

DUAL COMMON CATHODE SCHOTTKY RECTIFIER

Features

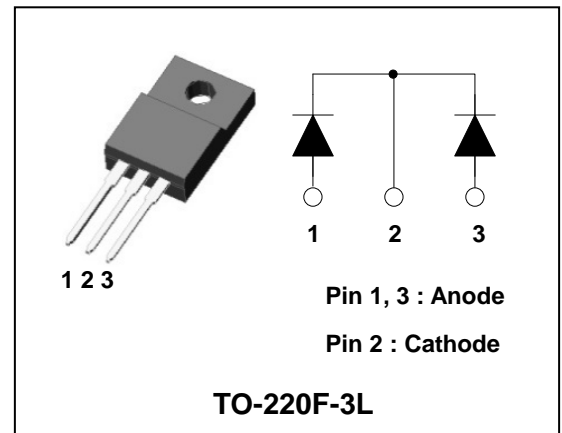
- Low forward voltage drop and leakage current
- Low power loss and High efficiency
- High surge capability
- Dual common cathode rectifier
- Full lead(Pb)-free component and RoHS compliant device

Applications

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

Description

The SDB16150DI 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.



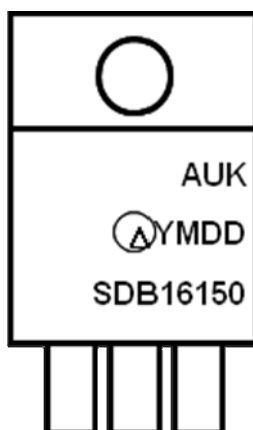
Product Characteristics

$I_{F(AV)}$	2 X 8A
V_{RRM}	150V
V_{FM} at 125°C	0.80V
I_{FSM}	180A

Ordering Information

Device	Marking Code	Package	Packaging
SDB16150PI	SDB16150PI	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

SDB16150 = 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	150	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	$V_{FM}^{(1)}$	$I_{FM} = 8A$	$T_J = 25^\circ C$	-	-	0.85	V
			$T_J = 125^\circ C$	-	-	0.80	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	$V_R = 10V_{DC}, f=1MHz$		-	90	-	pF

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

Electrical Characteristic Curves

Fig. 1 $I_F - V_F$ (Per Diode)

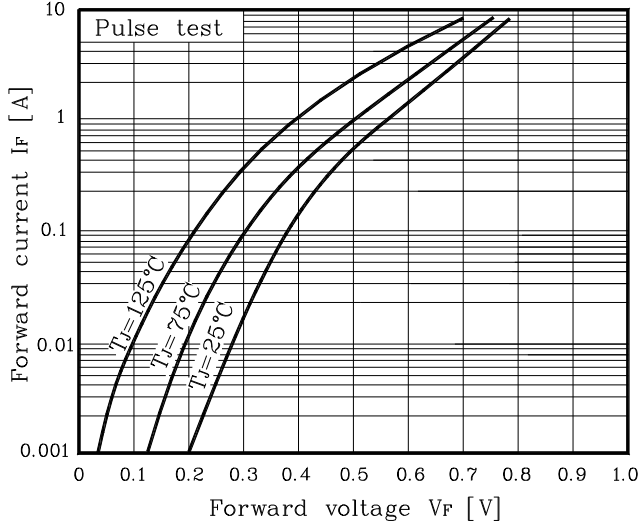


Fig. 2 $I_R - V_R$ (Per Diode)

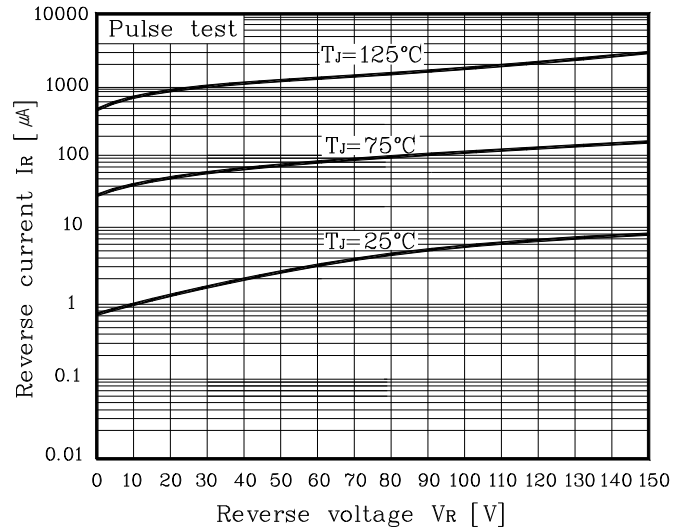


Fig. 3 $I_O - P_F$ (Per Diode)

