

RB500V-40

Silicon Epitaxial Planar Schottky Barrier Diode

Features

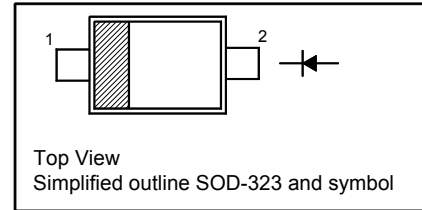
- Small surface mounting type
- Low I_R
- High reliability

Applications

- Low current rectification

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



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

Parameter	Symbol	Value	Unit
Peak Reverse Voltage	V_{RM}	45	V
Reverse Voltage	V_R	40	V
Mean Rectifying Current	I_O	0.1	A
Peak Forward Surge Current (60 Hz for 1 Cyc.)	I_{FSM}	1	A
Power Dissipation	P_{tot}	200	mW
Junction Temperature	T_j	125	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	- 40 to + 125	$^\circ\text{C}$

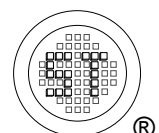
Thermal Characteristics

Parameter	Symbol	Max.	Unit
Thermal Resistance from Junction to Ambient ¹⁾	$R_{\theta JA}$	500	$^\circ\text{C/W}$

¹⁾ Device mounted on FR-4 substrate PC board, 2oz copper, with minimum recommended pad layout.

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

Parameter	Symbol	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage at $I_R = 100 \mu\text{A}$	$V_{(BR)R}$	45	-	-	V
Forward Voltage at $I_F = 10 \text{ mA}$	V_F	-	-	0.45	V
Reverse Current at $V_R = 10 \text{ V}$	I_R	-	-	1	μA
Capacitance Between Terminals at $V_R = 10 \text{ V}$, $f = 1 \text{ MHz}$	C_T	-	2	-	pF



