

30V, 3A SCHOTTKY BARRIER 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

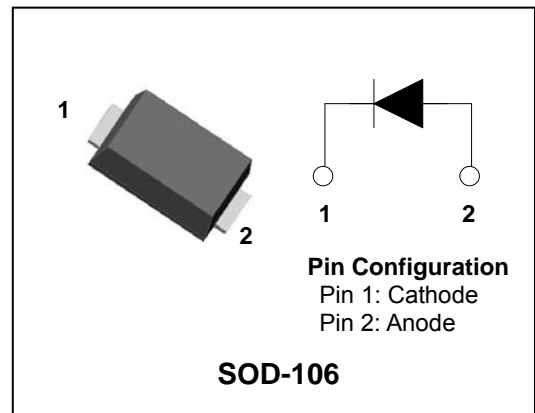
Applications

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

Description

The SDB330 is suited for Switch Mode Power Supply and high frequency DC to DC converters.

This device is especially intended for use in low voltage, high frequency inverters, freewheeling and polarity protection applications.



Ordering Information

Device	Marking Code	Package	Packaging
SDB330	3A30	SOD-106	Tape & Reel

Marking Information



3A30 = Specific Device Code

YWW = Year & Week Code Marking

-. Y = Year Code

-. WW = Week Code

■ = Color band denote cathode

Absolute Maximum Ratings (Rating at 25°C ambient temperature unless otherwise specified.)

Characteristic	Symbol	Value	Unit
Peak reverse voltage	V_{RM}	30	V
Reverse voltage	V_R	30	V
Forward current	I_F	3	A
Peak surge forward current (Non-repetitive 60Hz sine wave)	I_{FSM}	30	A
Junction temperature	T_J	150	°C
Storage temperature range	T_{stg}	-55~150	°C

Electrical Characteristics (Rating at 25°C ambient temperature unless otherwise specified.)

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Forward voltage	$V_F^{1)}$	$I_F=3A$	-	0.35	0.40	V
Reverse current	I_R	$V_R=30V$	-	-	5	mA
Total capacitance	C_T	$V_R=10V, f=1MHz$	-	160	-	pF
Thermal resistance	$R_{th(j-a)}$	Junction to ambient ²⁾	-	-	76	°C/W

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

* 2) Device mounted on glass epoxy PCB (recommanderable minimum solder land)

