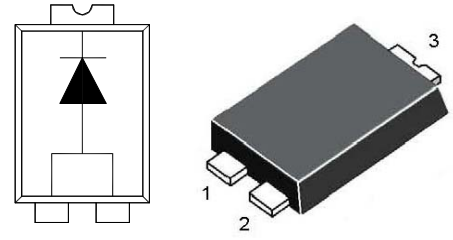


SDB0540

Surface Mount Schottky Barrier Rectifier

Features

- Low forward voltage drop



TO-277 Plastic Package

Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Value	Unit
Working Peak Reverse Voltage	V_{RWM}	40	V
Repetitive Peak Reverse Voltage	V_{RRM}	40	V
Reverse Voltage	V_R	40	V
RMS Reverse Voltage	$V_{R(RMS)}$	28	V
Average Rectified Output Current	I_O	5	A
Non-Repetitive Peak Forward Surge Current ($t = 8.3$ ms)	I_{FSM}	120	A
Typical Thermal Resistance, Junction to Ambient ¹⁾	$R_{\theta JA}$	95	$^\circ\text{C/W}$
Typical Thermal Resistance, Junction to Ambient ²⁾	$R_{\theta JA}$	70	$^\circ\text{C/W}$
Typical Thermal Resistance, Junction to Ambient ³⁾	$R_{\theta JA}$	50	$^\circ\text{C/W}$
Operating and Storage Temperature Range	T_J T_{stg}	- 55 to + 150	$^\circ\text{C}$

¹⁾ FR-4 PCB, 2oz. Copper, minimum recommended pad layout.

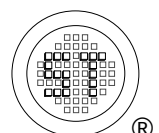
²⁾ Polyimide PCB, 2oz. Copper, minimum recommended pad layout.

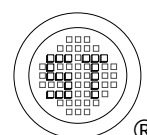
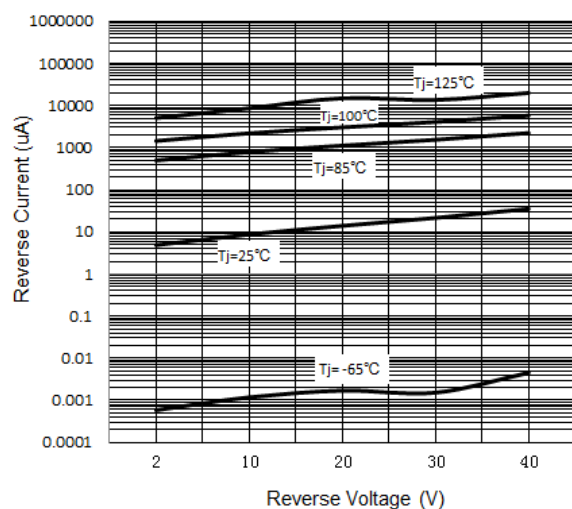
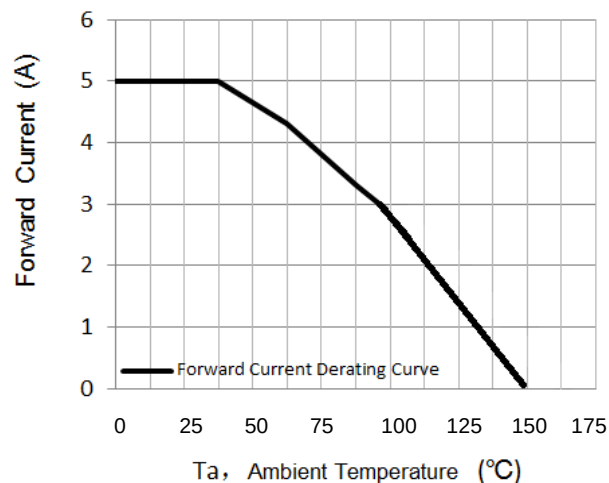
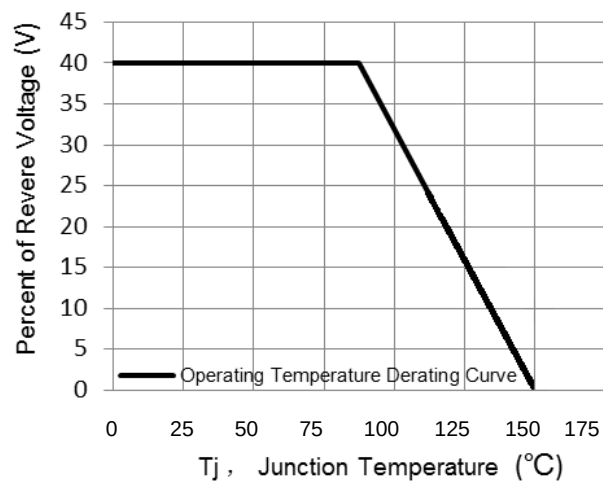
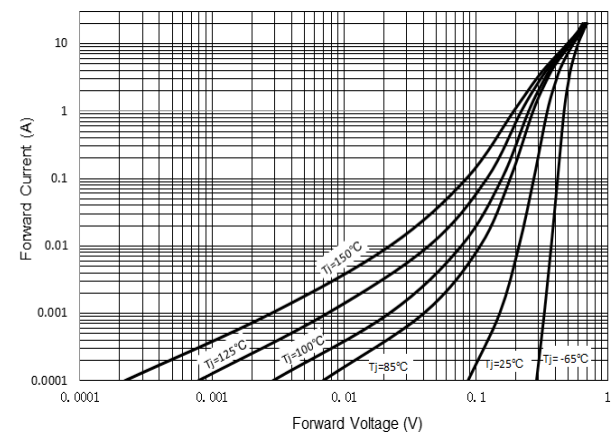
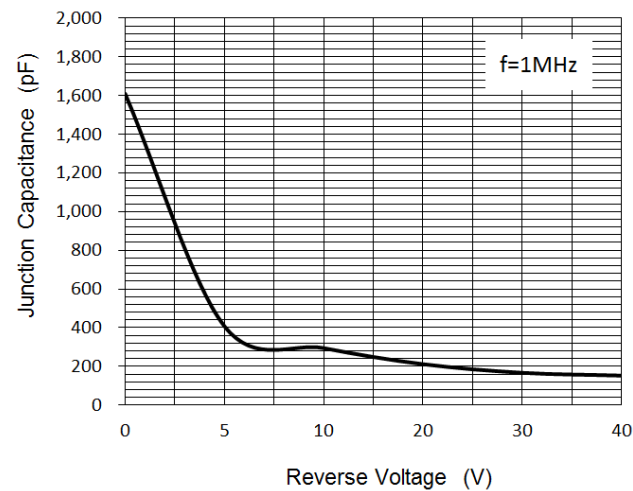
³⁾ Polyimide PCB, 2oz. Copper, cathode pad dimensions 9.4 mm x 7.2 mm, Anode pad dimensions 2.7 mm x 1.6 mm.

Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage at $I_R = 0.5$ mA	V_{BR}	40	-	-	V
Forward Voltage at $I_F = 5$ A, $T_J = 25^\circ\text{C}$ at $I_F = 5$ A, $T_J = 125^\circ\text{C}$ at $I_F = 10$ A, $T_J = 25^\circ\text{C}$ at $I_F = 10$ A, $T_J = 125^\circ\text{C}$	V_F	- - - -	- - - -	0.52 0.47 0.65 0.59	V
Reverse Current ¹⁾ at $V_R = 40$ V, $T_J = 25^\circ\text{C}$ at $V_R = 40$ V, $T_J = 100^\circ\text{C}$ at $V_R = 40$ V, $T_J = 125^\circ\text{C}$	I_R	- - -	- - -	0.3 20 40	mA
Junction Capacitance at $V_R = 0$ V, $f = 1$ MHz	C_J	-	1600	-	pF

¹⁾ Short duration pulse test used to minimize self-heating effect.



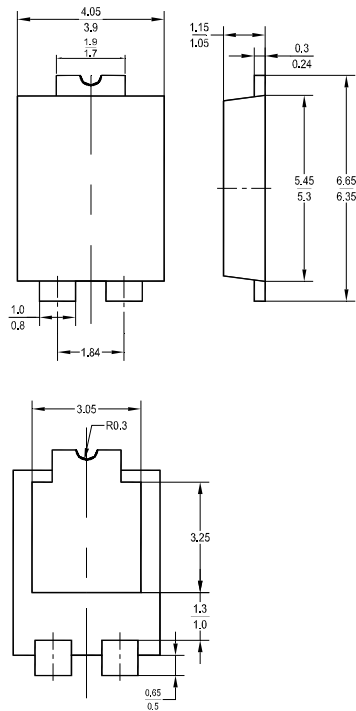


SDB0540

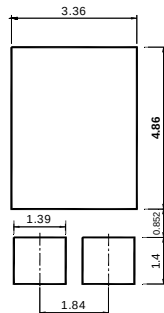
PACKAGE OUTLINE

Plastic surface mounted package (Units: mm)

TO-277



Recommended Soldering Footprint



Packing information

Package	Tape Width (mm)	Pitch		Reel Size		Per Reel Packing Quantity
		mm	inch	mm	inch	
TO-277	12	8 ± 0.1	0.315 ± 0.004	330	13	5,000

Marking information

" SDB0540 " = Part No.

" YYWW " = Date Code Marking

" Y " = Year (ex: 19 = 2019)

" W " = Week (ex: 09 = the 9th week of the year)

Font type: Arial

