

## DUAL COMMON CATHODE SCHOTTKY RECTIFIER

### Features

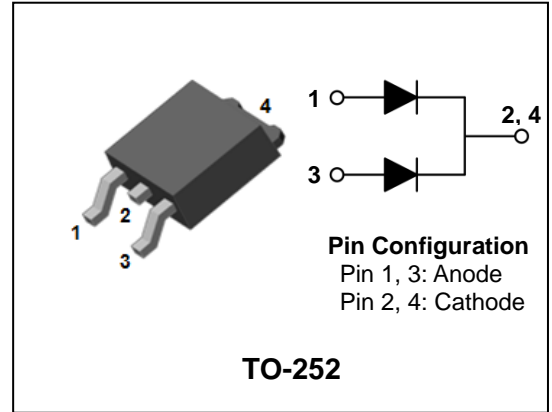
- Low forward voltage drop
- Low power loss and High efficiency
- Low leakage current
- Dual common cathode rectifier
- Halogen free and RoHS compliant device

### Applications

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

### Description

The SDB20150DI 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.



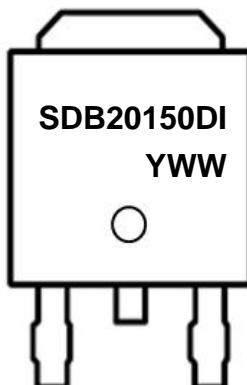
### Product Characteristics

$I_{F(AV)}$	2 x 10A
$V_{RRM}$	150V
$V_{FM}$ at 125°C	0.78V (Max.)
$I_{FSM}$	120A

### Ordering Information

Device	Marking Code	Package	Packaging
SDB20150DI	SDB20150DI	TO-252	Tape & Reel

### Marking Information



SDB20150DI = 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		$V_{RRM}$ $V_{RWM}$ $V_R$	150	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		$I_{FSM}$	120	A
Storage temperature range		$T_{stg}$	-45 to +150	°C
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	°C/W
	total device		3.6	

## Electrical Characteristics (Per Diode)

Characteristic	Symbol	Test Condition		Min.	Typ.	Max.	Unit
Peak forward voltage drop	$V_{FM}^{(1)}$	$I_{FM} = 10A$	$T_j = 25^\circ C$	-	0.80	0.88	V
			$T_j = 125^\circ C$	-	0.75	0.78	
Reverse leakage current	$I_{RM}^{(1)}$	$V_R = V_{RRM}$	$T_j = 25^\circ C$	-	-	20	uA
			$T_j = 125^\circ C$	-	-	20	mA
Junction capacitance	$C_j$	$V_R = 4V_{DC}, f=1MHz$		-	220	-	pF

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

Rating and Characteristic Curves (Per Diode)

