

## DUAL COMMON CATHODE SCHOTTKY RECTIFIER

### Features

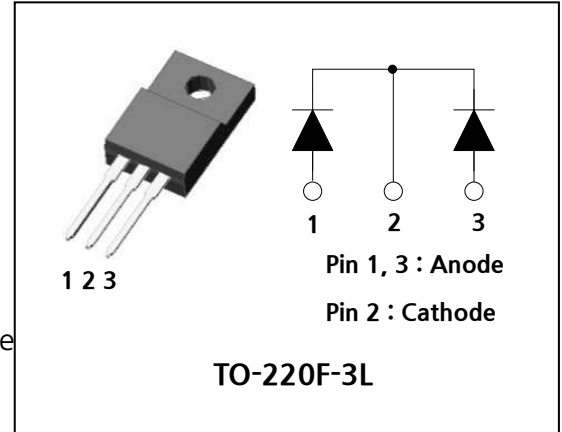
- Low forward voltage drop and leakage current
- Low power loss and High efficiency
- High surge capability
- Dual common cathode rectifier
- Full lead(Pb)-free component and RoHS compliant device

### Applications

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

### Description

The SDBT20L100C 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.



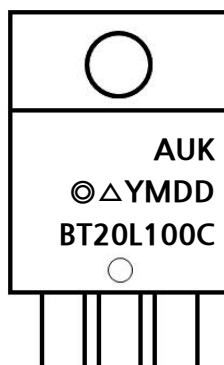
### Product Characteristics

$I_{F(AV)}$	2 x 10A
$V_{RRM}$	100V
$V_{FM}$ at 125°C	(Typ.) 0.59V
$I_{FSM}$	160A

### Ordering Information

Device	Marking Code	Package	Packaging
SDBT20L100C	BT20L100C	TO-220F-3L	Tube

### Marking Information



AUK = Manufacture Logo

© = Management Code

Δ = Machine Code

YMDD = Date Code Marking

- . Y = Year Code

- . M = Monthly Code

- . D = Daily Code

BT20L100C = Specific Device Code

## Absolute Maximum Ratings (Limiting Values)

Characteristic		Symbol	Value	Unit
Maximum repetitive reverse voltage		$V_{RRM}$	100	V
Maximum working peak reverse voltage		$V_{RWM}$		
Maximum DC blocking voltage		$V_R$		
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		$I_{FSM}$	160	A
Storage temperature range		$T_{stg}$	-40°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

Characteristic	Symbol	Test Condition		Min.	Typ.	Max.	Unit
Peak forward voltage drop	$V_{FM}^{(1)}$	$I_{FM} = 10A$	$T_A = 25^\circ C$	-	0.68	0.72	V
			$T_A = 125^\circ C$	-	0.59	0.65	V
Reverse leakage current	$I_{RM}^{(1)}$	$V_R = V_{RRM}$	$T_A = 25^\circ C$	-	10	800	uA
			$T_A = 125^\circ C$	-	10	25	mA

**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)

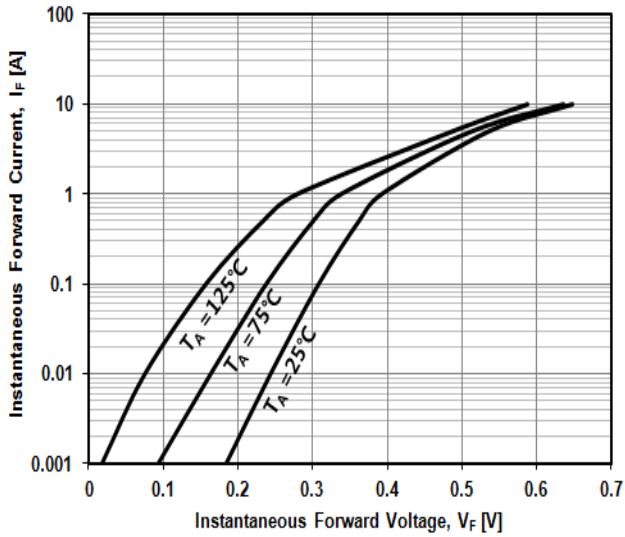


Fig. 2) Typical Reverse Characteristics (Per Diode)

