

Schottky Barrier Rectifier

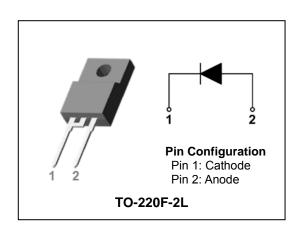
LOW FORWARD VOLTAGE SCHOTTKY RECTIFIER

Features

- Low forward voltage drop and leakage current
- Low power loss and High efficiency
- Guard-ring for overvoltage protection
- · High surge capability
- Full lead (Pb)-free and RoHS compliant device

Applications

- Power supply Output rectification
- Converter
- Free-wheeling diode
- Reverse battery protection
- Power inverters



Product Characteristics

I _{F(AV)}	15A
V_{RRM}	60V
V _{FM} at 125℃	0.58V
I _{FSM}	210A

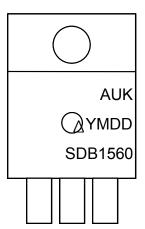
Description

The SDB1560PH Schottky rectifier has been optimized for very low forward voltage drop with moderate leakage. Typical applications are in switching power supplies, converters, free-wheeling diodes, and reverse battery protection.

Ordering Information

Device	Marking Code	Package	Packaging
SDB1560PH	SDB1560	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

SDB1560 = 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	$egin{array}{c} egin{array}{c} \egin{array}{c} \egin{array}{c} \egin{array}{c} \egin{array}$	60	٧
Maximum average forward rectified current	I _{F(AV)}	15	А
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load per diode	I _{FSM}	210	А
Storage temperature range	T _{stg}	-45℃ to +150℃	$^{\circ}$ C
Maximum operating junction temperature	TJ	150	$^{\circ}$ C

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Maximum thermal resistance junction to case	R _{th(j-c)}	4.5	°C/W

Electrical Characteristics

Characteristic	Symbol	Test Condition		Min.	Тур.	Max.	Unit
Dook forward voltage drap	V _{FM} ⁽¹⁾	1 - 150	T _j =25℃	-	-	0.62	V
Peak forward voltage drop	VFM	$I_{FM} = 15A$	T _j =125℃	-	-	0.58	V
Doverse leekage ourrent	I _{RM} ⁽¹⁾	$I_{RM}^{(1)}$ $V_R = V_{RRM}$	T _j =25℃	-	-	0.5	mA
Reverse leakage current			T _j =125℃	-	-	50	mA
Junction capacitance	C _j	$V_R = 5V_{DC}$, $f=1MHz$		-	-	720	pF

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

Rating and Characteristic Curves

Fig. 1) Typical Forward Characteristics

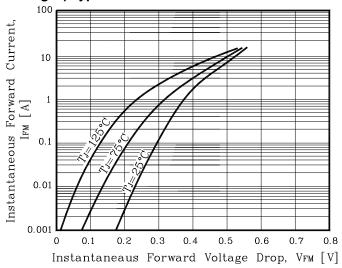


Fig. 2) Typical Reverse Characteristics

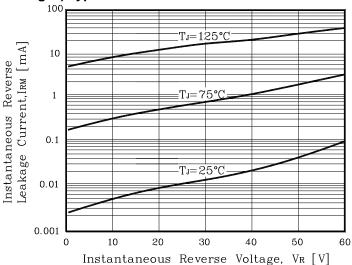


Fig. 3) Maximum Forward Derative Curve

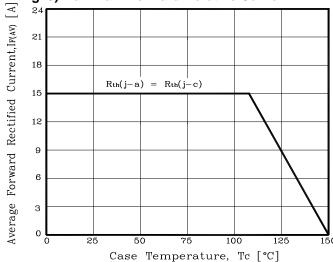


Fig. 4) Forward Power Dissipation

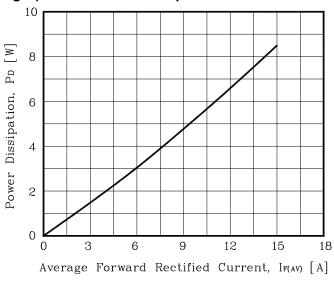


Fig. 5) Maximum Non-Repetitive Peak Forward Surge Current

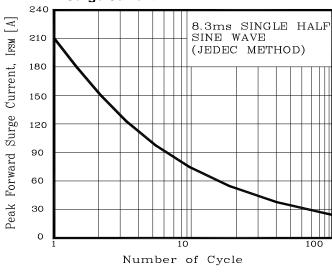
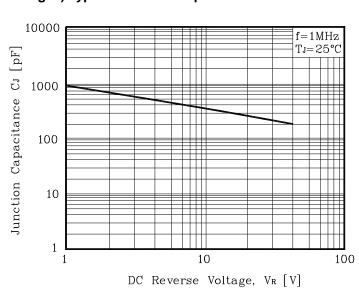
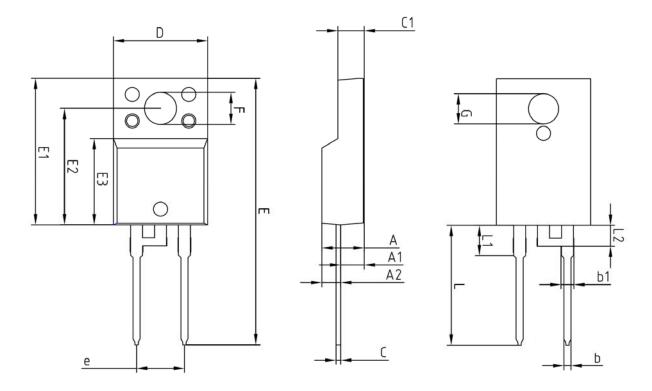


Fig. 6) Typical Junction Capacitance



Package Outline Dimension



	MILLIMETERS				
SYMBOL	MINIMUM	NOMINAL	MAXIMUM	NOTE	
Α	_	_	4.60		
A1	2.45	2.50	2.55		
A2	1.95	2.00	2.05		
Ь	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			
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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