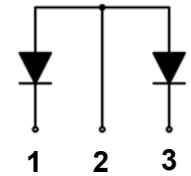
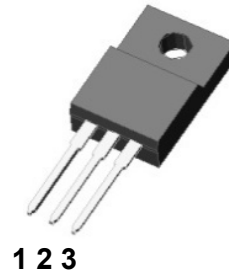


## DUAL COMMON ANODE SCHOTTKY RECTIFIER

### Features

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



Pin 1, 3 : Cathode  
Pin 2: Anode

### Applications

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

TO-220F-3L

### Product Characteristics

$I_{F(AV)}$	2 X 10A
$V_{RRM}$	80V
$V_{FM}$ at 125°C	0.65V (Typ.)
$I_{FSM}$	150A

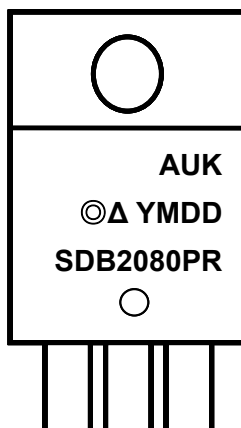
### Description

The SDB2080PR has two schottky barriers arranged in a common anode configuration. Typical applications are in switching power supplies, converters, free-wheeling diodes, and reverse battery protection.

### Ordering Information

Device	Marking Code	Package	Packaging
SDB2080PR	SDB2080PR	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

SDB2080PR = Specific Device Code

## Absolute Maximum Ratings (Limiting Values, Per diode)

Characteristic	Symbol	Value	Unit
Maximum repetitive reverse voltage Maximum working peak reverse voltage Maximum DC blocking voltage	$V_{RRM}$ $V_{RWM}$ $V_R$	80	V
Maximum average forward rectified current	per diode	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	$T_{stg}$	-45 to +150	°C
Maximum operating junction temperature	$T_j$	150	°C

## Thermal Characteristics

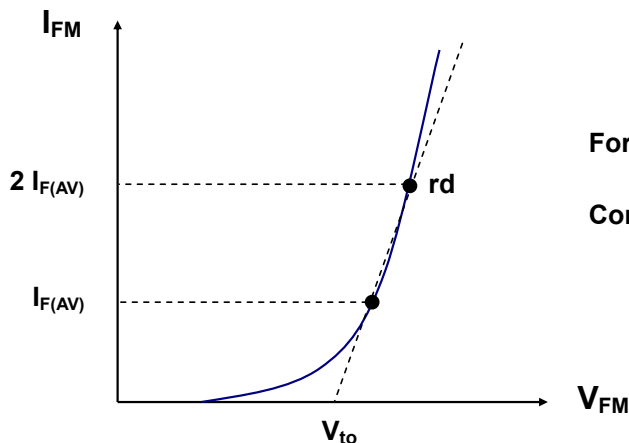
Characteristic	Symbol	Value	Unit
Maximum thermal resistance junction to case	per diode	4.0	°C/W
	total device	3.6	

## Electrical Characteristics (Per Diode)

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit	
Peak forward voltage drop	$V_{FM}^{(1)}$	$I_{FM} = 10A$	$T_j = 25^\circ C$	-	0.70	0.80	V
			$T_j = 125^\circ C$	-	0.65	0.72	V
Reverse leakage current	$I_{RM}^{(1)}$	$V_R = V_{RRM}$	$T_j = 25^\circ C$	-	-	0.6	mA
			$T_j = 125^\circ C$	-	-	100	mA
Junction capacitance	$C_j$	$V_R = 1V_{DC}, f=1MHz$	-	550	-	pF	

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

To evaluate the conduction losses use the following equation:  $P_F = 0.36 \times I_{F(AV)} + 0.0335 I_{F(RMS)}^2$

