KODENSHI AUK

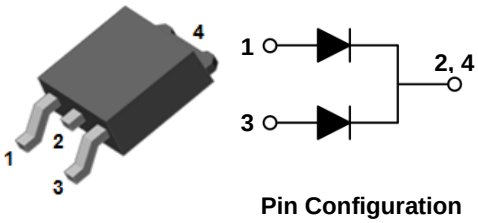
SDB10100DI

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
- Halogen-free component and RoHS compliant device



Pin Configuration
Pin 1, 3: Anode
Pin 2, 4: Cathode

TO-252

Applications

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

Product Characteristics

$I_{F(AV)}$	2 X 5A
V_{RRM}	100V
V_{FM} at 125℃	0.68V
I_{FSM}	120A

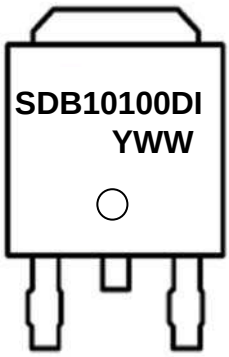
Description

The SDB10100DI 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
SDB10100DI	SDB10100DI	TO-252	Tape & Reel

Marking Information



SDB10100DI = Specific Device Code

YWW = Year & Week Code Marking

-. Y = Year Code

-. WW = Week 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	100	V
Maximum average forward rectified current	per diode	$I_{F(AV)}$	5	A
	total device		10	
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load per diode		I_{FSM}	120	A
Storage temperature range		T_{stg}	-45℃ to +150℃	℃
Maximum operating junction temperature		T_j	150	℃

Thermal Characteristics

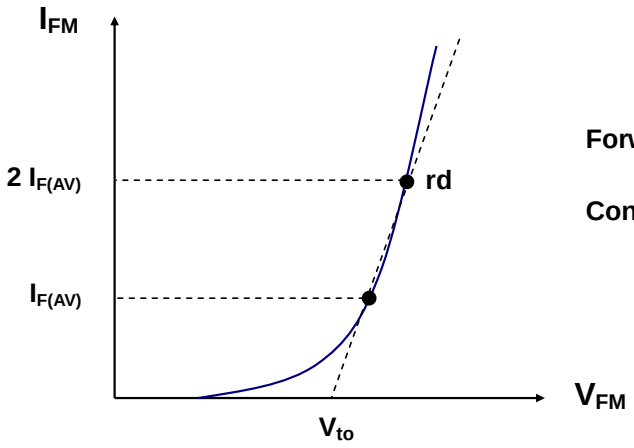
Characteristic		Symbol	Value	Unit
Maximum thermal resistance junction to case	per diode	$R_{th(j-c)}$	4.0	℃/W
	total device		3.6	

Electrical Characteristics (Per Diode)

Characteristic	Symbol	Test Condition		Min.	Typ.	Max.	Unit
Peak forward voltage drop	V_{FM} (1)	I_{FM} = 5A	T_j=25℃	-	-	0.85	V
			T_j=125℃	-	-	0.68	V
Reverse leakage current	I_{RM} (1)	$V_R = V_{RRM}$	T_j=25℃	-	-	10	uA
			T_j=125℃	-	-	10	mA
Junction capacitance	C_j	V_R = 4V_{DC}, f=1MHz		-	100	-	pF

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

To evaluate the conduction losses use the following equation: : $P_F = 0.62 \times I_{F(AV)} + 0.042\ I_F^{2}{}_{(RMS)}$



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)

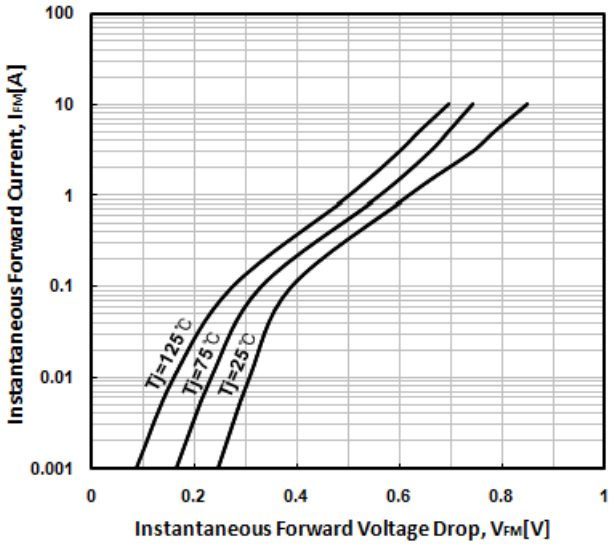


Fig. 2) Typical Reverse Characteristics (Per Diode)

