KODENSHI AUK

SDB20200PI

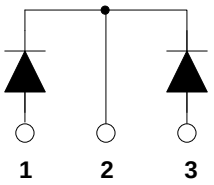
Schottky Barrier Rectifier

HIGH VOLTAGE SCHOTTKY RECTIFIER

Features

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

1 2 3



1 2 3

Pin 1, 3: Anode

Pin 2: Cathode

TO-220F-3L

Applications

- High efficiency SMPS
- Output rectification
- High frequency switching
- Freewheeling
- DC-DC converter systems

Product Characteristics

$I_{F(AV)}$	2 x 10A
V_{RRM}	200V
V_{FM} at 125℃	0.88V
I_{FSM}	180A

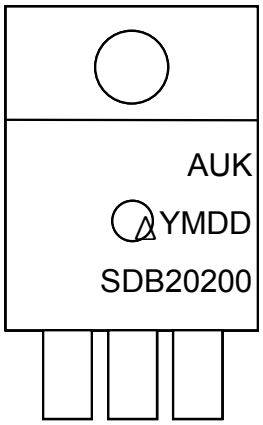
Description

The SDB20200PI has two schottky barriers arranged in a common cathode configuration and is ideally suited for a full wave output rectifier in low switching power supplies and DC to DC converters where small size and high reliability are required.

Ordering Information

Device	Marking Code	Package	Packaging
SDB20200PI	**SDB20200**	**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

SDB20200 = 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	200	V
Maximum average forward rectified current	per diode	$I_{F(AV)}$	10	A
	total device		20	
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}	-55℃ to +150℃	℃
Maximum operating junction temperature		T_j	150	℃

Thermal Characteristics

Characteristic		Symbol	Value	Unit
Maximum thermal resistance junction to case	per diode	$R_{th(j-c)}$	4.0	℃/W
	total device		3.6	

Electrical Characteristics (Per Diode)

Characteristic	Symbol	Test Condition		Min.	Typ.	Max.	Unit
Peak forward voltage drop	V_{FM} (1)	I_{FM} = 10A	T_j=25℃	-	-	0.95	V
			T_j=125℃	-	-	0.88	V
Reverse leakage current	I_{RM} (1)	$V_R = V_{RRM}$	T_j=25℃	-	-	20	uA
			T_j=125℃	-	-	10	mA
Junction capacitance	C_j	V_R = 10V_{DC}, f=1MHz		-	-	120	pF

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

Rating and Characteristic Curves

Fig. 1) Typical Forward Characteristics (Per diode)

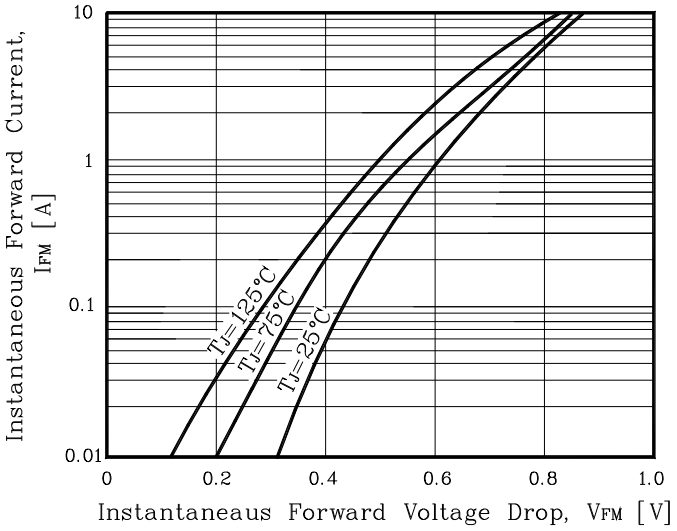


Fig. 2) Typical Reverse Characteristics (Per diode)

