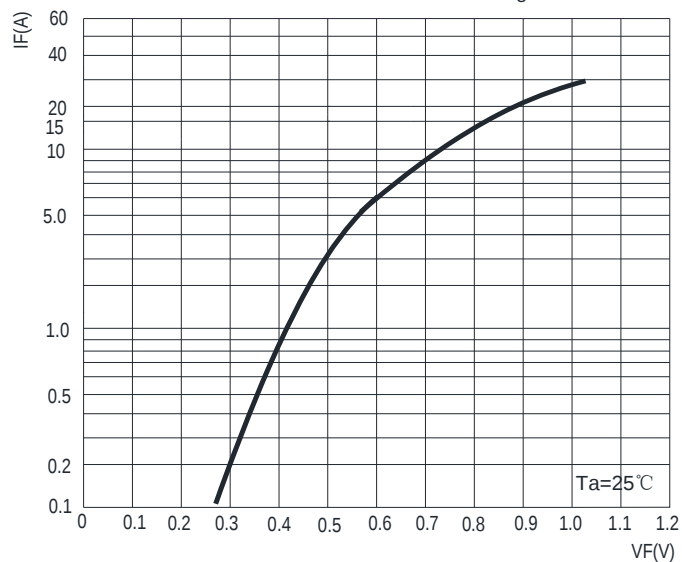
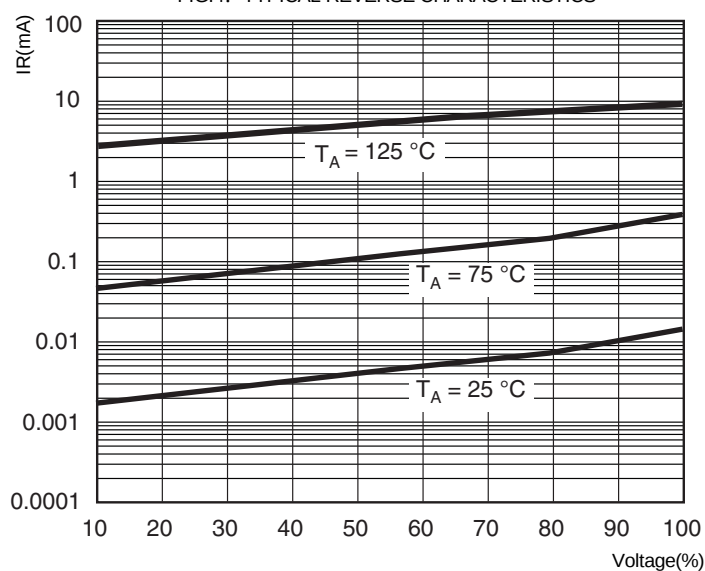
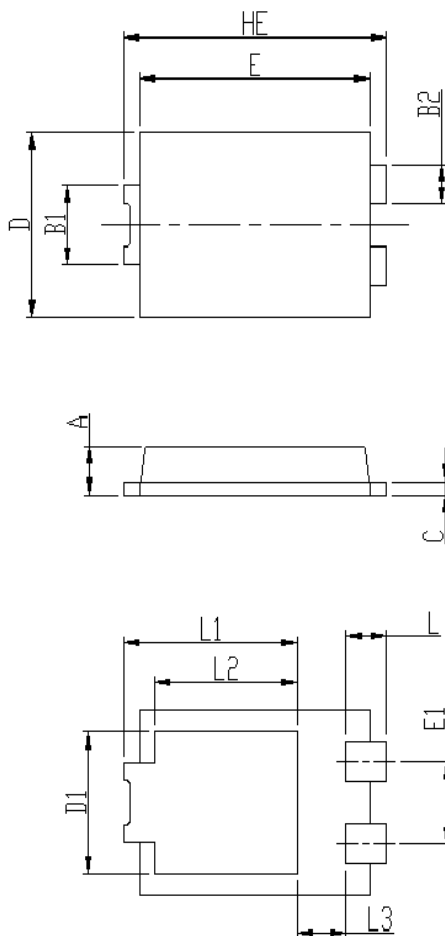


FIG.4: TYPICAL REVERSE CHARACTERISTICS

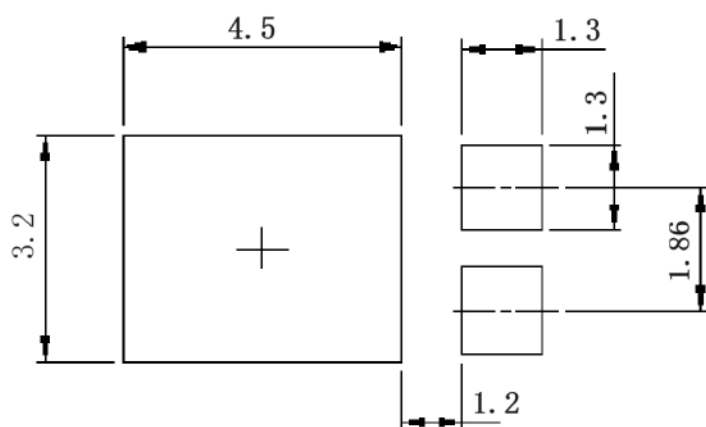


TO- 277 Package Outline Dimensions



DIM	Unit: mm		Unit: inch	
	MIN	MAX	MIN	MAX
HE	6.3	6.7	0.248	0.264
E	5.1	5.5	0.201	0.217
D	3.7	4.1	0.146	0.162
B1	1.7	2.1	0.067	0.083
B2	0.8	1	0.031	0.039
A	1.05	1.2	0.041	0.047
C	0.28	0.4	0.011	0.016
L	0.85	1.1	0.033	0.043
L1	4.3	4.8	0.169	0.189
L2	3.5	Typ.	0.138	Typ.
L3	1.2	1.5	0.047	0.059
D1	3.0	3.4	0.118	0.134
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.