

Schottky Barrier Rectifier

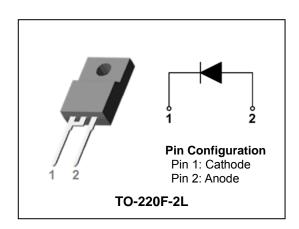
HIGH VOLTAGE SCHOTTKY RECTIFIER

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



Product Characteristics

I _{F(AV)}	8A
V_{RRM}	150V
V _{FM} at 125℃	0.80V
I _{FSM}	180A

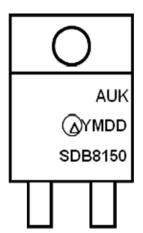
Description

The SDB8150PH 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.

Ordering Information

Device	Marking Code	Package	Packaging
SDB8150PH	SDB8150	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

SDB8150 = 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	150	٧
Maximum average forward rectified current	I _{F(AV)}	8	Α
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load per diode	I _{FSM}	180	А
Storage temperature range	T _{stg}	-45℃ to +150℃	$^{\circ}\!$
Maximum operating junction temperature	T _J	150	${\mathbb C}$

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Maximum thermal resistance junction to case	R _{th(j-c)}	5.0	°C/W

Electrical Characteristics

Characteristic	Symbol	Test Condition		Min.	Тур.	Max.	Unit
Peak forward voltage drop	V _{FM} ⁽¹⁾	I _{FM} = 8A	T _j =25℃	ı	ı	0.85	V
			T _j =125℃	-	-	0.80	V
Reverse leakage current	I _{RM} ⁽¹⁾	$V_R = V_{RRM}$	T _j =25℃	-	-	0.1	mA
			T _j =125℃	-	-	5.0	mA
Junction capacitance	C _j	$V_R = 10V_{DC}$, $f=1MHz$		-	90	-	pF

Note : (1) Pulse test : $t_P \le 380~\mu s$, Duty cycle $\le 2\%$

Rating and Characteristic Curves

Fig. 1) Typical Forward Characteristics

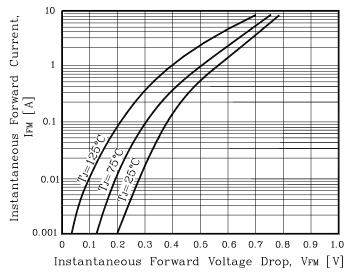


Fig. 2) Typical Reverse Characteristics

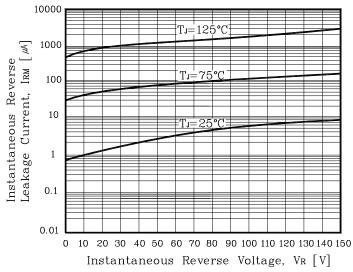


Fig. 3) Maximum Forward Derative Curve

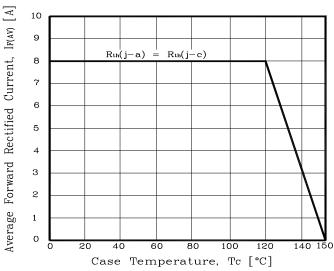


Fig. 4) Forward Power Dissipation

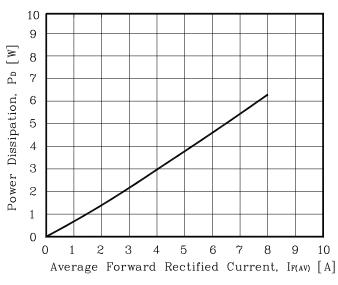


Fig. 5) Maximum Non-Repetitive Peak Forward Surge Current

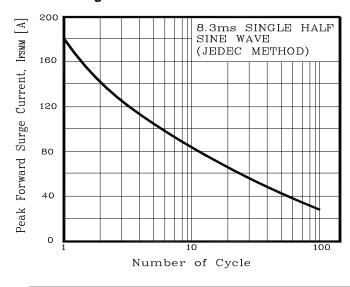
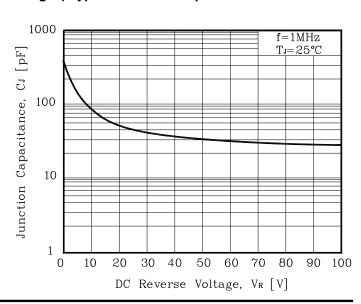
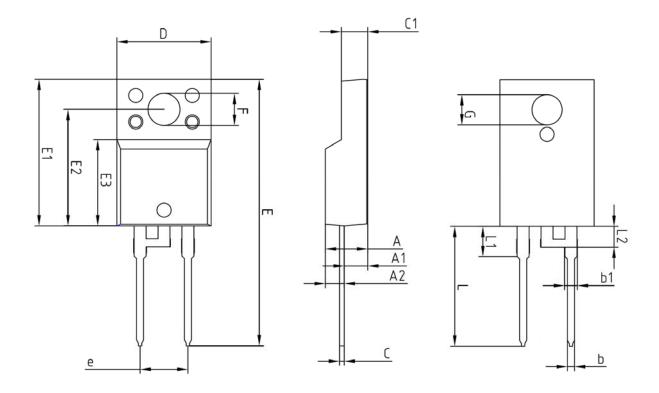


Fig. 6) Typical Junction Capacitance



Package Outline Dimension



SYMBOL	MINIMUM			NOTE	
Α	_	_	4.60		
A1	2.45	2.50	2.55		
A2	1.95	2.00	2.05		
b	0.65	0.75	0.85		
Ь1	1.07	1.27	1.47		
С	0.40	0.50	0.60		
C1	2.70	2.80	2.90		
D	9.90	10.00	10.10		
Ε	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		
е	5.08 BSC				
L	12.40	 3.46 BS	13.00		
L1					
L2	2.21 BSC				

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