

HIGH VOLTAGE SCHOTTKY RECTIFIER

Features

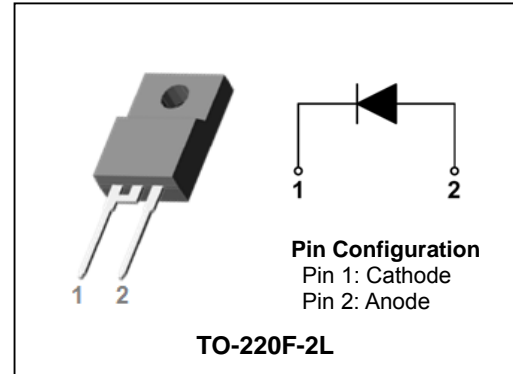
- Low forward voltage drop
- Low power loss and High efficiency
- Low leakage current
- High surge capability
- Full lead (Pb)-free and RoHS compliant device

Applications

- Switching power supplies
- Converter
- Free-wheeling diode
- Reverse battery protection
- Power inverters

Description

The SDB8100PH Schottky rectifier has been optimized for low reverse leakage at high temperature. Ideally suited for use in low voltage, high frequency switching power supplies, free-wheeling diodes, and polarity protection diodes.



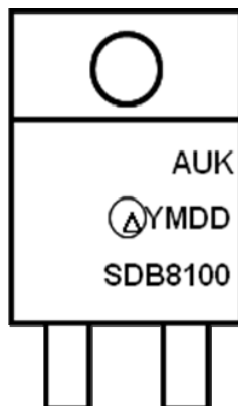
Product Characteristics

$I_{F(AV)}$	8A
V_{RRM}	100V
V_{FM} at 125°C	0.72V
I_{FSM}	180A

Ordering Information

Device	Marking Code	Package	Packaging
SDB8100PH	SDB8100	TO-220F-2L	Tube

Marking Information



AUK = Manufacture Logo

Δ = Control Code of Manufacture

YMDD = Date Code Marking

- . Y = Year Code

- . M = Monthly Code

- . D = Daily Code

SDB8100 = Specific Device Code

Absolute Maximum Ratings (Limiting Values)

Characteristic	Symbol	Value	Unit
Maximum repetitive reverse voltage Maximum working peak reverse voltage Maximum DC blocking voltage	V_{RRM} V_{RWM} V_R	100	V
Maximum average forward rectified current	$I_{F(AV)}$	8	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load per diode	I_{FSM}	180	A
Storage temperature range	T_{stg}	-45 °C to +150 °C	°C
Maximum operating junction temperature	T_J	150	°C

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Maximum thermal resistance junction to case	$R_{th(j-c)}$	4.0	°C/W

Electrical Characteristics

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit	
Peak forward voltage drop	$V_{FM}^{(1)}$	$I_{FM} = 8A$	$T_j = 25^\circ C$	-	-	0.82	V
			$T_j = 125^\circ C$	-	-	0.72	V
Reverse leakage current	$I_{RM}^{(1)}$	$V_R = V_{RRM}$	$T_j = 25^\circ C$	-	-	0.1	mA
			$T_j = 125^\circ C$	-	-	5.0	mA
Junction capacitance	C_j	$V_R = 10V_{DC}, f=1MHz$	-	-	200	pF	

