

## DUAL COMMON CATHODE SCHOTTKY RECTIFIER

### Features

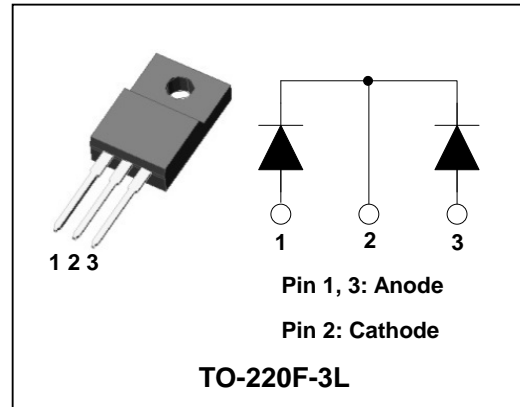
- Low forward voltage drop
- Low power loss and High efficiency
- Low leakage current
- High surge capability
- Full lead (Pb)-free and RoHS compliant device

### Applications

- Switching power supplies
- Converter
- Free-wheeling diode
- Reverse battery protection
- Power inverters

### Description

The SDB16100PI Schottky rectifier has been optimized for low reverse leakage at high temperature. Ideally suited for use in low voltage, high frequency switching power supplies, free-wheeling diodes, and polarity protection diodes.



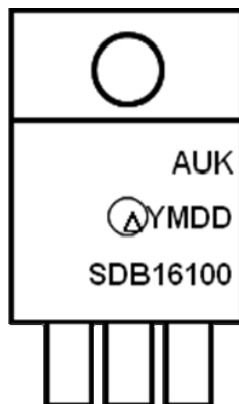
### Product Characteristics

$I_{F(AV)}$	2 X 8A
$V_{RRM}$	100V
$V_{FM}$ at 125°C	0.72V
$I_{FSM}$	180A

### Ordering Information

Device	Marking Code	Package	Packaging
SDB16100PI	SDB16100	TO-220F-3L	Tube

### Marking Information



AUK = Manufacture Logo

Δ = Control Code of Manufacture

YMDD = Date Code Marking

- . Y = Year Code

- . M = Monthly Code

- . D = Daily Code

SDB16100 = 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		$V_{RRM}$ $V_{RWM}$ $V_R$	100	V
Maximum average forward rectified current	per diode	$I_{F(AV)}$	8	A
	total device		16	
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load per diode		$I_{FSM}$	180	A
Storage temperature range		$T_{stg}$	-45 °C to +150 °C	°C
Maximum operating junction temperature		$T_j$	150	°C

## 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	$V_{FM}^{(1)}$	$I_{FM} = 8A$	$T_j = 25^\circ C$	-	-	0.82	V
			$T_j = 125^\circ C$	-	-	0.72	V
Reverse leakage current	$I_{RM}^{(1)}$	$V_R = V_{RRM}$	$T_j = 25^\circ C$	-	-	0.1	mA
			$T_j = 125^\circ C$	-	-	5.0	mA
Junction capacitance	$C_j$	$V_R = 10V_{DC}, f=1MHz$		-	130	-	pF

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

Rating and Characteristic Curves

Fig. 1) Typical Forward Characteristics (Per Diode)

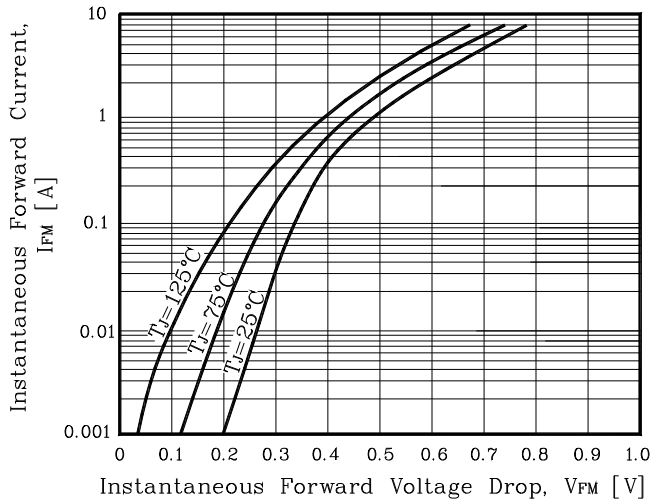


Fig. 2) Typical Reverse Characteristics (Per Diode)