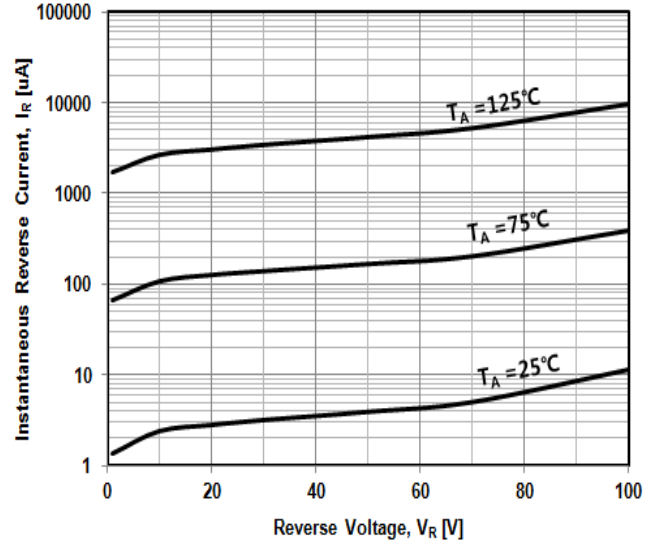


Fig. 3) Maximum Forward Current Derating Curve

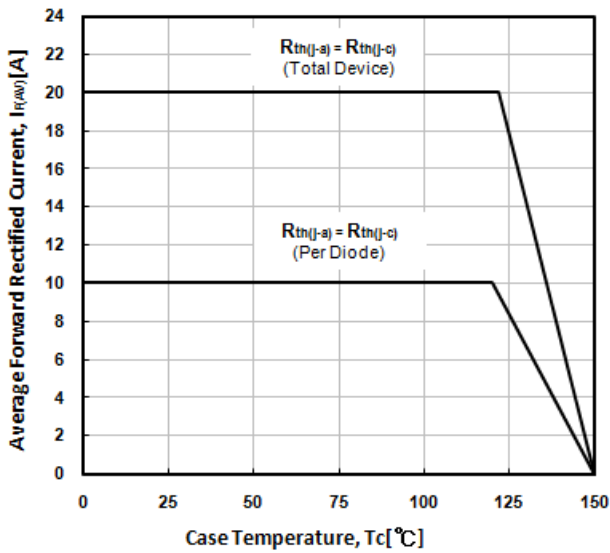
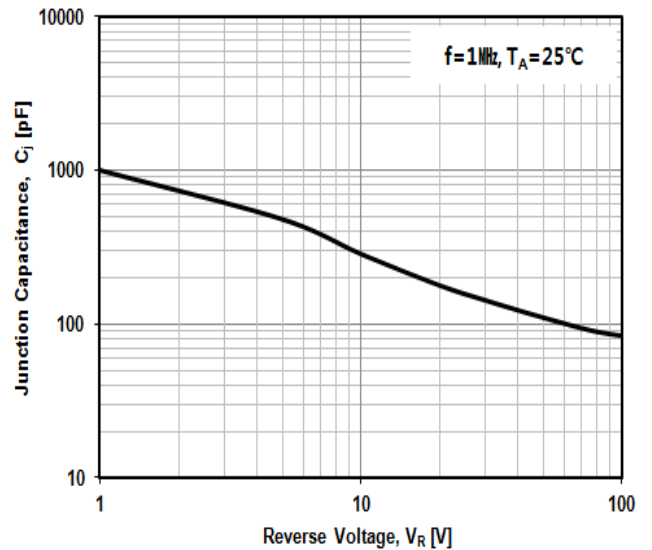
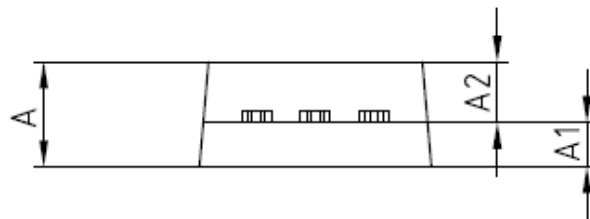