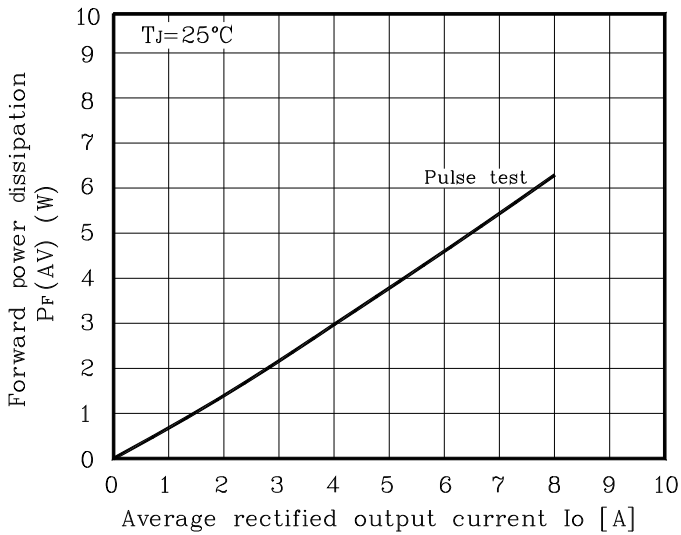


Fig. 4 $C_T - V_R$ (Per Diode)

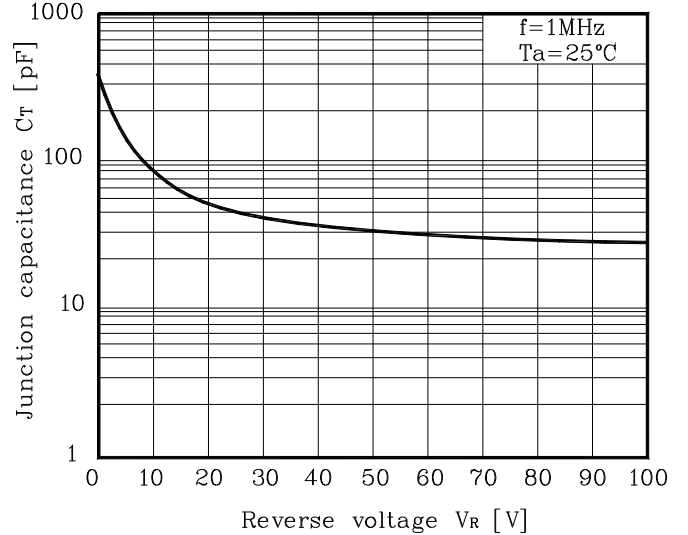


Fig. 5 $I_{FSM} - \text{Number of cycle}$ (Per Diode)