Fig. 1) Typical Forward Characteristics

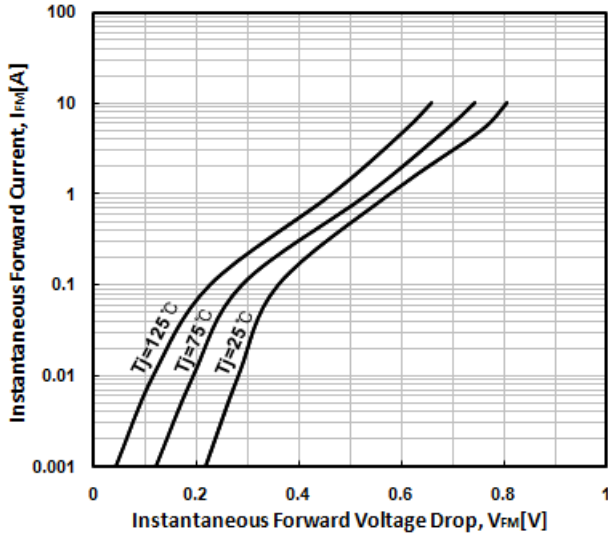


Fig. 2) Typical Reverse Characteristics

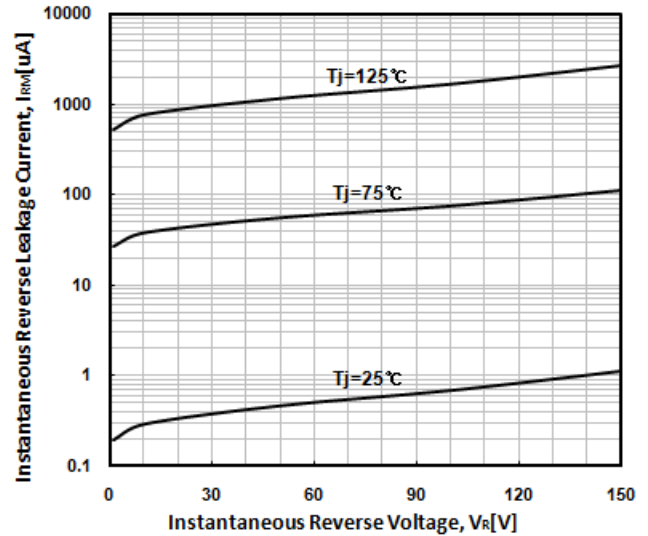


Fig. 3) Maximum Forward Derivative Curve

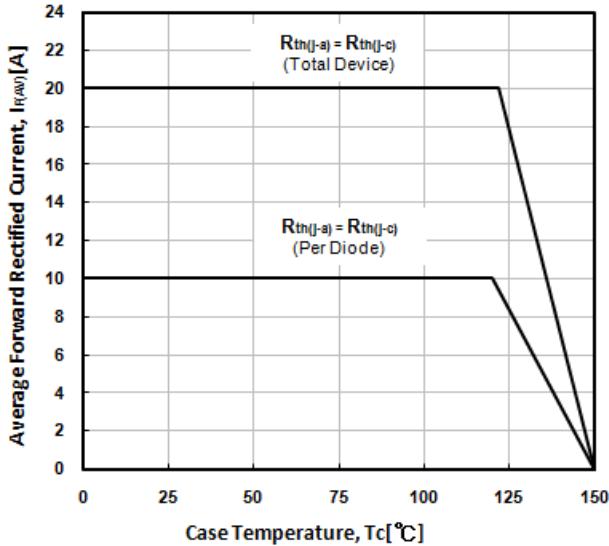


Fig. 4) Forward Power Dissipation

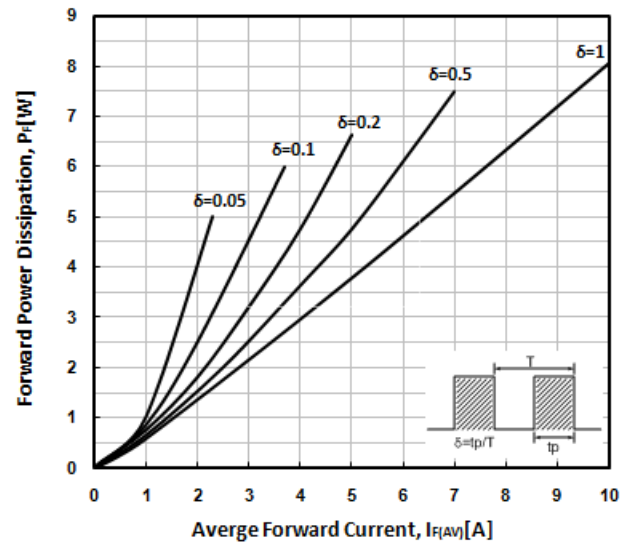


Fig. 5) Maximum Non-Repetitive Peak Forward Surge Current

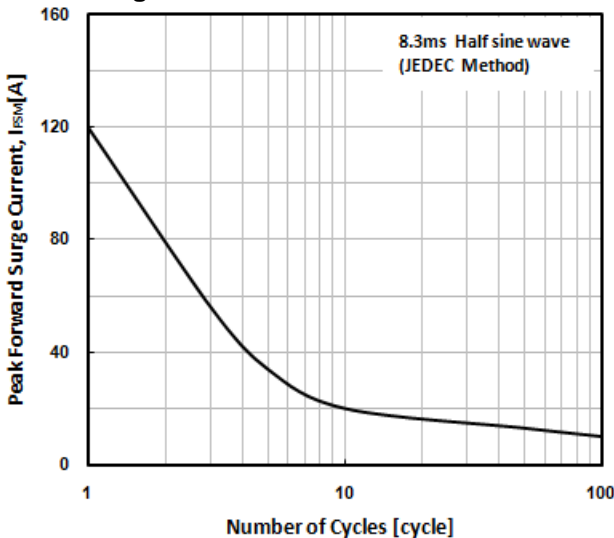
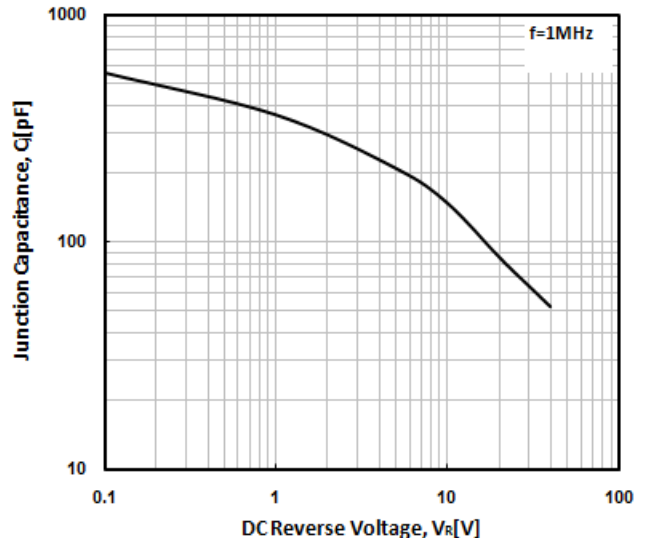
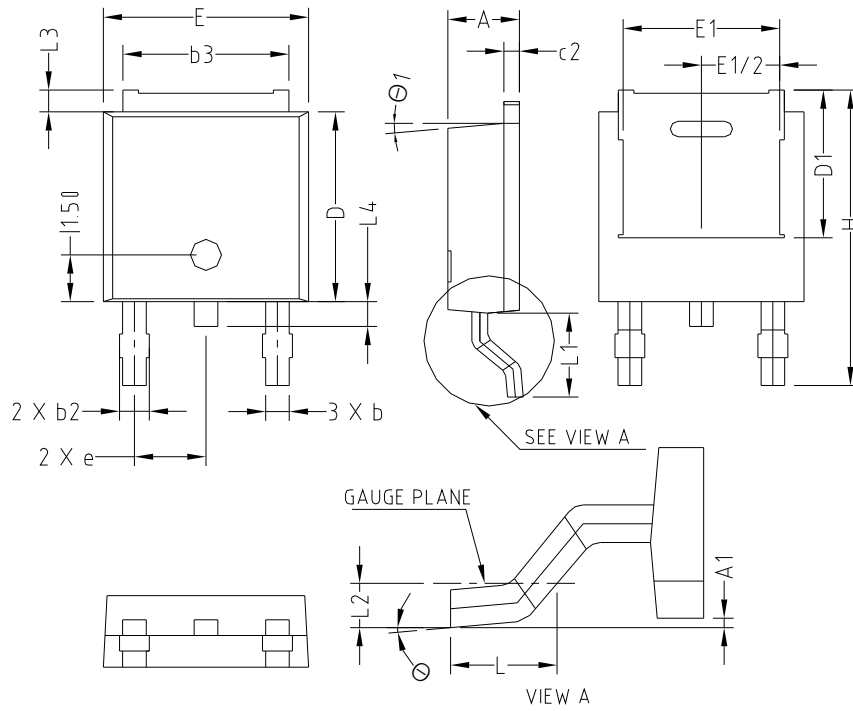


Fig. 6) Typical Junction Capacitance