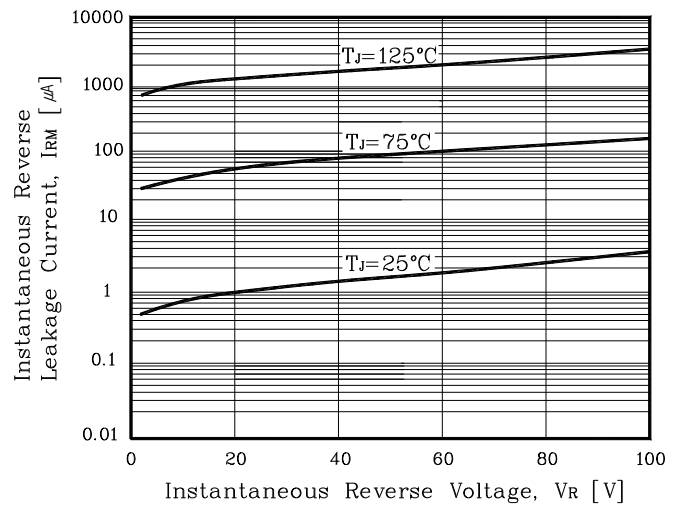


Fig. 3) Maximum Forward Derivative Curve (Per Diode)

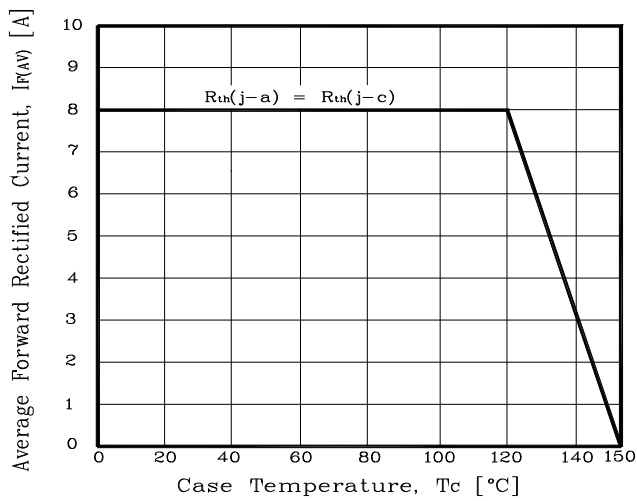


Fig. 4) Forward Power Dissipation (Per Diode)

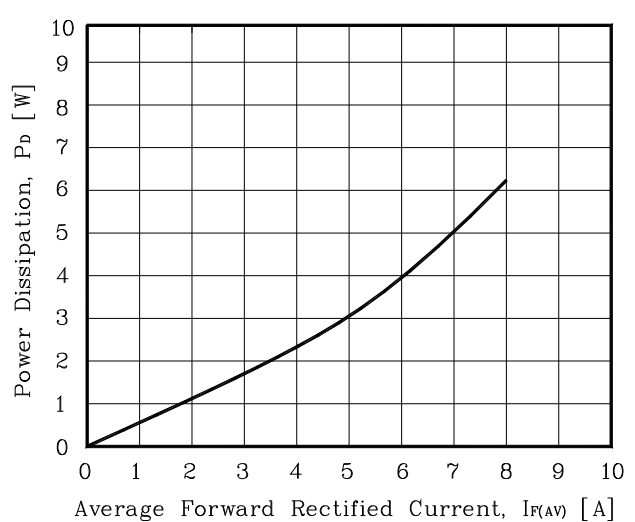


Fig. 5) Maximum Non-Repetitive Peak Forward Surge Current (Per Diode)

