KODENSHI AUK

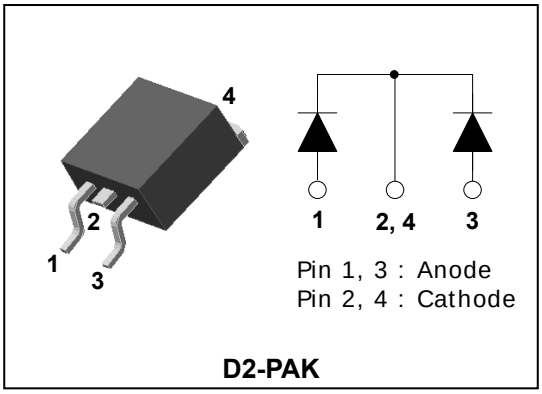
SDB20D60D2

Schottky Barrier Rectifier

DUAL COMMON CATHODE SCHOTTKY RECTIFIER

Features

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



D2-PAK

Applications

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

Product Characteristics

$I_{F(AV)}$	2 X 10A
V_{RRM}	60V
V_{FM} at 125℃	0.55V
I_{FSM}	150A

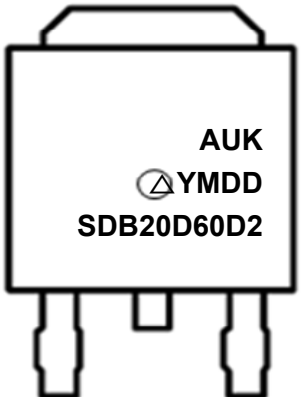
Description

The SDB20D60D2 is suited for Switch Mode Power Supply and high frequency DC to DC converters. This device is especially intended for use in low voltage, high frequency inverters, free wheeling and polarity protection applications.

Ordering Information

Device	Marking Code	Package	Packaging
SDB20D60D2	SDB20D60D2	D2-PAK	Tape & Reel

Marking Information



AUK = Manufacture Logo

Δ = Control Code of Manufacture

YMDD = Date Code Marking

-. Y = Year Code

-. M = Monthly Code

-. D = Daily Code

SDB20D60D2 = 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	60	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}	150	A
Storage temperature range		T_{stg}	-55 to +150	℃
Maximum operating junction temperature		T_j	150	

Thermal Characteristics

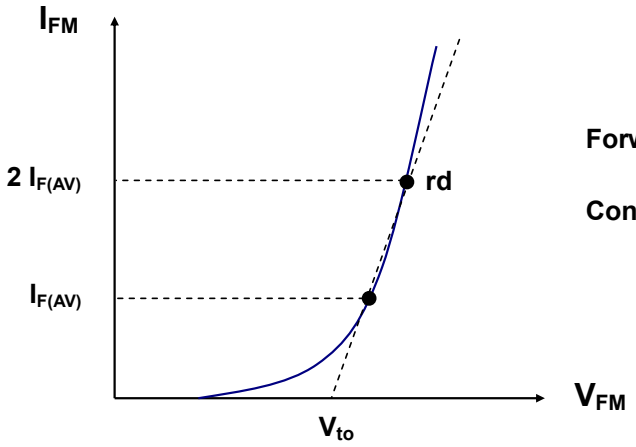
Characteristic		Symbol	Value	Unit
Maximum thermal resistance junction to case	per diode	$R_{th(j-c)}$	3.0	℃/W
	total device		2.8	

Electrical Characteristics

Characteristic	Symbol	Test Condition		Min.	Typ.	Max.	Unit
Peak forward voltage drop	V_{FM} (1)	I_{FM} = 10A	T_j=25℃	-	0.55	0.65	V
			T_j=125℃	-	0.50	0.55	
Reverse leakage current	I_{RM} (1)	$V_R = V_{RRM}$	T_j=25℃	-	-	1.5	mA
			T_j=125℃	-	-	200	
Junction capacitance	C_j	V_R = 4V_{DC}, f=1MHz		-	400	-	pF

Note : (1) Pulse test : $t_p \leq 380us$, Duty cycle $\leq 2\%$

To evaluate the conduction losses use the following equation: $P_F = 0.35\ I_{F(AV)} + 0.019\ I_F{}^2{}_{(RMS)}$



Forward Voltage : $V_{FM} = V_{to} + rd\ I_{FM}$

Conduction Loss : $P_F = V_{to}\ I_{F(AV)} + rd\ I_F{}^2{}_{(RMS)}$

Rating and Characteristic Curves

Fig. 1) Typical Forward Characteristics (Per Diode)