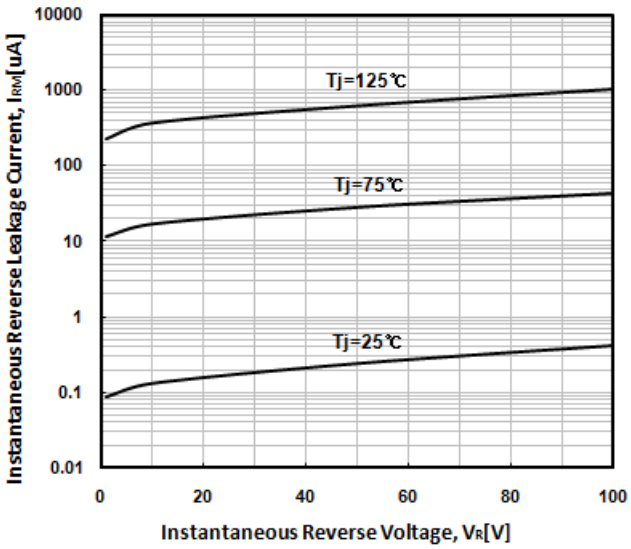


Fig. 3) Maximum Forward Derative Curve

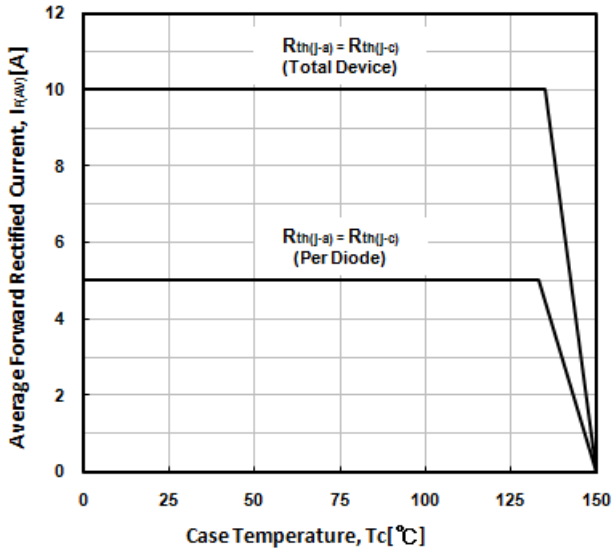


Fig. 4) Forward Power Dissipation (Per Diode)

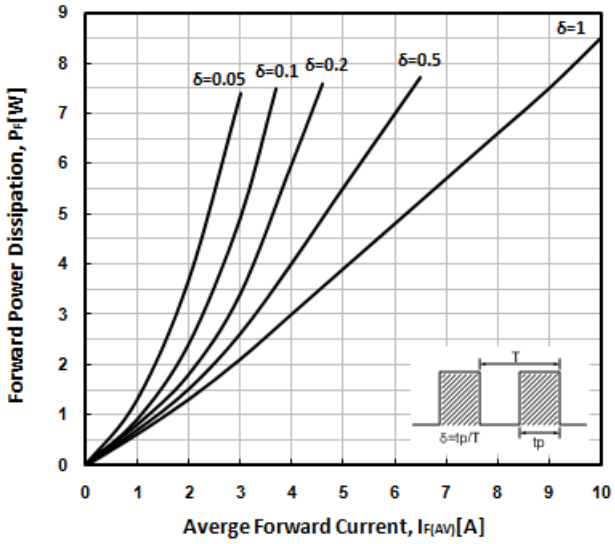


Fig. 5) Maximum Non-Repetitive Peak Forward Surge Current (Per Diode)