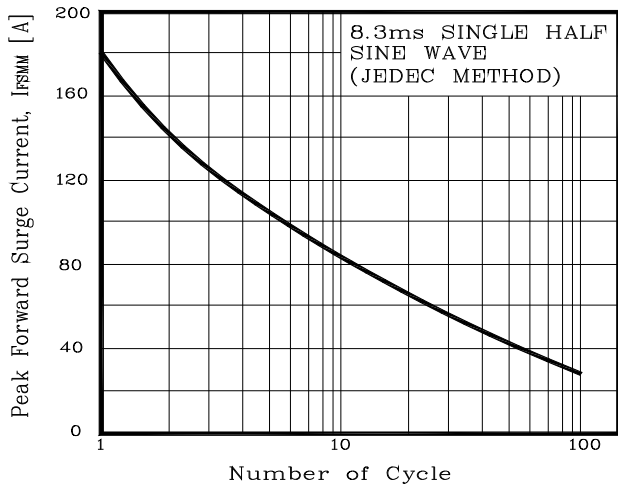
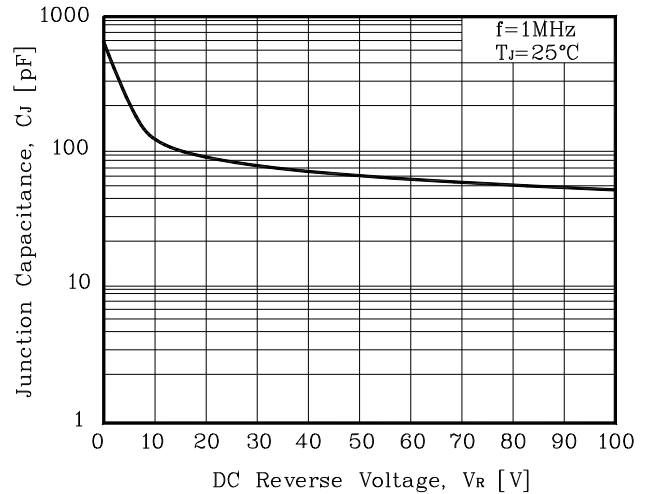
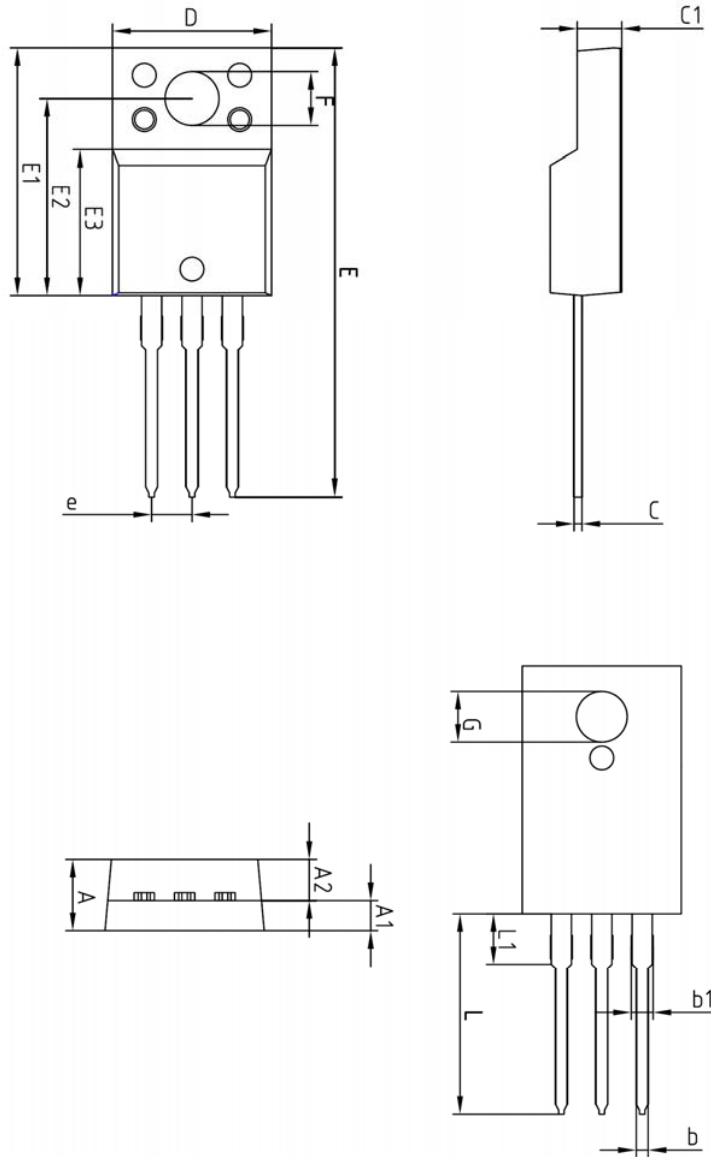


Fig. 6) Typical Junction Capacitance (Per Diode)



## Package Outline Dimension



SYMBOL	MILLIMETERS			NOTE
	MINIMUM	NOMINAL	MAXIMUM	
A	-	-	4.60	
A1	2.45	2.50	2.55	
A2	1.95	2.00	2.05	
b	0.65	0.75	0.85	
b1	1.07	1.27	1.47	
C	0.40	0.50	0.60	
C1	2.70	2.80	2.90	
D	9.90	10.00	10.10	
E	28.00	-	28.60	
E1	15.50	15.60	15.70	
E2	12.30	12.40	12.50	
E3	9.15	9.20	9.25	
F	3.30	3.40	3.50	
G	3.10	3.20	3.30	
e	2.54 BSC			
L	12.40	-	13.00	
L1	3.46 BSC			

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