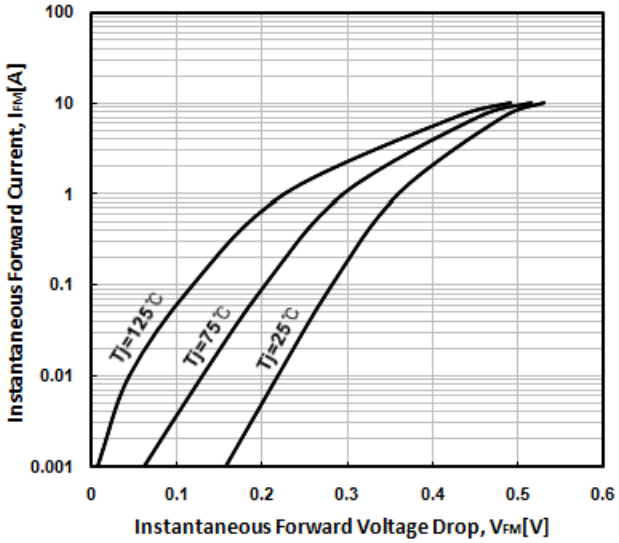


Fig. 2) Typical Reverse Characteristics (Per Diode)

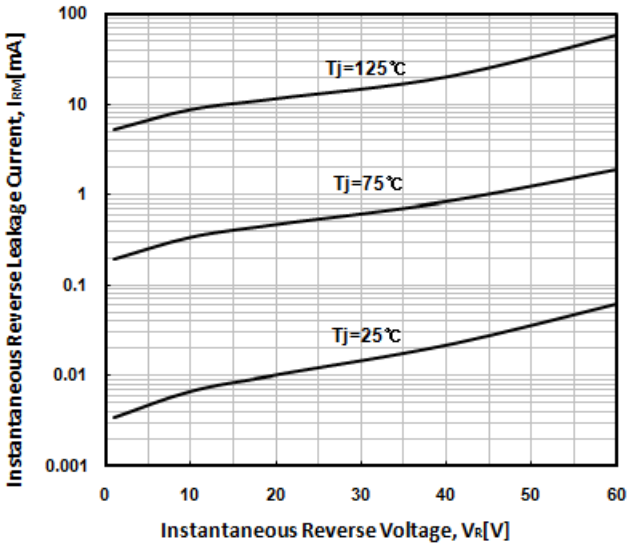


Fig. 3) Maximum Forward Derative Curve

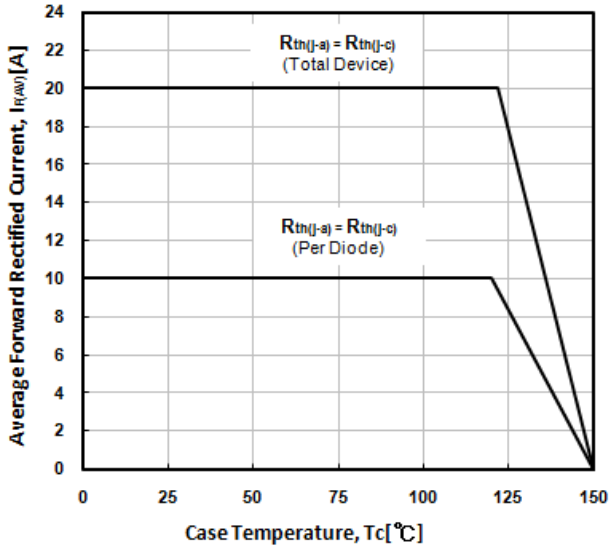


Fig. 4) Forward Power Dissipation (Per Diode)

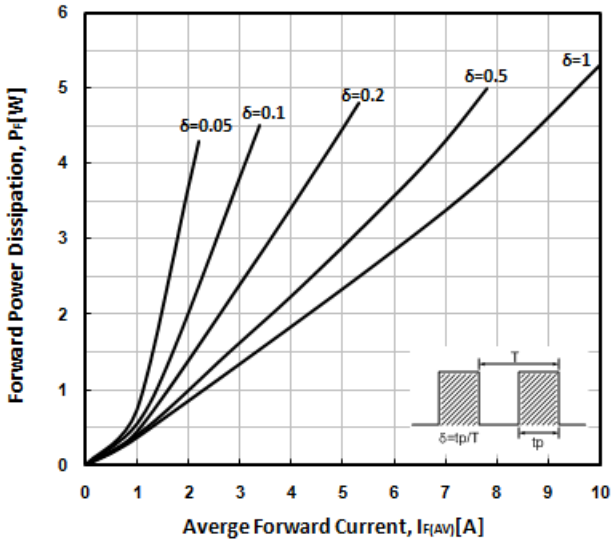


Fig. 5) Maximum Non-Repetitive Peak Forward Surge Current (Per Diode)