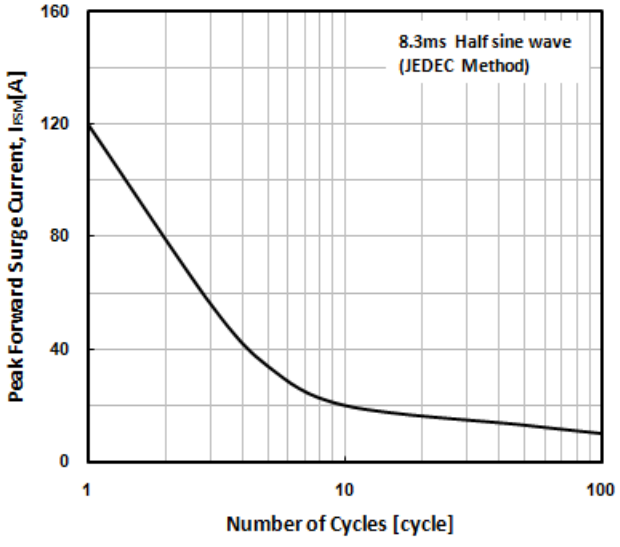
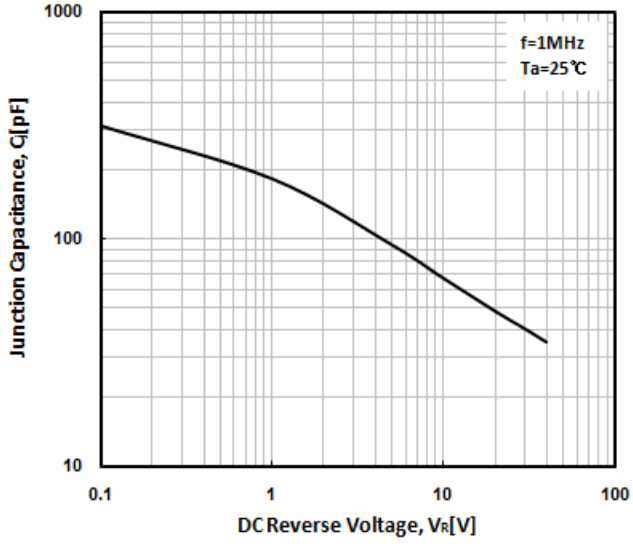
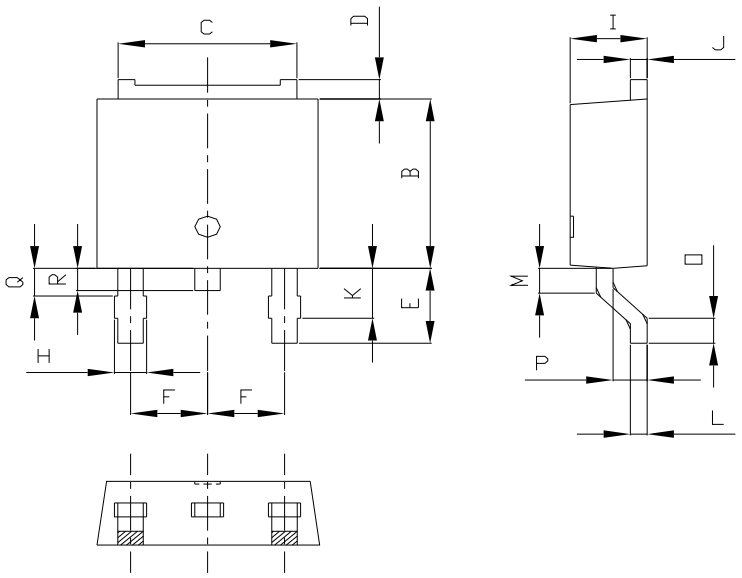


Fig. 6) Typical Junction Capacitance (Per Diode)

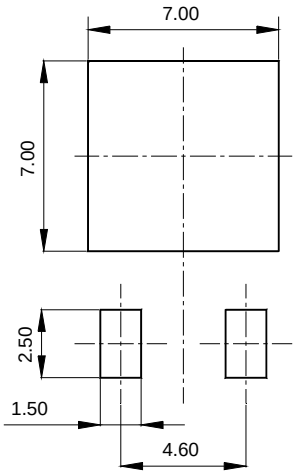


Package Outline Dimension



SYMBOL	MILLIMETERS			NOTE
	MINIMUM	NOMINAL	MAXIMUM	
A	6.40	6.60	6.80	
B	5.90	6.10	6.30	
C	5.04	5.34	5.64	
D	0.50	0.70	0.90	
E	2.50	2.70	2.90	
F	2.10	2.30	2.50	
H	0.96 MAX			
I	2.20	2.30	2.40	
J	0.40	0.50	0.60	
K	1.60	1.80	2.00	
L	0.40	0.50	0.60	
M	0.81	0.91	1.01	
O	0.80	0.90	1.00	
P	0.90	1.00	1.10	
Q	0.95 MAX			
R	0.60	0.80	1.00	

※ Recommended Land Pattern [unit: mm]



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