# KODENSHI AUK

## SDB20D100D2

**Schottky Barrier Rectifier** 

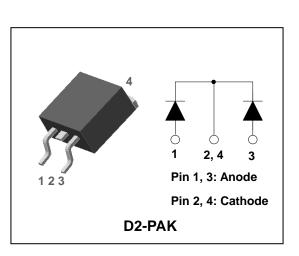
### HIGH VOLTAGE SCHOTTKY RECTIFIER

#### Features

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

### **Applications**

- Power supply Output rectification
- High efficiency SMPS
- Free-wheeling diode
- Reverse battery protection
- DC to DC systems



#### Product Characteristics

I <sub>F(AV)</sub>	2 X 10A
V <sub>RRM</sub>	100V
$V_{FM}$ at 125 $^\circ\!$	0.72V
I <sub>FSM</sub>	120A

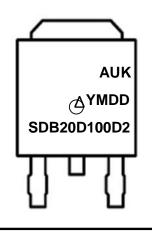
#### Description

Schottky barrier rectifier designed for high frequency miniature Switched Mode Power Supplies such as adaptors and on board DC to DC converters.

#### **Ordering Information**

Device	Marking Code	Package	Packaging
SDB20D100D2	SDB20D100D2	D2-PAK	Tape & Reel

### **Marking Information**



AUK = Manufacture Logo

 $\Delta$  = Control Code of Manufacture

YMDD = Date Code Marking

- -. Y = Year Code
- -. M = Monthly Code
- -. DD = Daily Code

SDB20D100D2 = 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 <sub>RRM</sub> V <sub>RWM</sub> V <sub>R</sub>	100	V	
Maximum average forward rectified current	per diode		10	A	
	total device	I <sub>F(AV)</sub>	20		
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load per diode		I <sub>FSM</sub>	120	A	
Storage temperature range		T <sub>stg</sub>	-45℃ to +150℃	°C	
Maximum operating junction temperature		TJ	150	°C	

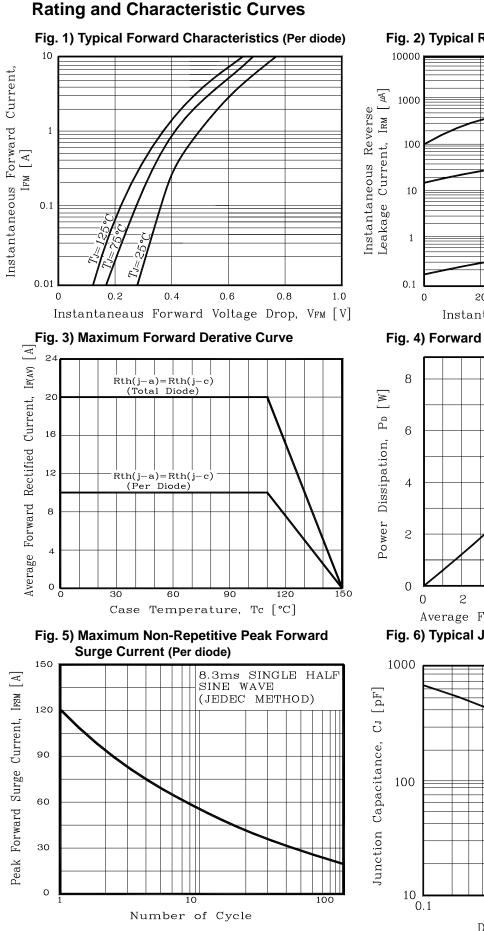
### **Thermal Characteristics**

Characteristic		Symbol	Value	Unit
Maximum thermal resistance junction to case	per diode	D	3.0	°C/W
	total device	R <sub>th(j-c)</sub>	2.8	

### Electrical Characteristics (Per Diode)

Characteristic	Symbol	Test Condition		Min.	Тур.	Max.	Unit
Peak forward voltage drop	${\sf V_{FM}}^{(1)}$	I <sub>FM</sub> = 10A	<b>T</b> j <b>=25</b> ℃	-	-	0.85	V
			Tj <b>=125</b> ℃	-	-	0.72	V
Reverse leakage current	$I_{\rm RM}^{(1)}$	V <sub>R</sub> = V <sub>RRM</sub>	<b>T</b> j <b>=25</b> ℃	-	-	20	uA
			Tj <b>=125</b> ℃	-	-	20	mA
Junction capacitance	C <sub>j</sub>	$V_{R} = 5V_{DC}$ , f=1MHz		-	-	350	pF

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



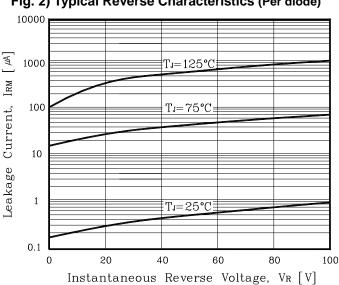


Fig. 2) Typical Reverse Characteristics (Per diode)



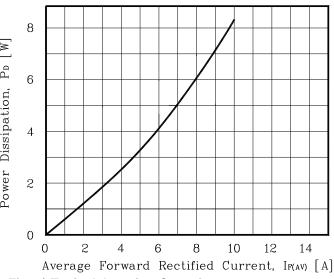
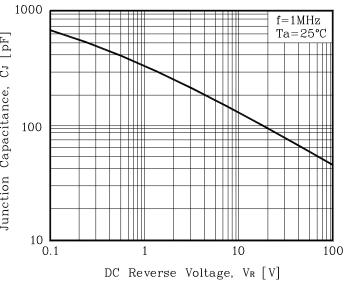
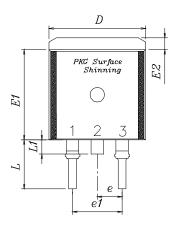


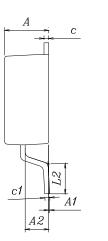
Fig. 6) Typical Junction Capacitance (Per diode)

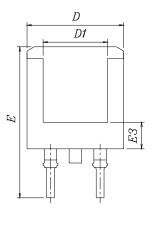


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### Package Outline Dimension

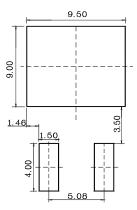






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SYMBOL	MINIMUM	NOIL		
А	4.35	4.50	4.65	
A1	—	—	0.15	
A2	2.20	2.40	2.60	
С	0.40	0.50	0.60	
с1	0.40	0.50	0.60	
D	9.80	10.00	10.20	
D1	6.40	6.60	6.80	
E	15.00	15.40	15.80	
E1	9.05	9.20	9.35	
E2	1.00	1.20	1.40	
E3	2.50	2.70	2.90	
е	2.34	2.54	2.74	
e1	4.88	5.08	5.28	
L	4.60	5.00	5.40	
L1	1.40	1.45	1.50	
L2	2.50	_	_	

#### \* Recommend PCB solder land [Unit: mm]



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