

Schottky Barrier Rectifier

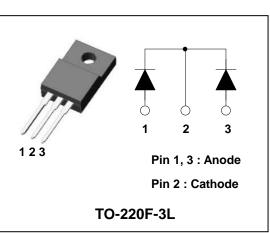
DUAL COMMON CATHODE SCHOTTKY RECTIFIER

Features

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

Applications

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



Product Characteristics

I _{F(AV)}	2 X 5A
V _{RRM}	150V
V _{FM} at 125℃	0.75V
I _{FSM}	120A

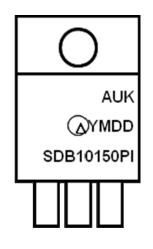
Description

The SDB10150PI has two schottky barriers arranged in a common cathode configuration. Typical applications are in switching power supplies, converters, free-wheeling diodes, and reverse battery protection.

Ordering Information

Device	Marking Code	Package	Packaging
SDB10150PI	SDB10150PI	TO-220F-3L	Tube

Marking Information



AUK = Manufacture Logo
Δ = Control Code of Manufacture
YMDD = Date Code Marking
. Y = Year Code
. M = Monthly Code
. D = Daily Code
SDB10150PI = 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	V	
Maximum average forward restified current	per diode		5	A	
Maximum average forward rectified current	total device	I _{F(AV)}	10		
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load per diode		I _{FSM}	120	А	
Storage temperature range		T _{stg}	-45℃ to +150℃	°C	
Maximum operating junction temperature		Tj	150	°C	

Thermal Characteristics

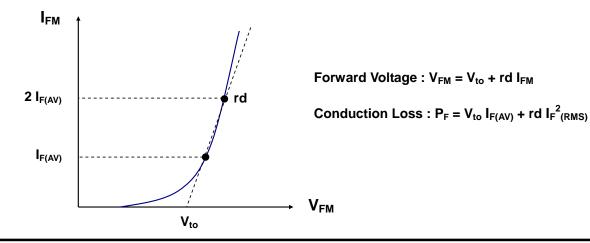
Characteristic	Symbol	Value	Unit		
Maximum thermal registeries junction to ease	per diode	D	4.0	°C/W	
Maximum thermal resistance junction to case	total device	R _{th(j-c)}	3.6	0700	

Electrical Characteristics (Per Diode)

Characteristic	Symbol	Test Condition		Min.	Тур.	Max.	Unit
Peak forward voltage drop	${\sf V}_{\sf FM}{}^{(1)}$	I _{FM} = 5A	Tj =25 ℃	-	-	0.88	V
			Tj =125 ℃	-	-	0.75	V
Reverse leakage current	$I_{RM}^{(1)}$	V _R = V _{RRM}	Tj =25 ℃	-	-	10	uA
			Tj =125 ℃	-	-	10	mA
Junction capacitance	Cj	$V_R = 4V_{DC}, f=1MHz$		-	80	-	pF

Note : (1) Pulse test : $t_{P}\!\leq\!380~\mu\!\!/\text{s},$ Duty cycle $\leq\!2\%$

To evaluate the conduction losses use the following equation (Fig 4.) : $P_F = 0.72 \times I_{F(AV)} + 0.021 I_{F^2(RMS)}^2$



Rating and Characteristic Curves

Fig. 1) Typical Forward Characteristics (Per diode)

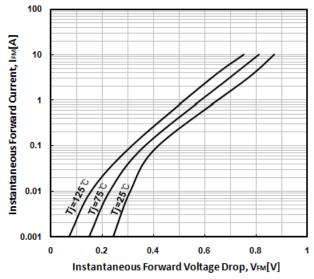
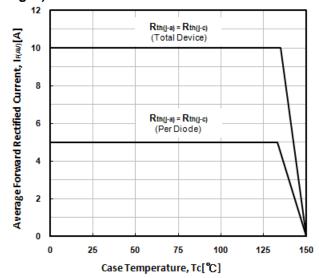
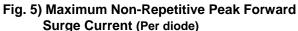


Fig. 3) Maximum Forward Derative Curve





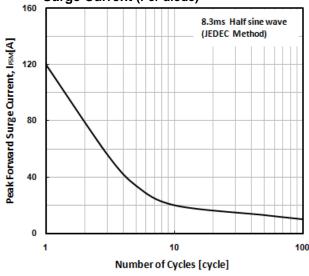
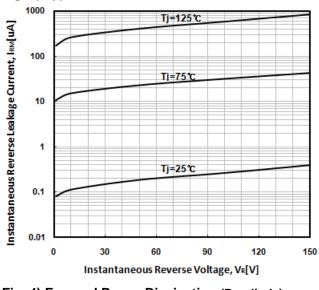


Fig. 2) Typical Reverse Characteristics (Per diode)





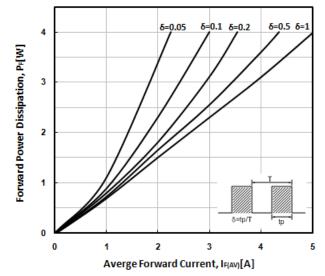
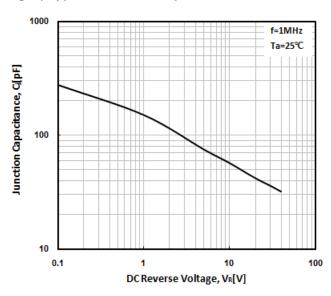
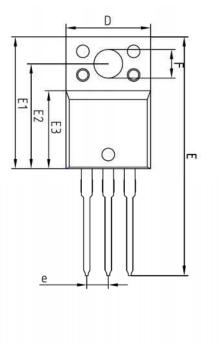


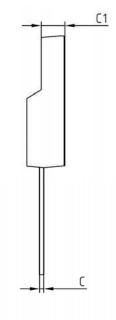
Fig. 6) Typical Junction Capacitance (Per diode)

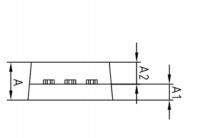


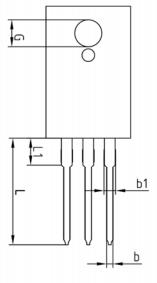
KSD-D00004-002

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	
b	0.65	0.75	0.85	
b1	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	
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 2.54 BS	3.30	
е				
L	12.40		13.00	
L1				

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