

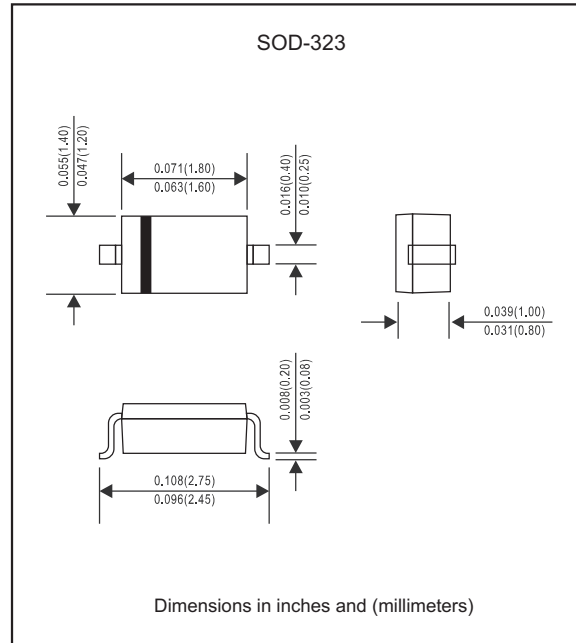
### Features

- Low current rectification and high speed switching.
- Extremely small surface mount type.
- Up to 100mA current capability.
- Silicon epitaxial planar chip, metal silicon junction.
- Lead-free parts for green partner, exceeds environmental standards of MIL-STD-19500 /228
- Compliant to Halogen-free

### Mechanical data

- Epoxy:UL94-V0 rated flame retardant
- Case : Molded plastic, SOD-323
- Terminals : Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity : Indicated by cathode band
- Mounting Position : Any

### Package outline

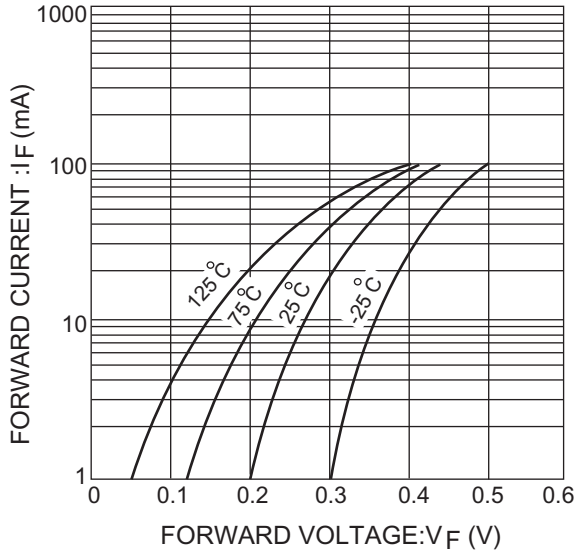


### Maximum ratings and Electrical Characteristics (AT $T_A=25^\circ\text{C}$ unless otherwise noted)

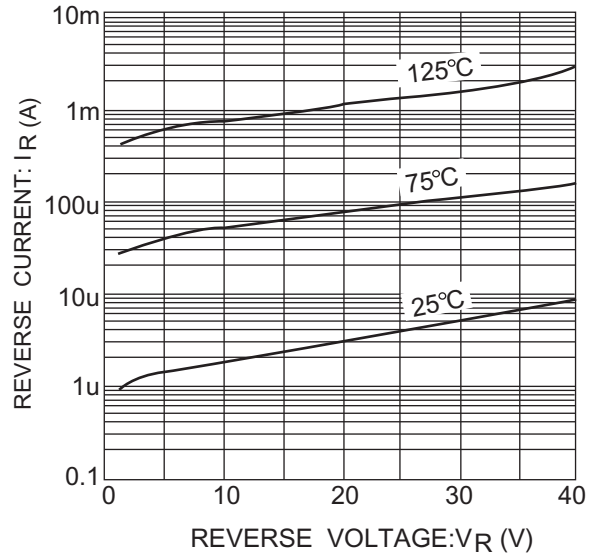
PARAMETER	CONDITIONS	Symbol	MIN.	TYP.	MAX.	UNIT
Repetitive peak reverse voltage		$V_{RM}$			40	V
Continuous reverse voltage		$V_R$			40	V
Average Rectified Forward Current		$I_O$			100	mA
Peak Forward Surge Current	$t=8.3\text{mS}$	$I_{FSM}$			1000	mA
Typical Junction Capacitance	$f=1\text{MHz}$ and applied 10V DC reverse voltage	$C_T$		6		pF
Operating junction temperature range		$T_J$	-40		+125	$^\circ\text{C}$
Storage temperature range		$T_{STG}$	-40		+125	$^\circ\text{C}$
Forward voltage	$I_F = 100\text{ mA}$	$V_F$			0.55	V
Reverse current	$V_R = 10\text{ V}$	$I_R$			30	$\mu\text{A}$