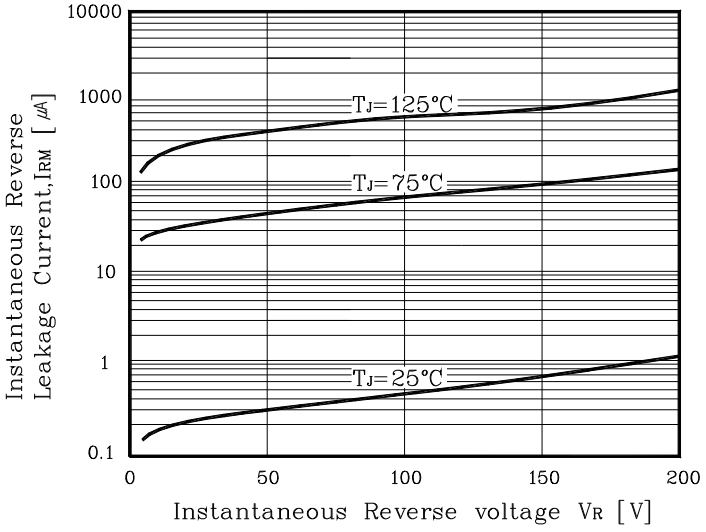


Fig. 3) Maximum Forward Derative Curve

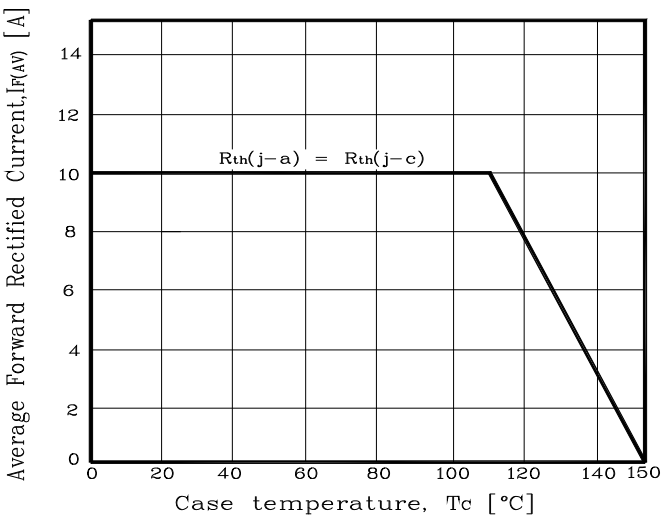


Fig. 4) Forward Power Dissipation (Per diode)

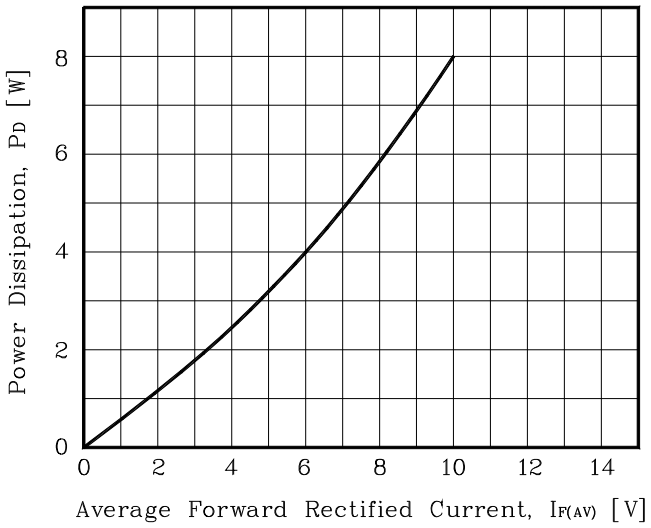


Fig. 5) Maximum Non-Repetitive Peak Forward Surge Current (Per diode)

