

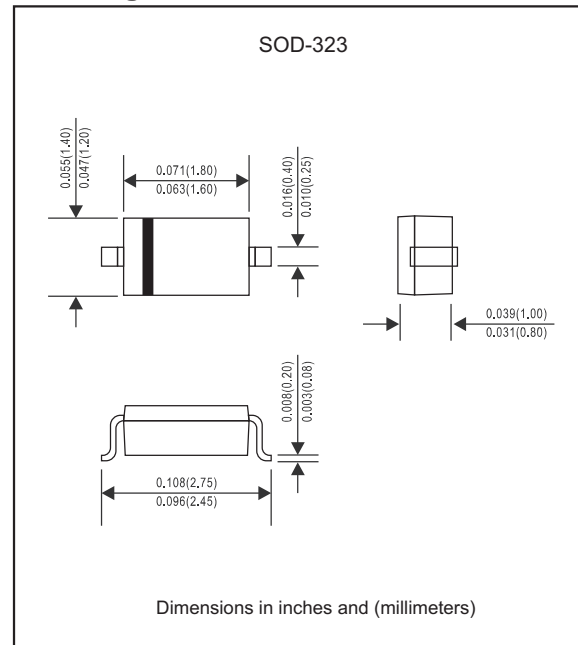
Features

- 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
- Suffix "-Q1" for AEC-Q101

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	μA

Rating and characteristic curves

FIG: 1 Forward characteristics

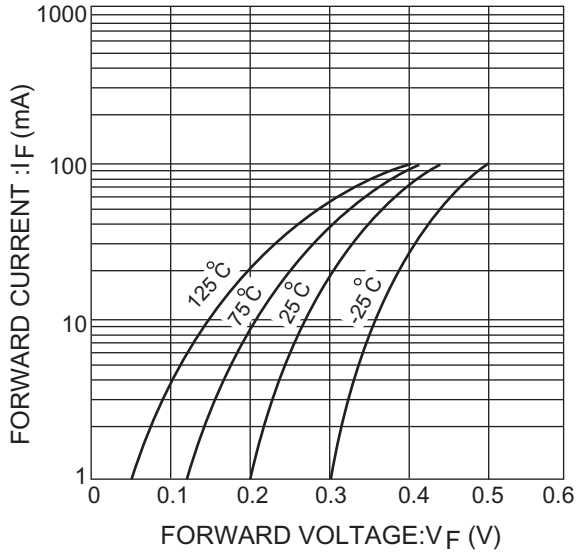


Fig.2 Reverse characteristics

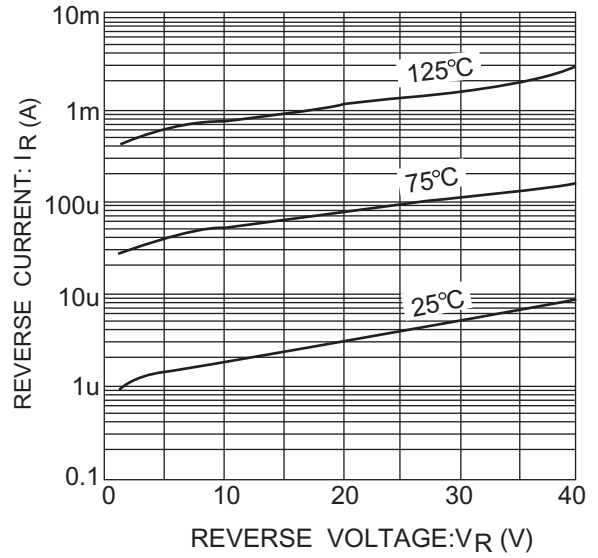


Fig. 4 Derating curve (mounting on glass epoxy PCBs)

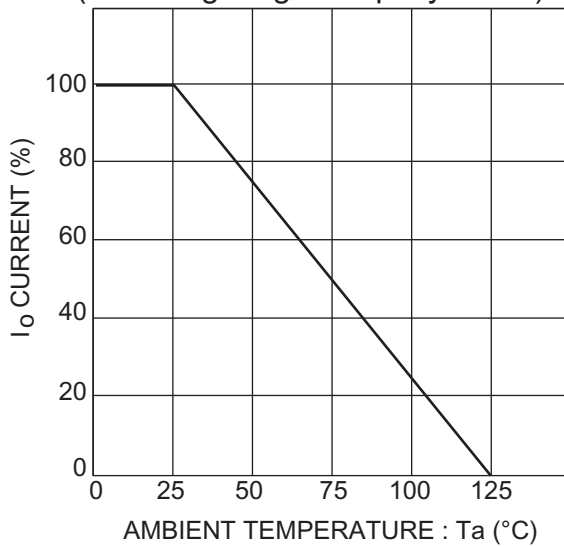
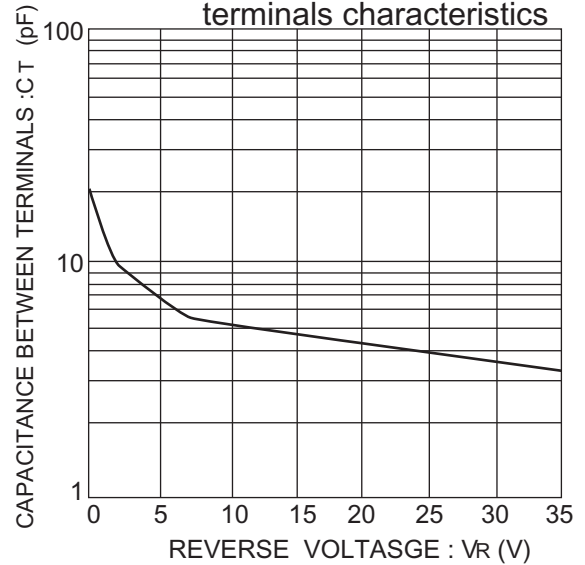




Fig.3 Capacitance between terminals characteristics



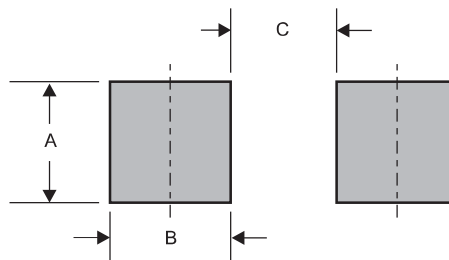
Pinning information

Pin	Simplified outline	Symbol
Pin1 cathode Pin2 anode		

Marking

Type number	Marking code
RB501V-40-Q1	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)