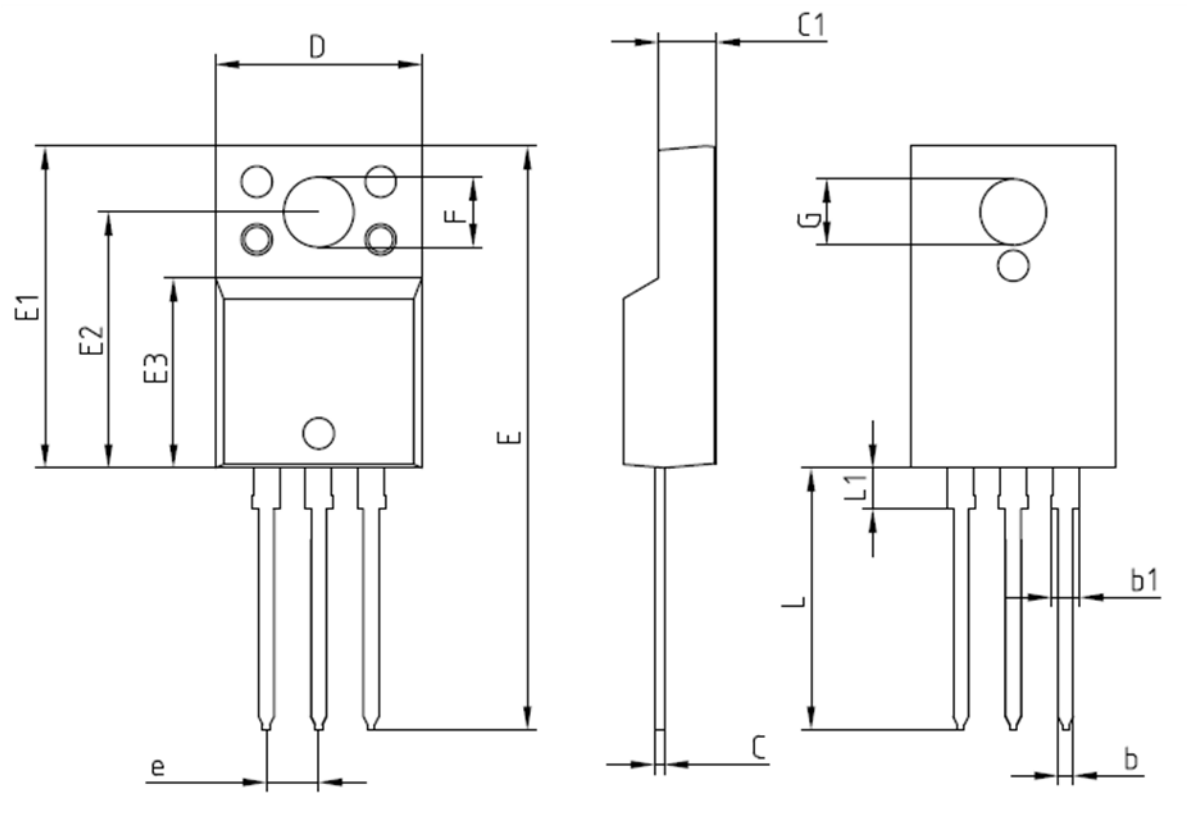


Fig. 4) Typical Junction Capacitance (Per Diode)



## 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	
L	12.40	—	13.00	
L1	1.80	2.00	2.20	

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