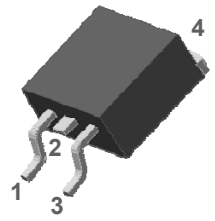
High Voltage Schottky Barrier Rectifier

General Description

The SDB10S200D2 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.



D2-PAK

Product Characteristics	
$I_{F(AV)}$	10A
V_{RRM}	200V
V_{FM} at 125°C	0.88V
I_{FSM}	120A

Features and Benefits

- Low forward drop voltage and low leakage current
- Low power loss and high efficiency
- High surge capability
- Full lead (Pb)-free and RoHS compliant device

Applications

- Switching power supply
- Output rectification
- High frequency switching
- DC/DC Converter system

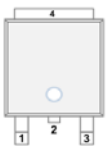
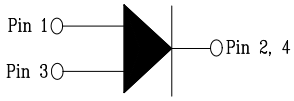
Ordering Information

Part Number	Marking Code	Package	Packaging
SDB10S200D2	SDB10S200D2	D2-PAK	Tape & Reel

Marking Information

AUK = Manufacture Logo
Δ = Control Code of Manufacture
YMDD = Date Code Marking
-. Y = Year Code
-. M = Monthly Code
-. DD = Daily Code
SDB10S200D2 = Specific Device Code

Pinning Information

Pin	Description	Simplified Outline	Graphic Symbol
1	Anode		
2, 4	Common-Cathode		
3	Anode		

Absolute Maximum Ratings (Limiting values at 25°C, unless otherwise specified)

Characteristic	Symbol	Ratings	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	$I_{F(AV)}$	10	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load per diode	I_{FSM}	120	
Storage temperature range	T_{stg}	-45 to +150	°C
Maximum operating junction temperature	T_J	150	

Thermal Characteristics

Characteristic	Symbol	Ratings	Unit
Thermal resistance, junction to case	$R_{th(j-c)}$	4.0	°C/W

Electrical Characteristics

Characteristic	Symbol	Test Condition		Min.	Typ.	Max.	Unit
Peak forward voltage drop	V_{FM} (1)	I_{FM} = 10A	T_j = 25°C	-	-	0.95	V
			T_j = 125°C	-	-	0.88	
Reverse leakage current	I_{RM} (1)	$V_R = V_{RRM}$	T_j = 25°C	-	-	20	uA
			T_j = 125°C	-	-	10	mA
Junction capacitance	C_j	V_R = 10V_{DC}, f = 1MHz		-	100	-	pF