Note : (1) Pulse test : $t_p \leq 380 \mu s$, Duty cycle $\leq 2\%$

Rating and Characteristic Curves

Fig. 1) Typical Forward Characteristics

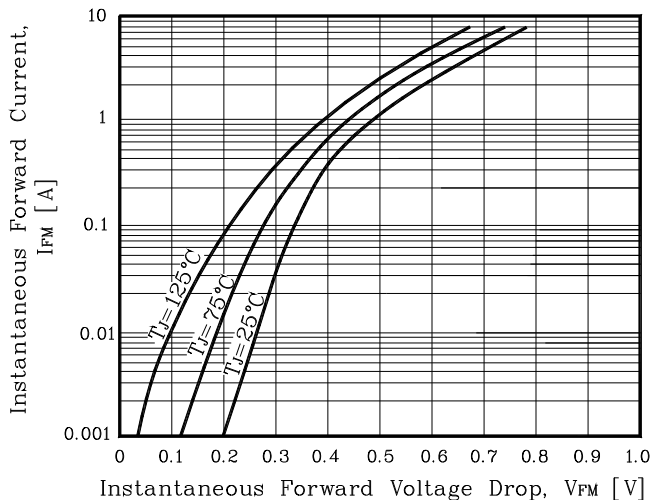


Fig. 2) Typical Reverse Characteristics

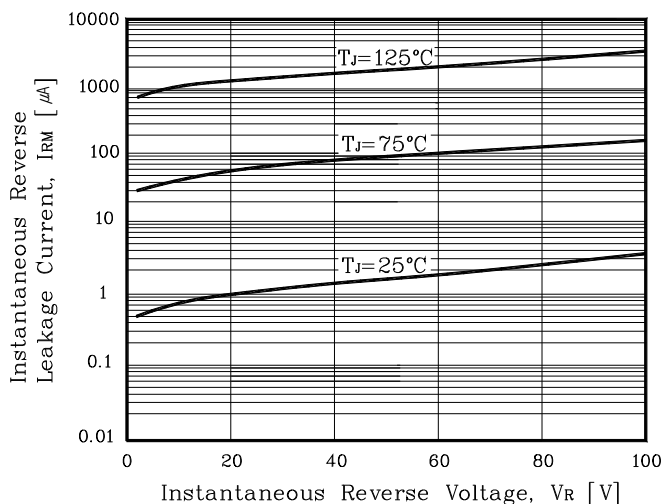


Fig. 3) Maximum Forward Derivative Curve

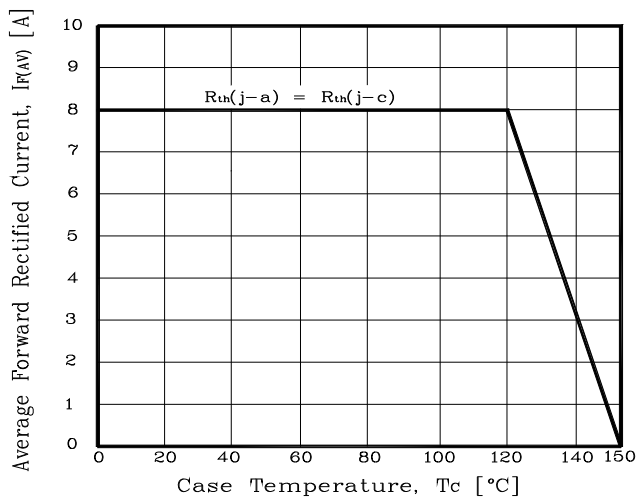


Fig. 4) Forward Power Dissipation

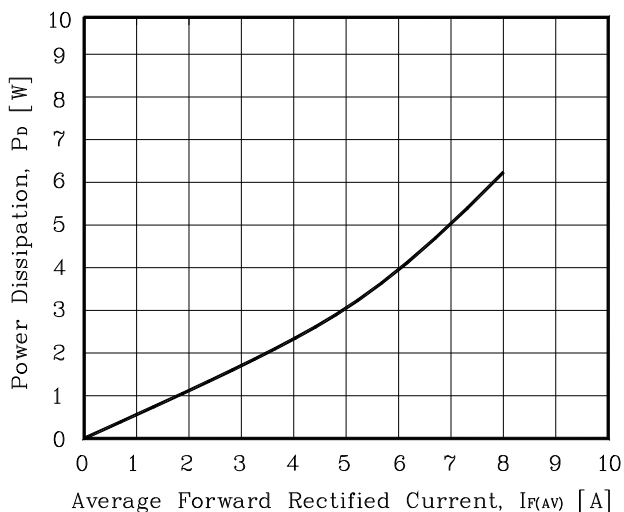


Fig. 5) Maximum Non-Repetitive Peak Forward Surge Current

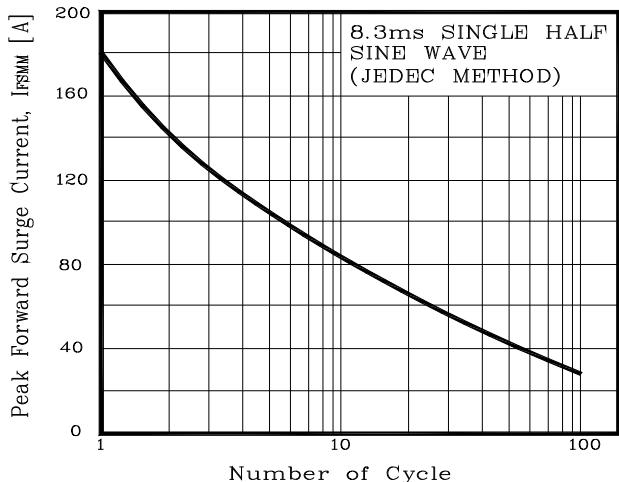
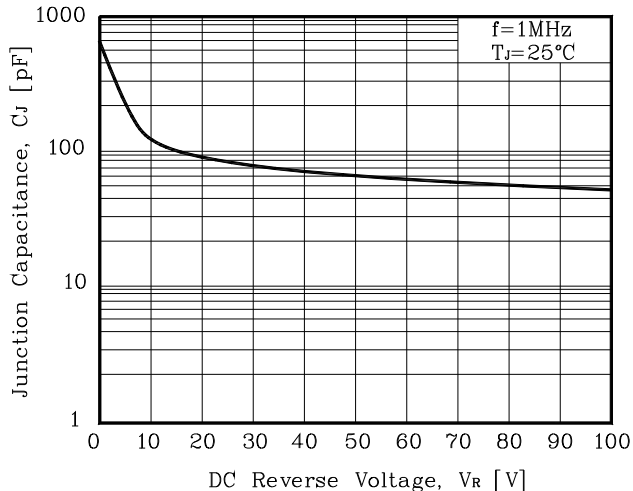
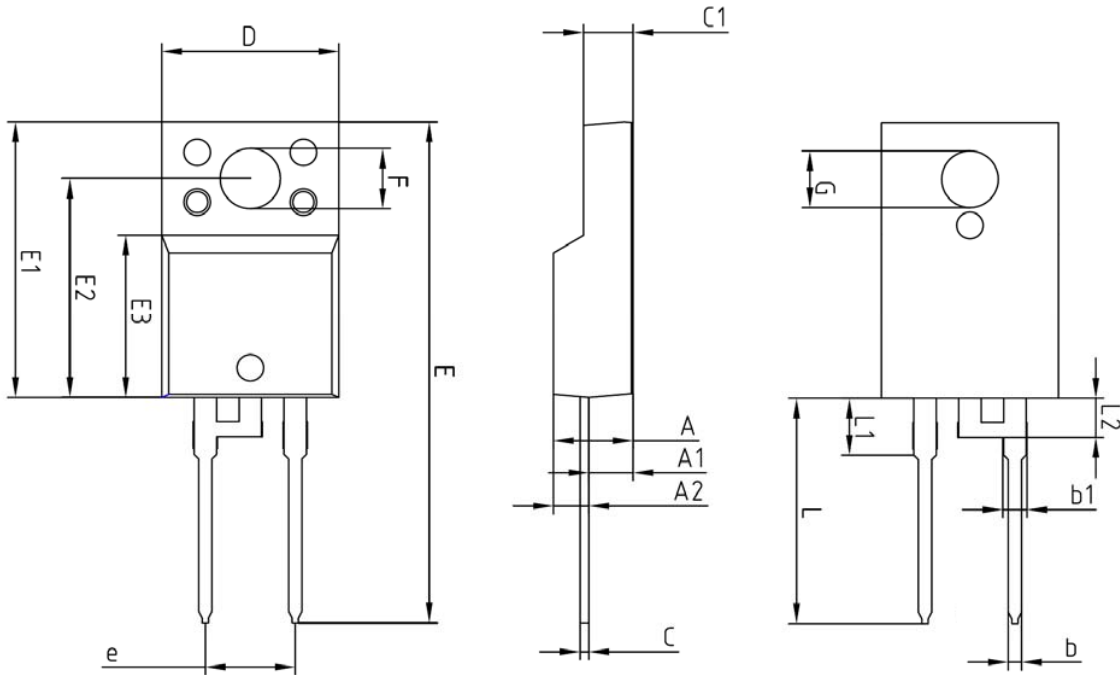


Fig. 6) Typical Junction Capacitance



Package Outline Dimension



SYMBOL	MILLIMETERS			NOTE
	MINIMUM	NOMINAL	MAXIMUM	
A	-	-	4.60	
A1	2.45	2.50	2.55	
A2	1.95	2.00	2.05	
b	0.65	0.75	0.85	
b1	1.07	1.27	1.47	
C	0.40	0.50	0.60	
C1	2.70	2.80	2.90	
D	9.90	10.00	10.10	
E	28.00	-	28.60	
E1	15.50	15.60	15.70	
E2	12.30	12.40	12.50	
E3	9.15	9.20	9.25	
F	3.30	3.40	3.50	
G	3.10	3.20	3.30	
e	5.08 BSC			
L	12.40	-	13.00	
L1	3.46 BSC			
L2	2.21 BSC			

The AUK Corp. products are intended for the use as components in general electronic equipment (Office and communication equipment, measuring equipment, home appliance, etc.).

Please make sure that you consult with us before you use these AUK Corp. products in equipments which require high quality and / or reliability, and in equipments which could have major impact to the welfare of human life(atomic energy control, airplane, spaceship, transportation, combustion control, all types of safety device, etc.). AUK Corp. cannot accept liability to any damage which may occur in case these AUK Corp. products were used in the mentioned equipments without prior consultation with AUK Corp..

Specifications mentioned in this publication are subject to change without notice.