

Schottky Barrier Rectifier

General Description

The SDB380 surface mounted Schottky rectifier has been designed for applications requiring low forward drop and very small foot prints on PC boards. Typical applications are in disk drives, switching power supplies, converters, free-wheeling diodes, battery charging, and reverse battery protection.



SOD-106

Features and Benefits

- Low forward drop voltage and low reverse leakage current
- Low power rectified
- “Green” device and RoHS compliant device
- Available in full lead (Pb)-free device



Applications

- Portable equipment battery applications
- Switching mode power supplies applications

Ordering Information

Part Number	Marking Code	Package	Packaging
SDB380	3A80	SOD-106	Tape & Reel

Marking Information



3A80 = Specific Device Code

YWW = Year & Week Code Marking

-. Y = Year Code

-. WW = Week Code

■ = Color band denote cathode

Pinning Information

Pin	Description	Simplified Outline	Graphic Symbol
1	Cathode		
2	Anode		

Absolute Maximum Ratings ($T_{amb}=25^{\circ}\text{C}$, Unless otherwise specified)

Characteristic	Symbol	Ratings	Unit
Peak reverse voltage	V_{RM}	80	V
Reverse voltage	V_R	80	
Forward current	I_F	3	A
Peak surge forward current (Non-repetitive 60Hz sine wave)	I_{FSM}	95	A
Junction temperature	T_J	150	$^{\circ}\text{C}$
Storage temperature range	T_{stg}	-55 ~ 150	

Electrical Characteristics ($T_{amb}=25^{\circ}\text{C}$, Unless otherwise specified)

Characteristic	Symbol	Test Condition		Min.	Typ.	Max.	Unit
Forward voltage	V_F ¹⁾	$I_F=3\text{A}$	$T_A=25^{\circ}\text{C}$	-	-	0.8	V
		$I_F=3\text{A}$	$T_A=125^{\circ}\text{C}$	-	-	0.7	
Reverse current	I_R	$V_R=80\text{V}$	$T_A=25^{\circ}\text{C}$	-	-	0.5	mA
		$V_R=80\text{V}$	$T_A=100^{\circ}\text{C}$	-	-	20	
Thermal resistance	$R_{th(j-a)}$ ²⁾	Junction to ambient		-	-	76	$^{\circ}\text{C}/\text{W}$
Total capacitance	C_T	$V_R=10\text{V}, f=1\text{MHz}$		-	100	-	pF