Electrical Characteristic Curves

Fig. 1 $I_F - V_F$

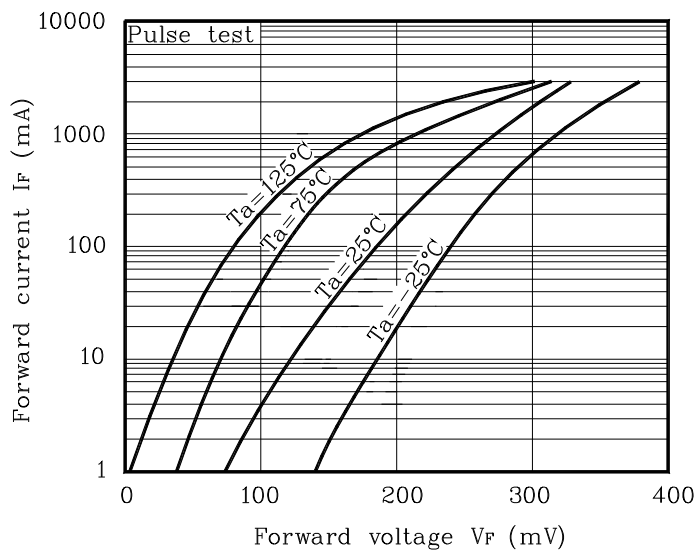


Fig. 2 $I_R - V_R$

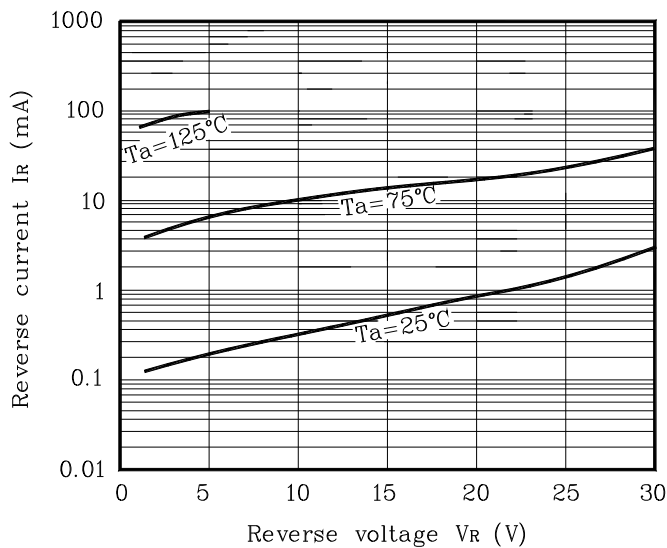


Fig. 3 $C_T - V_R$

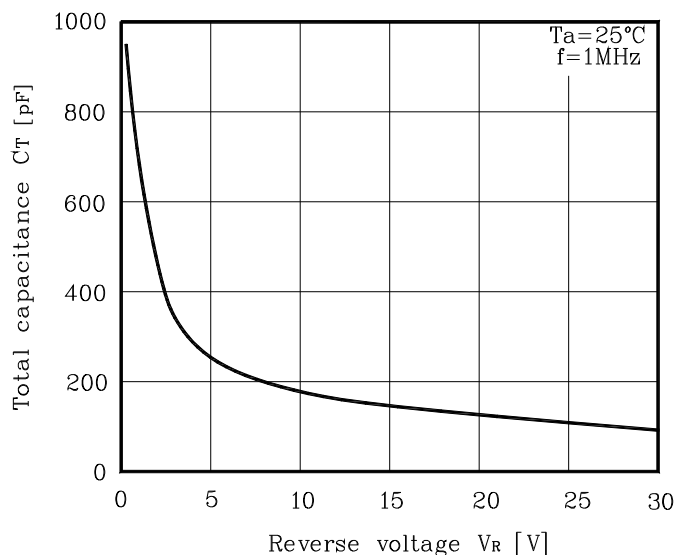


Fig. 4 $P_F - I_F$

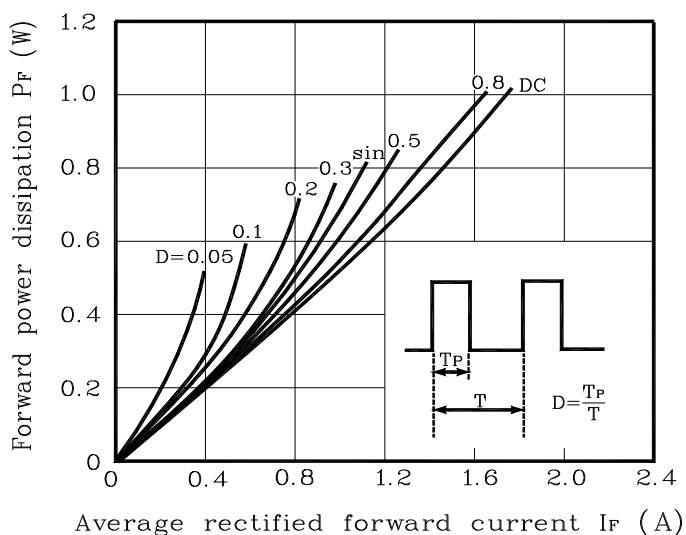


Fig. 5 $I_{FSM} - \text{Number of cycle}$

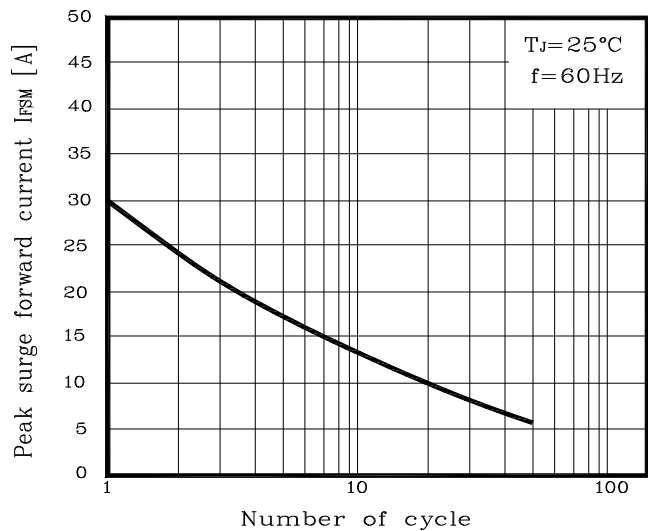
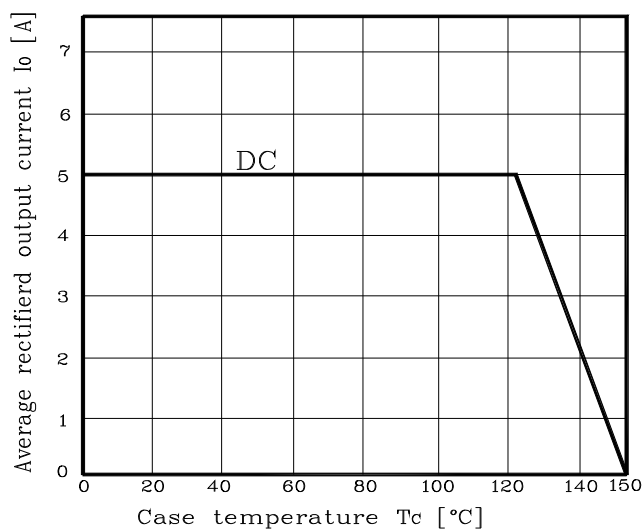
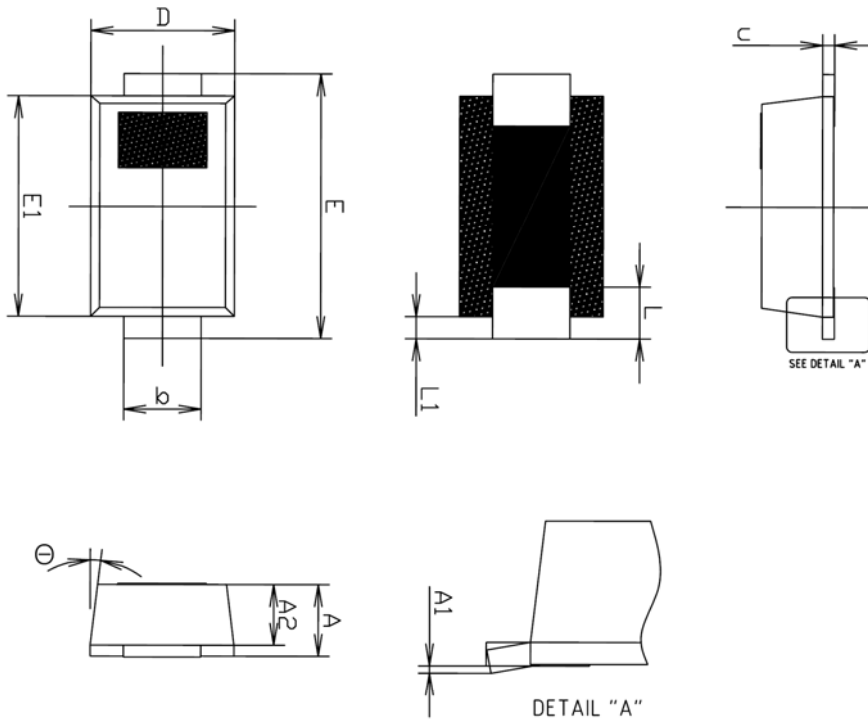


Fig. 6 $I_O \text{ derating} - T_C$

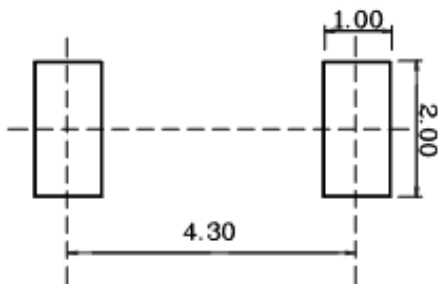


Package Outline Dimension



SYMBOL	MILLIMETERS			NOTE
	MINIMUM	NOMINAL	MAXIMUM	
A	1.25	1.30	1.35	
A1	0.00	—	0.10	
A2	1.05	1.10	1.15	
b	1.35	1.42	1.49	
c	0.17	0.22	0.27	
D	2.50	2.60	2.70	
E	4.60	4.80	5.00	
E1	3.90	4.00	4.10	
L	0.79	0.94	1.09	
L1	0.30	0.40	0.50	
Θ	4°	—	10°	

Recommend PCB Solder Land Dimension (Unit: mm)



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