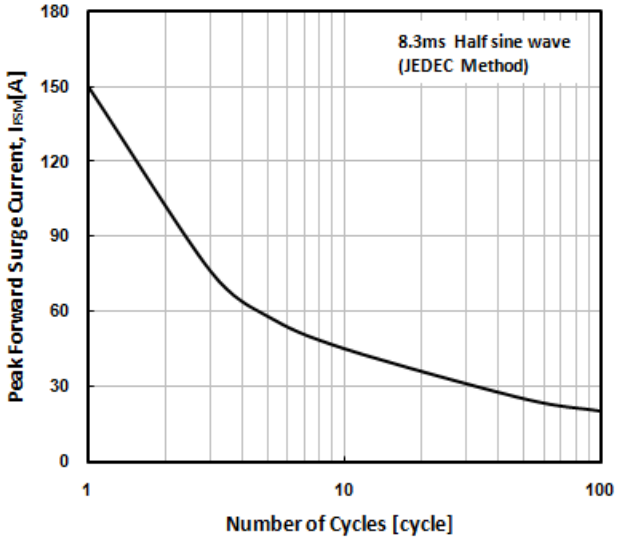
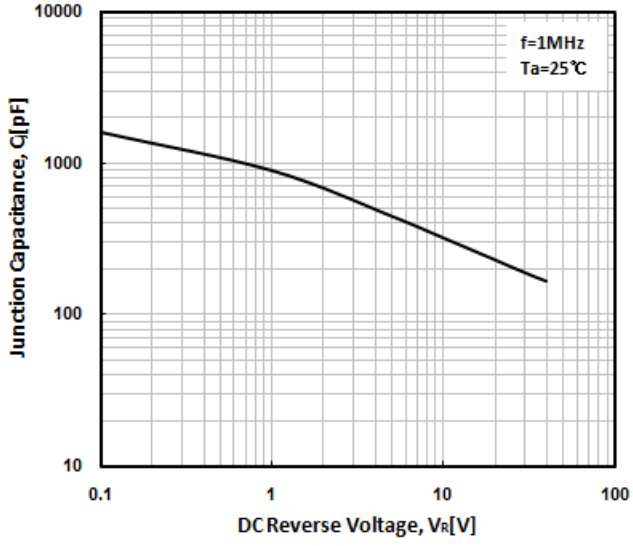
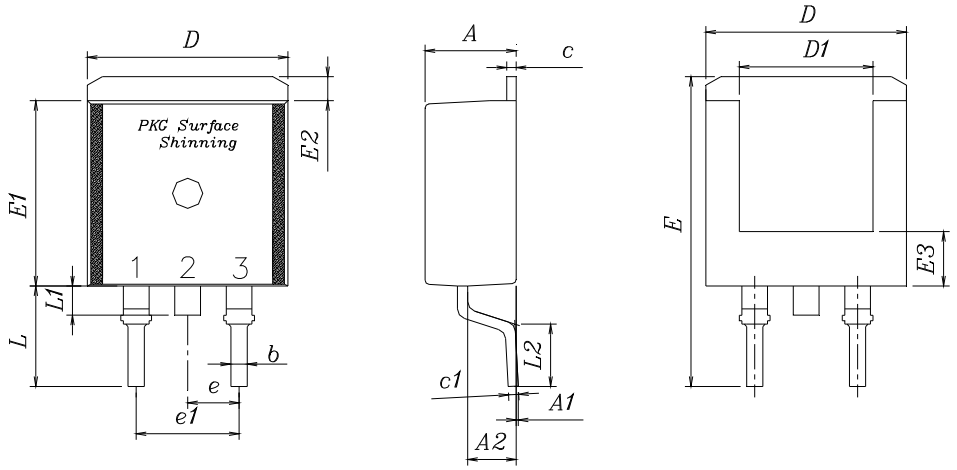


Fig. 6) Typical Junction Capacitance (Per Diode)

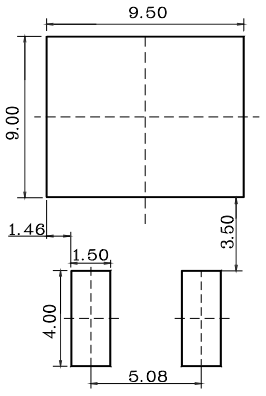


Package Outline Dimension (Unit: mm)



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	
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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