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

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

Rating and Characteristic Curves

Fig. 1 $I_F - V_F$

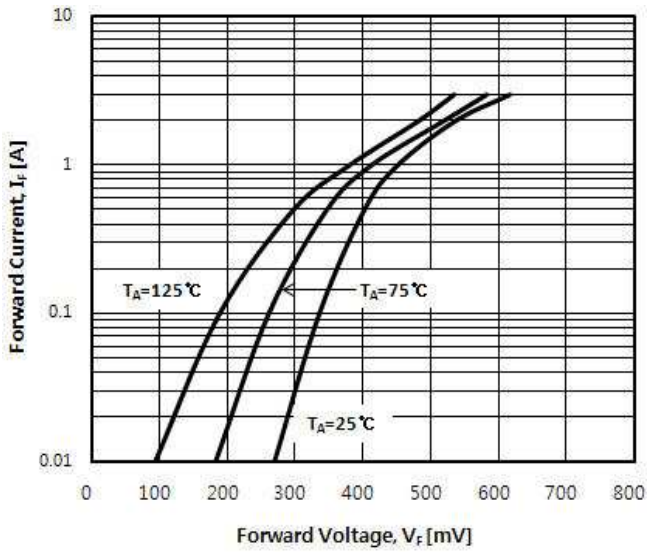


Fig. 2 $I_R - V_R$

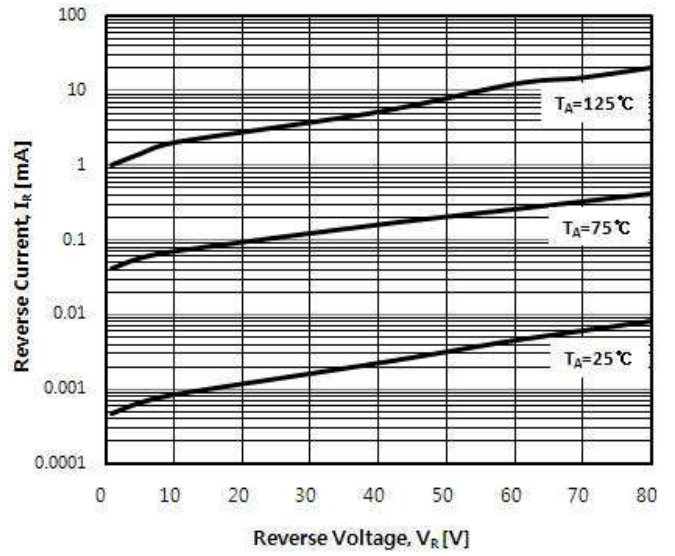
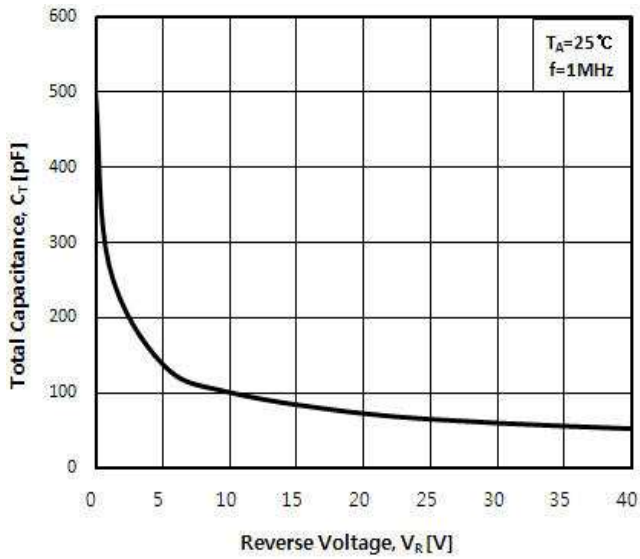
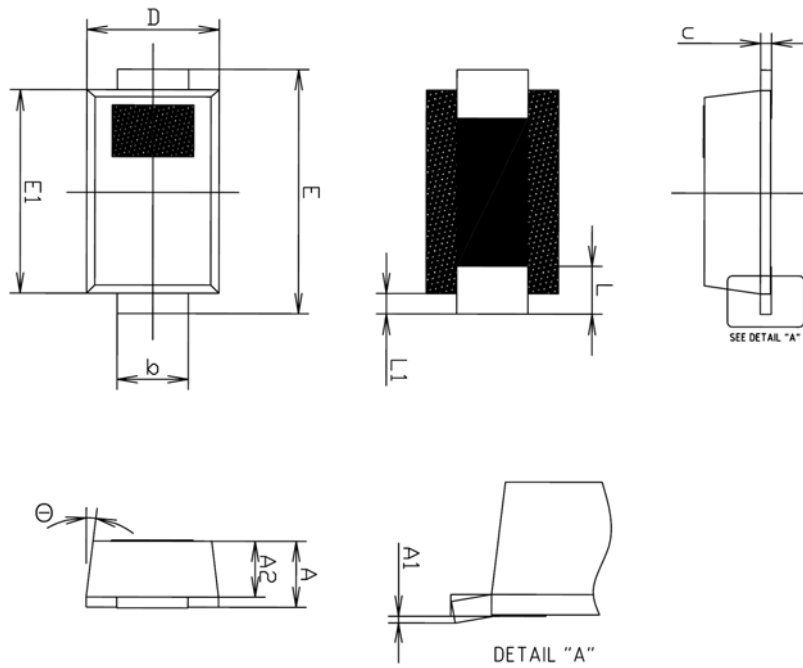


Fig. 3 $C_T - V_R$

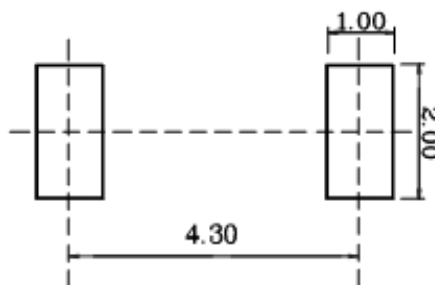


Package Outline Dimensions (Unit: mm)



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 (Unit: mm)



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