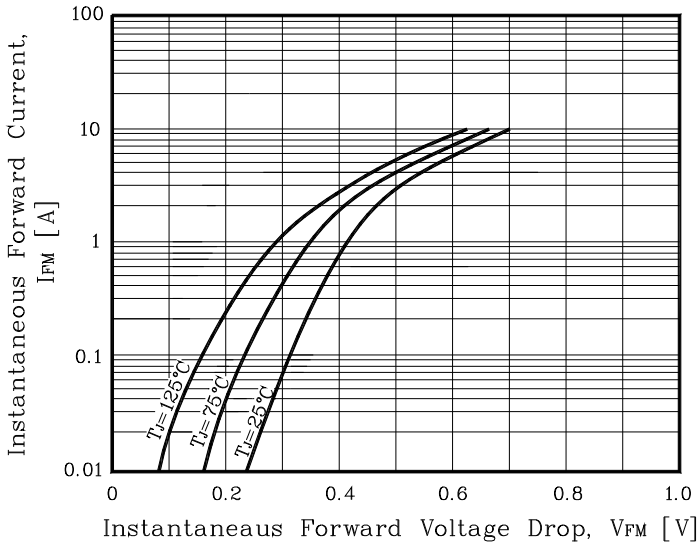


**Forward Voltage :**  $V_{FM} = V_{to} + rd I_{FM}$

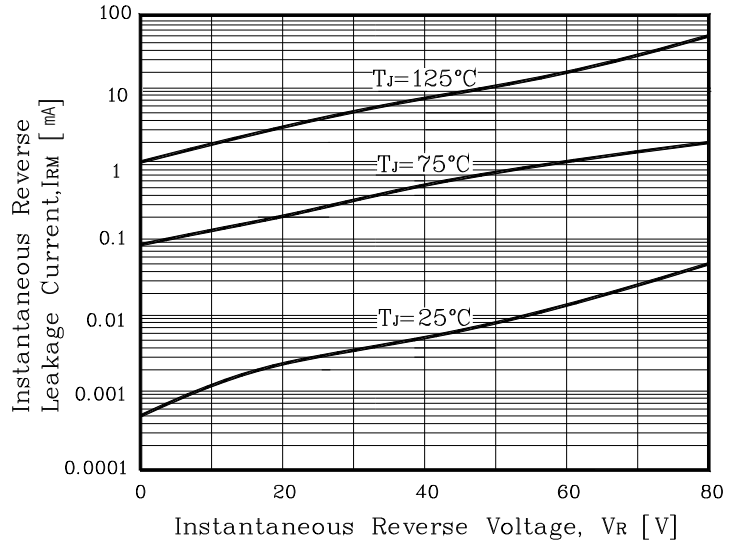
**Conduction Loss :**  $P_F = V_{to} I_{F(AV)} + rd I_{F(RMS)}^2$

## Rating and Characteristic Curves

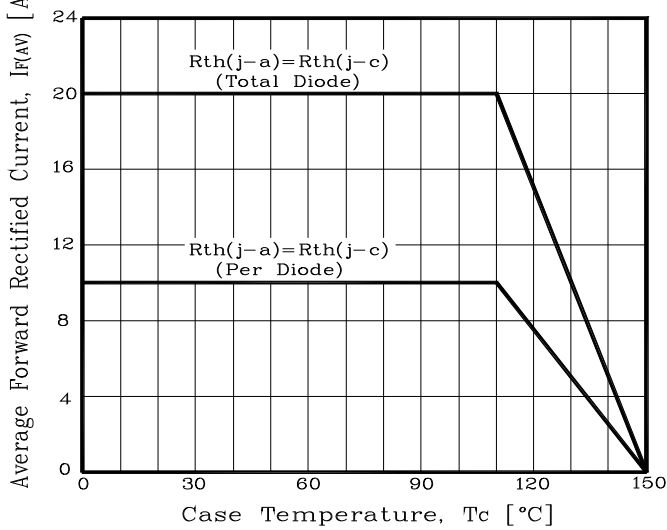
**Fig. 1) Typical Forward Characteristics (Per diode)**



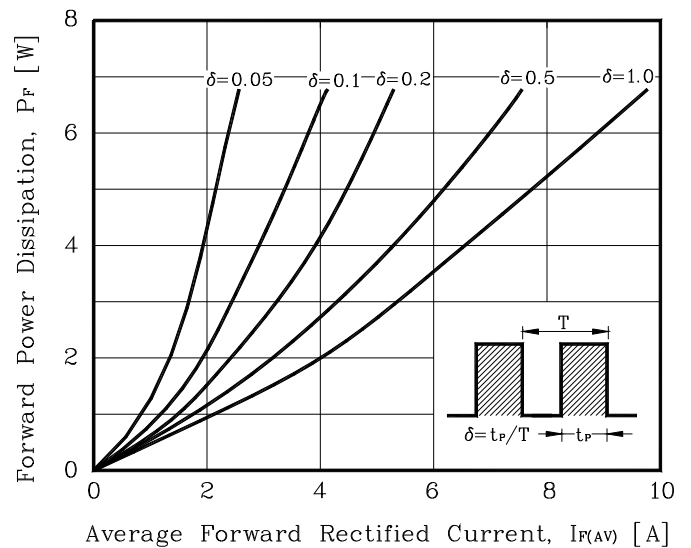
**Fig. 2) Typical Reverse Characteristics (Per diode)**



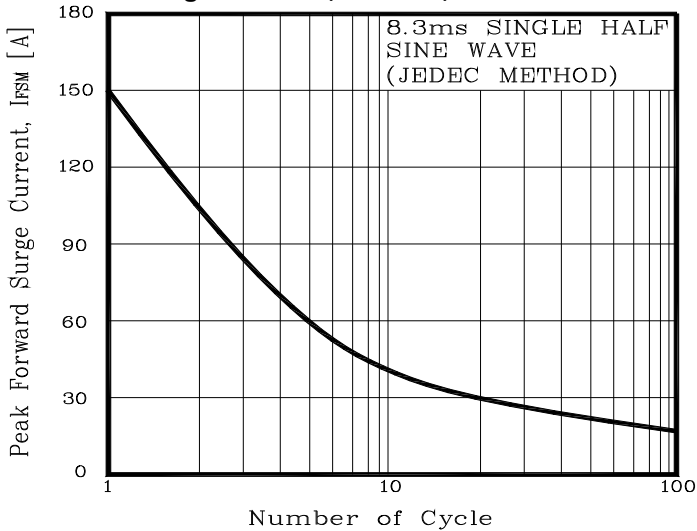
**Fig. 3) Maximum Forward Derivative Curve**



