

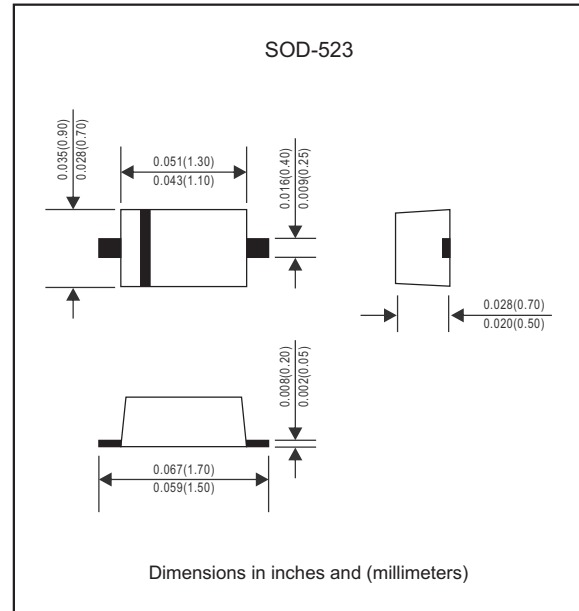
### Features

- Low current rectification and high speed switching.
- Extremely small surface mount type.
- Up to 200mA current capability.
- Low forward voltage drop .
- Silicon epitaxial planar chip, metal silicon junction.
- Lead-free parts meet 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-523
- Terminals : Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity : Indicated by cathode band
- Mounting Position : Any

### Package outline

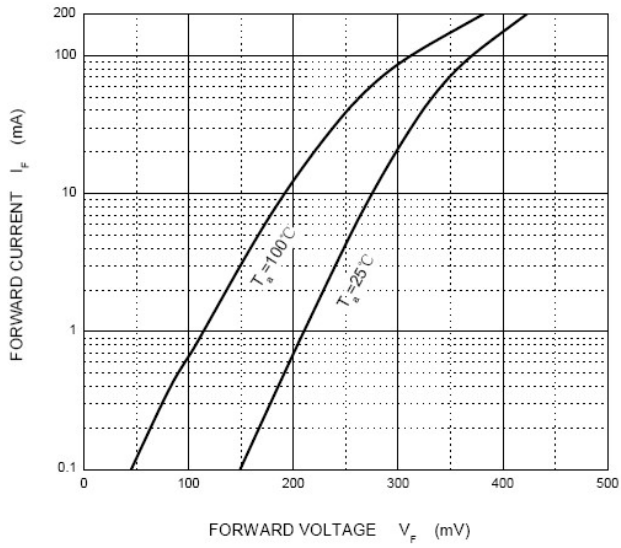


### Maximum ratings and Electrical Characteristics (AT $T_A=25^\circ\text{C}$ unless otherwise noted)

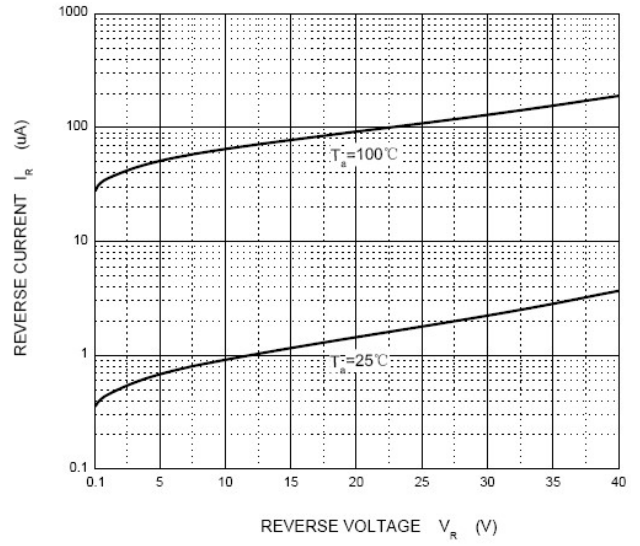
PARAMETER	CONDITIONS	Symbol	MIN.	TYP.	MAX.	UNIT
Repetitive peak reverse voltage		$V_{RM}$	40			V
Continuous reverse voltage		$V_R$	40			V
Mean rectifying current		$I_o$			200	mA
Forward surge current	60Hz for 1cycle	$I_{FSM}$			1000	mA
Operating junction temperature range		$T_J$	-55		+125	$^\circ\text{C}$
Storage temperature range		$T_{STG}$	-55		+125	$^\circ\text{C}$
Forward voltage	$I_F = 200 \text{ mA}$	$V_F$			0.54	V
Reverse current	$V_R = 10 \text{ V}$	$I_R$			20	$\mu\text{A}$
Diode capacitance	$V_R = 10 \text{ V}, f = 1\text{MHz}$	$C_T$		6.0		pF

## RATING AND CHARACTERISTIC CURVES

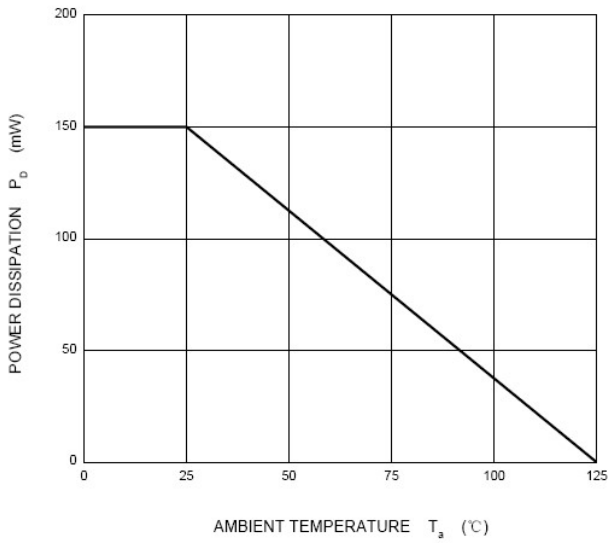
**Forward Characteristics**





**Reverse Characteristics**



**Power Derating Curve**



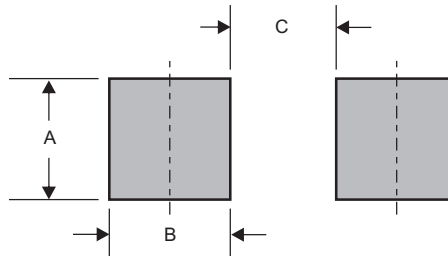
### Pinning information

Pin	Simplified outline	Symbol
Pin1 cathode Pin2 anode		

### Marking

Type number	Marking code
RB521S-40-Q1	S

### Suggested solder pad layout



Dimensions in inches and (millimeters)

PACKAGE	A	B	C
SOD-523	0.032 (0.80)	0.024 (0.60)	0.044 (1.10)