1) Pulse test: $t_P \leq 380us$, Duty cycle≤2%

Rating and Characteristic Curves

Fig. 1) Typical Forward Characteristics

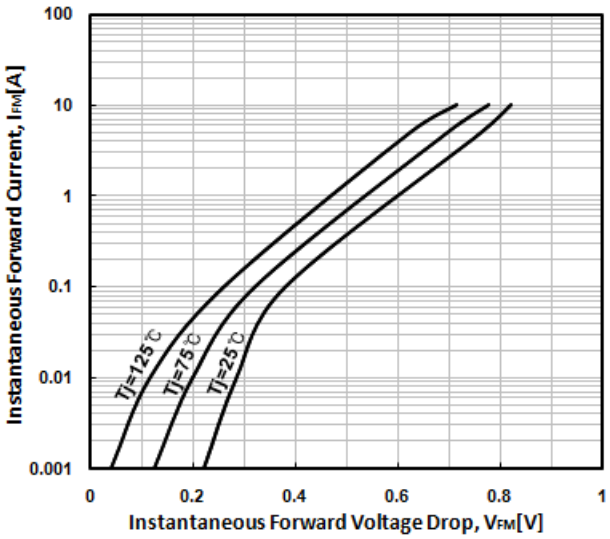


Fig. 2) Typical Reverse Characteristics

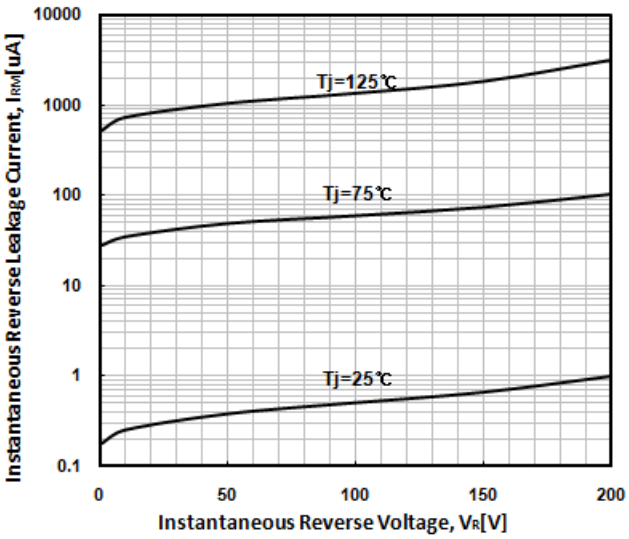


Fig. 3) Maximum Forward Derative Curve

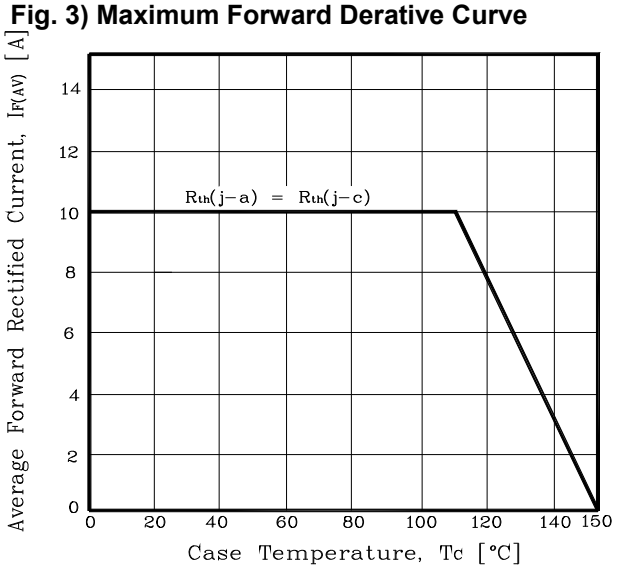


Fig. 4) Forward Power Dissipation

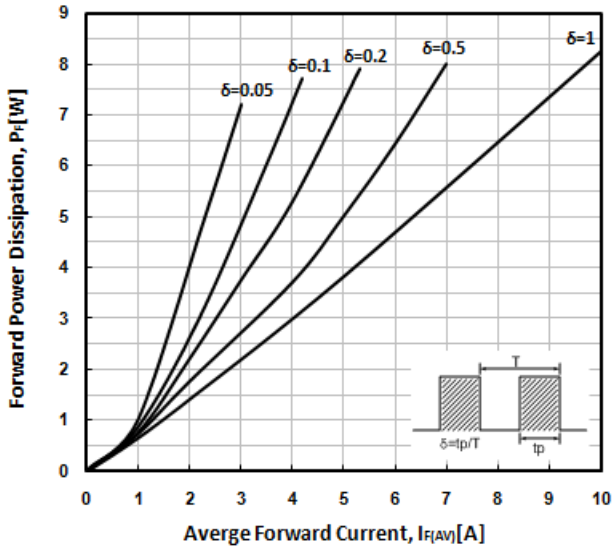


Fig. 5) Maximum Non-Repetitive Peak Forward Surge Current

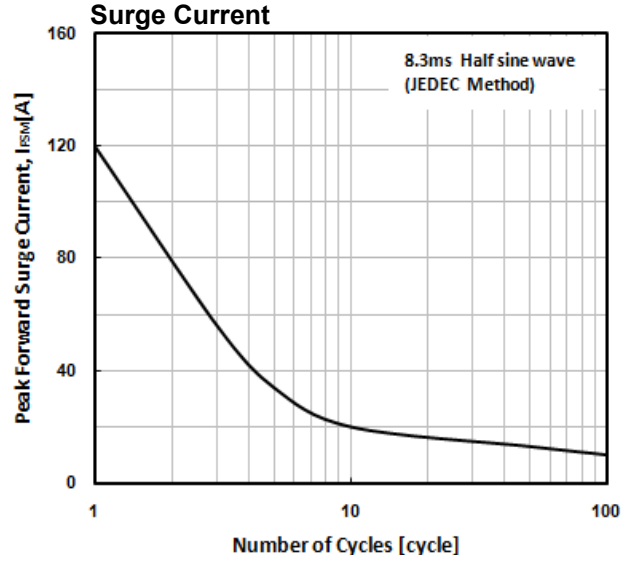