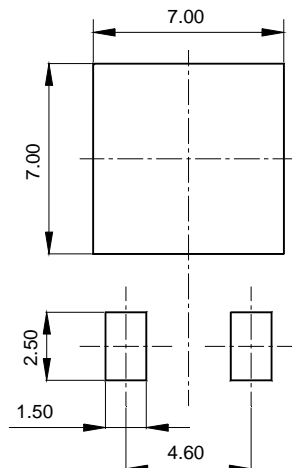


## Package Outline Dimension



SYMBOL	MILLIMETERS			NOTE
	MINIMUM	NOMINAL	MAXIMUM	
A	2.20	2.30	2.40	
A1	0.00		0.127	
b	0.66	0.76	0.86	
b2	-	-	0.96	
b3	5.04	5.34	5.64	
c2	0.40	0.50	0.60	
D	5.90	6.10	6.30	
D1	14.75			
E	6.40	6.60	6.80	
E1	15.04			
e	2.30 BSC			
H	9.20	9.50	9.80	
L	1.27	1.47	1.67	
L1	2.50	2.70	2.90	
L2	0.508 BSC			
L3	0.50	0.70	0.90	
L4	0.60	0.80	1.00	
⊖	0°	-	10°	
⊖1	5°			

### ※ Recommended Land Pattern (Unit: mm)



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