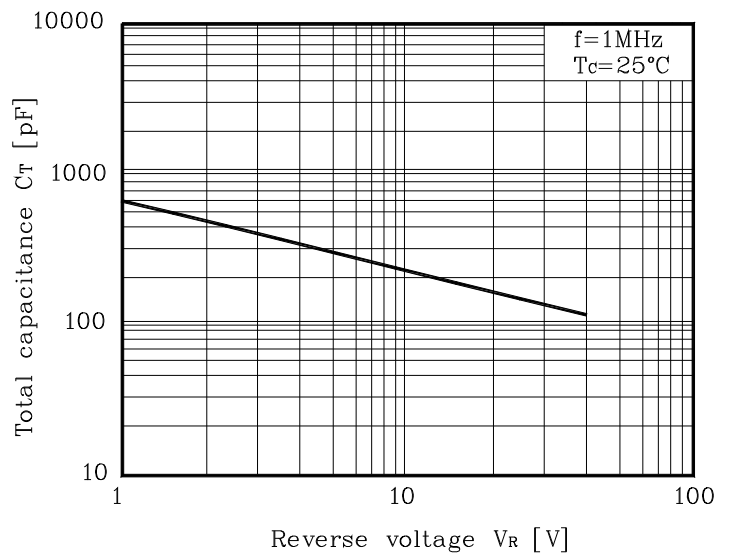
**Fig. 4) Forward Power Dissipation (Per diode)**



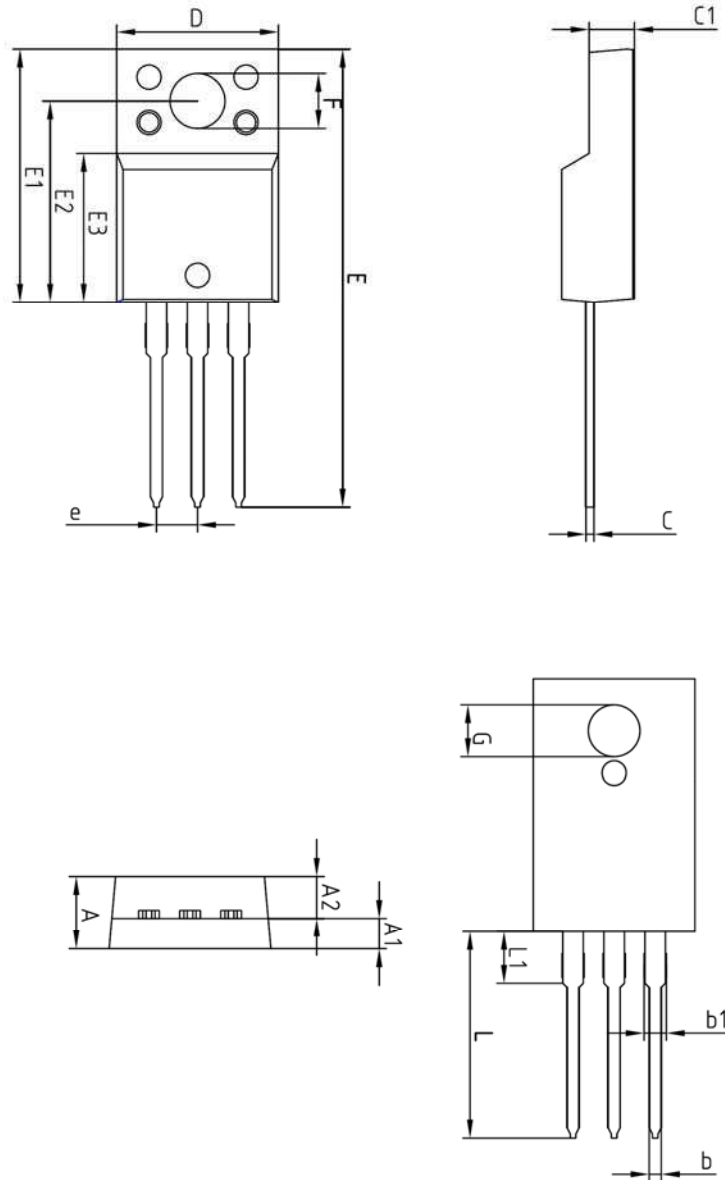
**Fig. 5) Maximum Non-Repetitive Peak Forward Surge Current (Per diode)**



**Fig. 6) Typical Junction Capacitance (Per diode)**



## Package Outline Dimension (Unit: mm)



SYMBOL	MILLIMETERS			NOTE
	MINIMUM	NOMINAL	MAXIMUM	
A	—	—	4.60	
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	2.34	2.54	2.74	

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