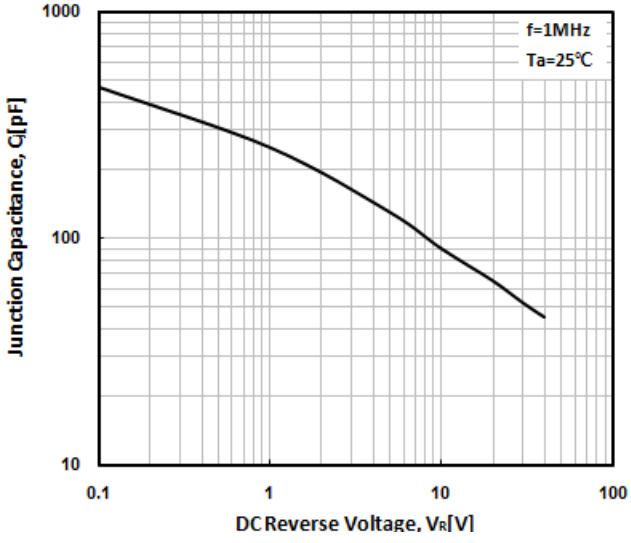
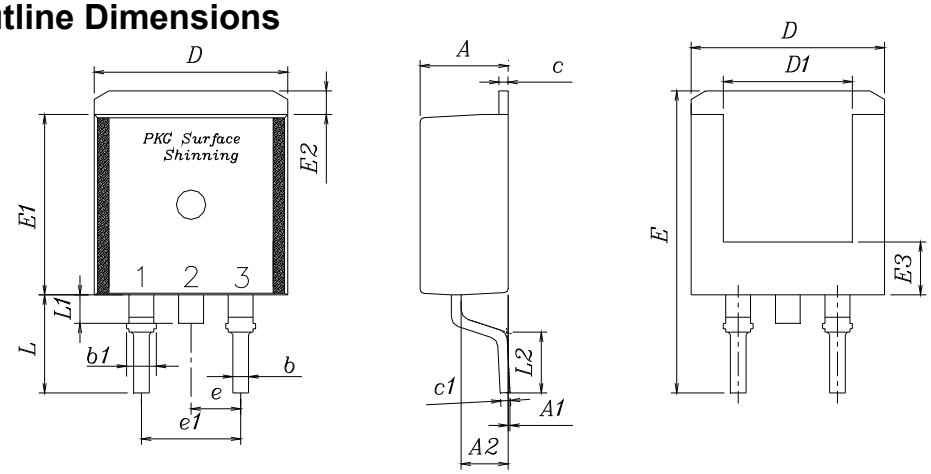


Fig. 6) Typical Junction Capacitance

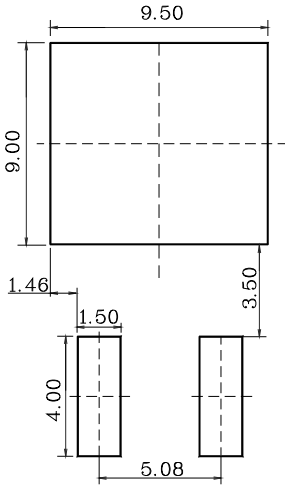


Package Outline Dimensions



SYMBOL	MILLIMETERS			NOTE
	MINIMUM	NOMINAL	MAXIMUM	
A	4.35	4.50	4.65	
A1	–	–	0.15	
A2	2.20	2.40	2.60	
b	0.70	0.80	0.90	
b1	1.17	1.27	1.37	
c	0.40	0.50	0.60	
c1	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	
e	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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