Electrical Characteristics Curves

Fig 1. Reverse Characteristics Curve

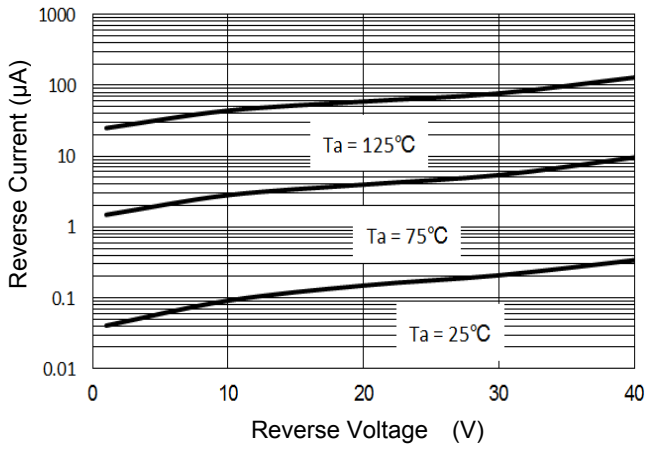


Fig 2. Forward Characteristics Curve

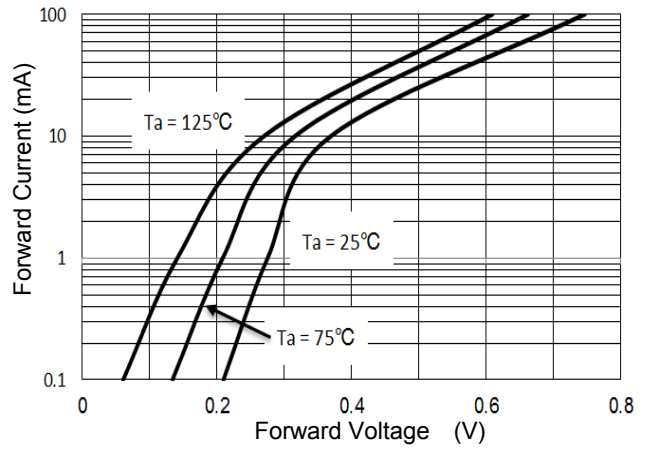


Fig 3. Junction Capacitance

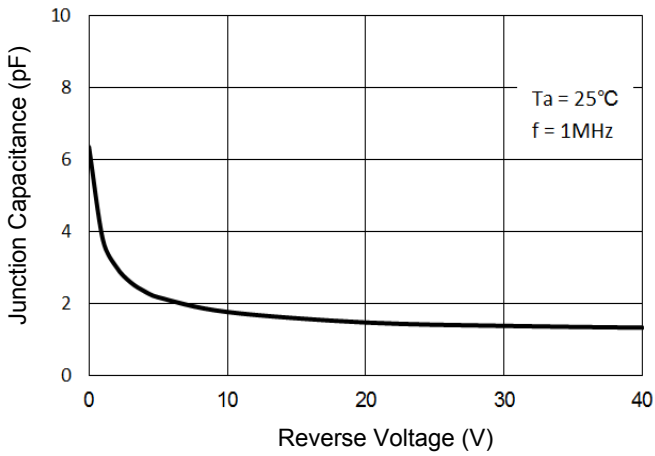
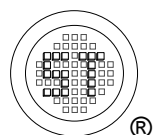
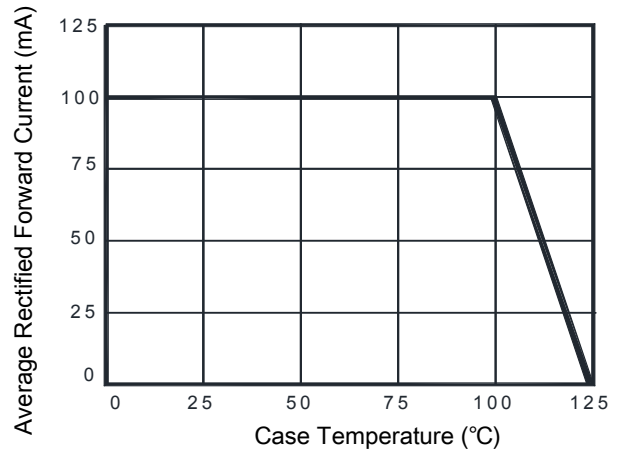


Fig 4. Forward Current Derating Curve

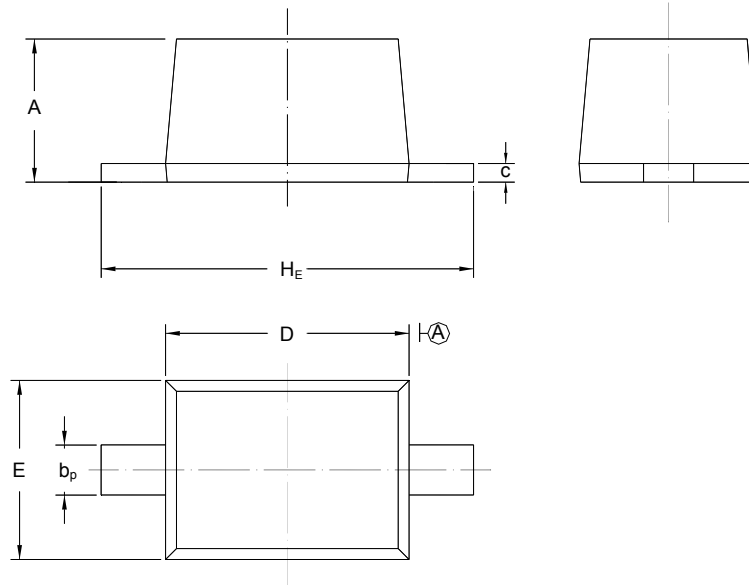


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PACKAGE OUTLINE

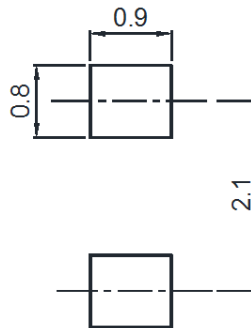
Plastic surface mounted package; 2 leads

SOD-323



UNIT	A	b _p	C	D	E	H _E
mm	1.10 0.80	0.40 0.25	0.15 0.10	1.80 1.60	1.35 1.15	2.80 2.30

Recommended Soldering Footprint



Packing information

Package	Tape Width (mm)	Pitch		Reel Size		Per Reel Packing Quantity
		mm	inch	mm	inch	
SOD-323	8	4 ± 0.1	0.157 ± 0.004	178	7	3,000

Marking information

" *** " = Part No.
 " III " = Cathode line
 " S9 " = Part No.
 Font type: Arial