## Rating and characteristic curves (RB501V-40)

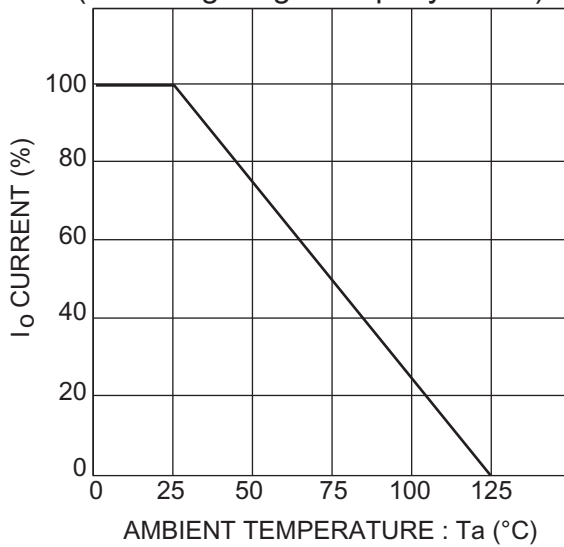
**FIG: 1 Forward characteristics**



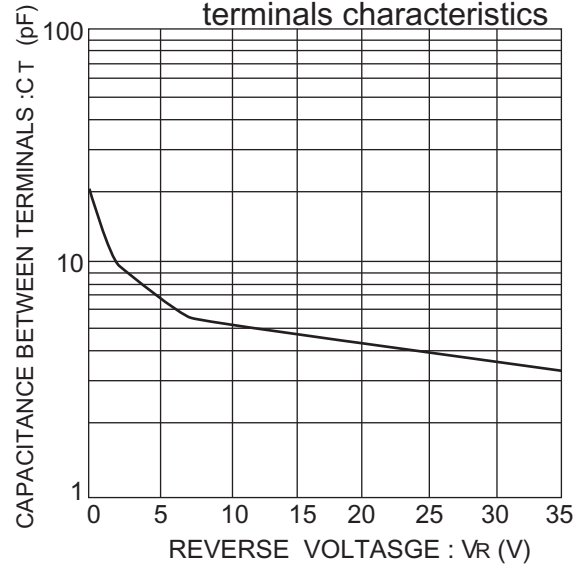
**Fig.2 Reverse characteristics**





**Fig. 4 Derating curve (mounting on glass epoxy PCBs)**



**Fig.3 Capacitance between terminals characteristics**



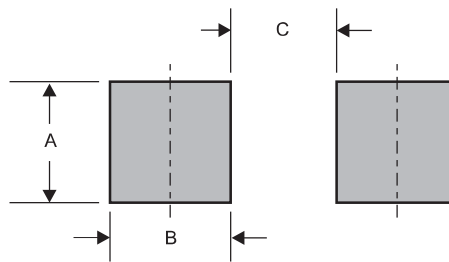
### Pinning information

Pin	Simplified outline	Symbol
Pin1 cathode Pin2 anode		

### Marking

Type number	Marking code
RB501V-40	4

### Suggested solder pad layout



Dimensions in inches and (millimeters)

PACKAGE	A	B	C
SOD-323	0.033 (0.83)	0.025 (0.63)	0.063 (1.60)