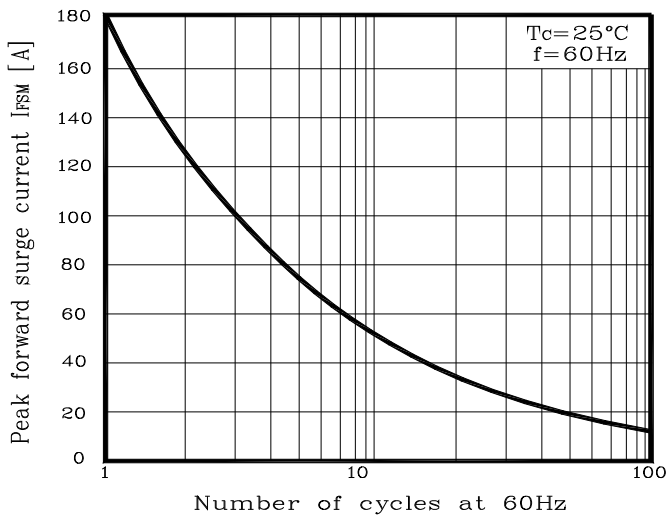
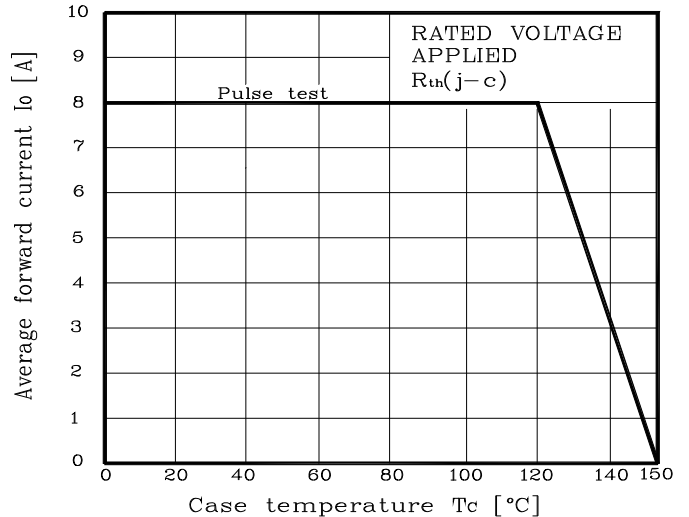
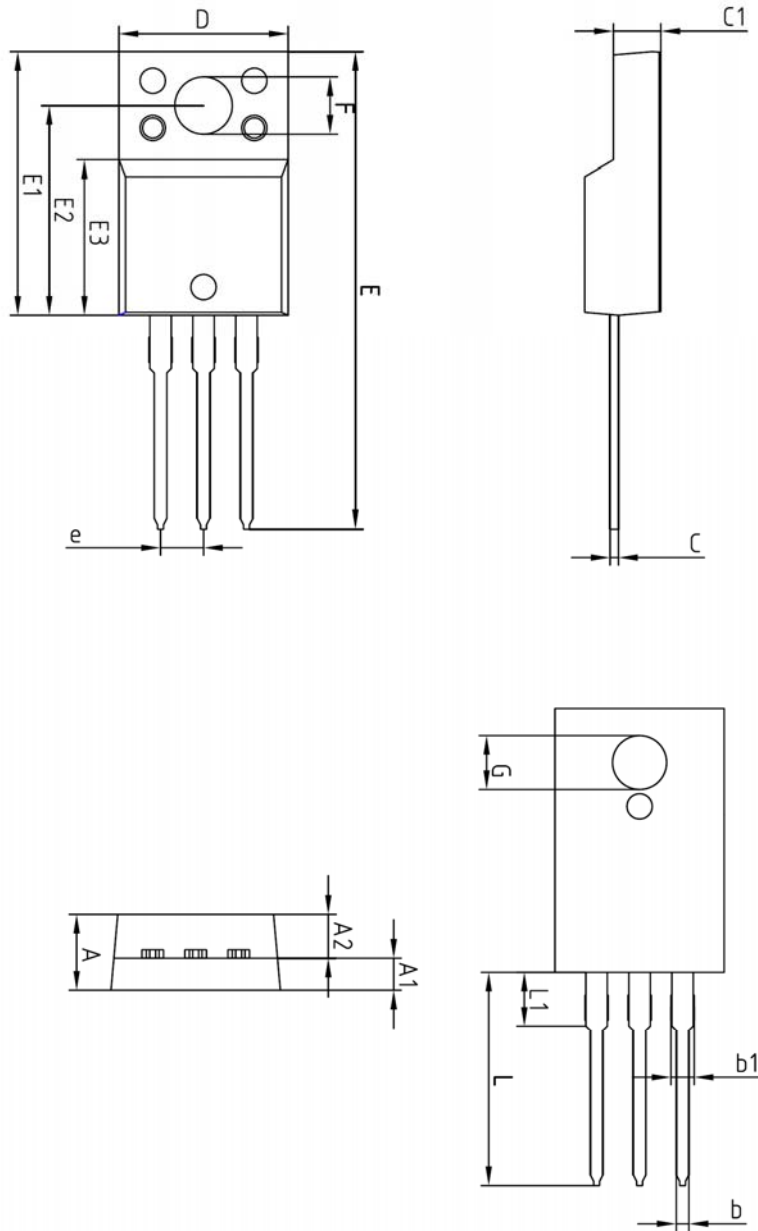


Fig. 6 I_O derating - T_C (Per Diode)



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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