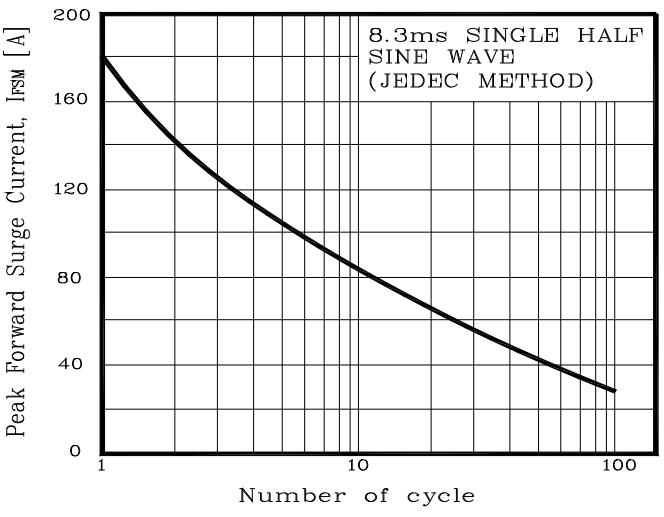
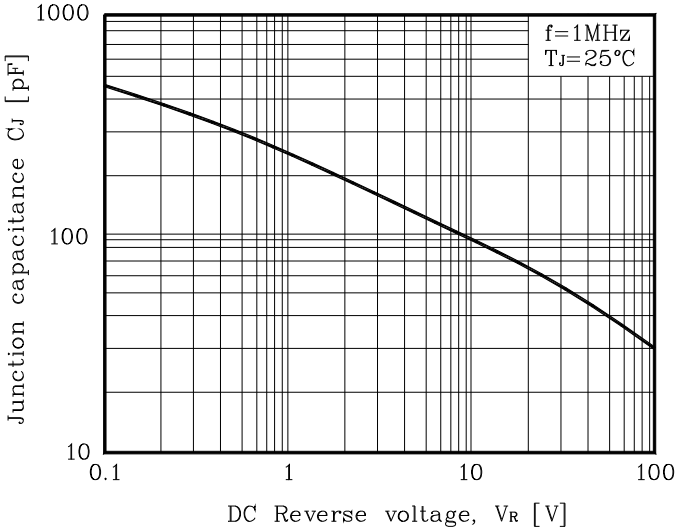
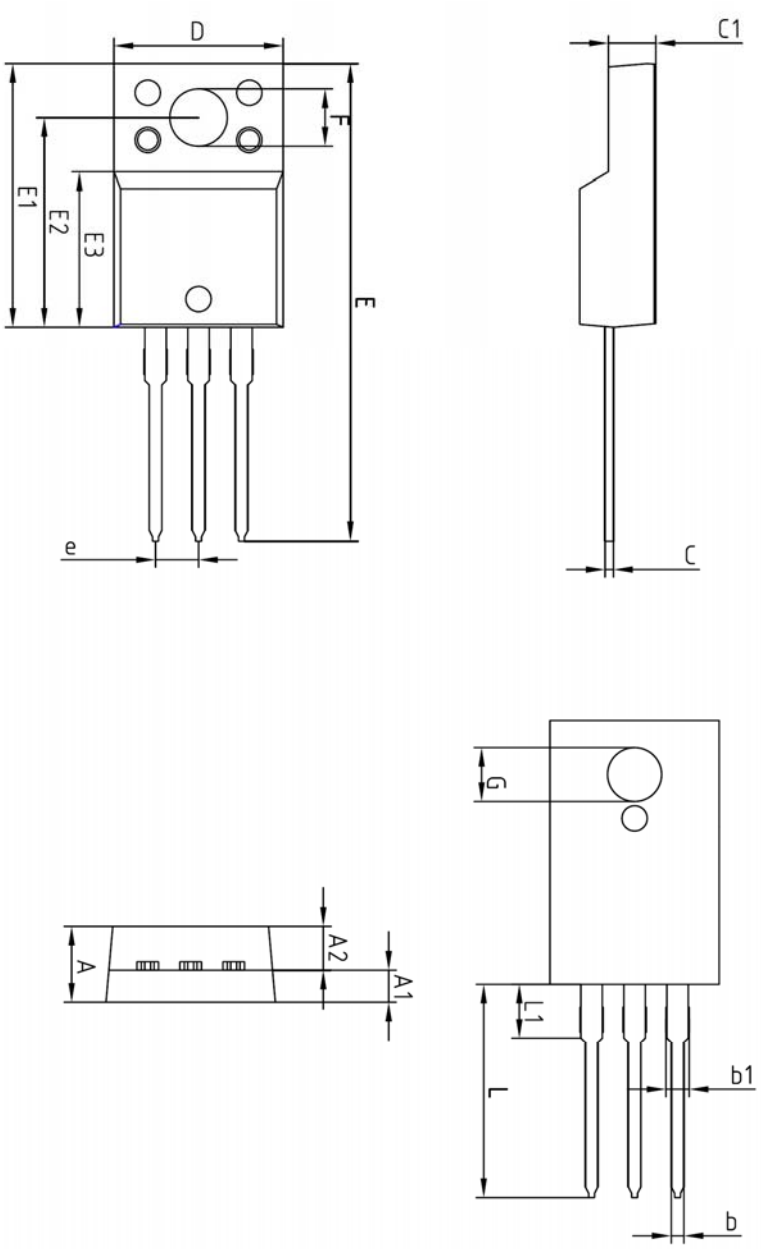


Fig. 6) Typical Junction Capacitance (Per diode)



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	2.54 BSC			
L	12.40	–	13.00	
L1	3.46 BSC			

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