

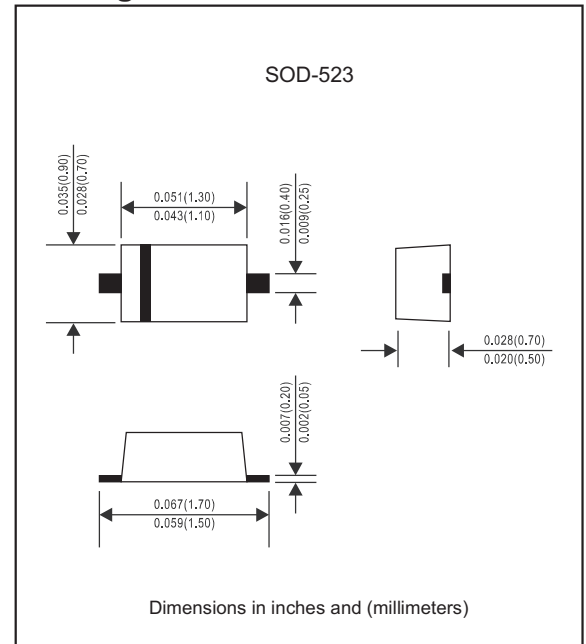
Features

- Low current rectification and high speed switching.
- Extremely small surface mount type.
- Up to 200mA current capability.
- Low forward voltage drop ($V_F = 0.6V$ max. @ $I_F = 200mA$)
- Silicon epitaxial planar chip, metal silicon junction.
- Lead-free parts meet exceeds environmental standards of MIL-STD-19500 /228
- Compliant to Halogen-free

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 $T_A = 25^\circ C$ unless otherwise noted)

| PARAMETER | CONDITIONS | Symbol | MIN. | TYP. | MAX. | UNIT |
|--------------------------------------|---|------------------------------------|------|------------|------|------------------------------|
| Repetitive peak reverse voltage | | V_{RM} | | | 30 | V |
| Continuous reverse voltage | | V_R | | | 30 | V |
| Average Rectifier Forward Current | | I_O | | | 200 | mA |
| Total power dissipation | $T_a = 25^\circ C$ | P_D | | | 150 | mW |
| Peak Forward Surge Current | 60Hz for 1 cycle | I_{FSM} | | | 1000 | mA |
| Thermal Resistance | Junction to Ambient Junction to Case | $R_{\theta JA}$ $R_{\theta JC}$ | | 833 625 | | $^\circ C/W$ $^\circ C/W$ |
| Operating junction temperature range | | T_J | -40 | | +125 | $^\circ C$ |
| Storage temperature range | | T_{STG} | -40 | | +125 | $^\circ C$ |
| Forward voltage | $I_F = 200$ mA | V_F | | | 0.60 | V |
| Reverse current | $V_R = 10$ V | I_R | | | 1.0 | μA |
| Diode capacitance | $V_R = 10$ V, $f = 1$ MHz | C_T | | 4.0 | | pF |

RATING AND CHARACTERISTIC CURVES (RB520S-30)

FIG.1-TYPICAL FORWARD CHARACTERISTICS

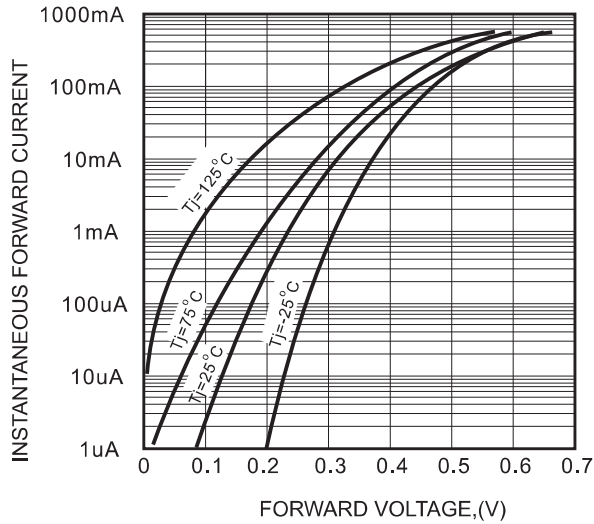


FIG.2 - TYPICAL REVERSE CHARACTERISTICS

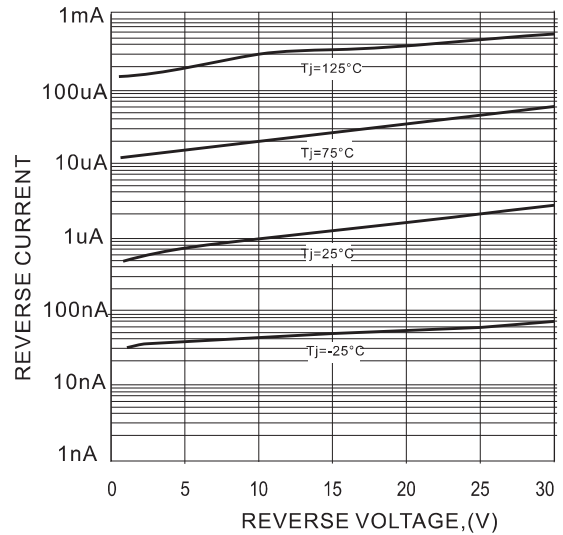


FIG.3-TYPICAL TERMINALS CAPACITANCE

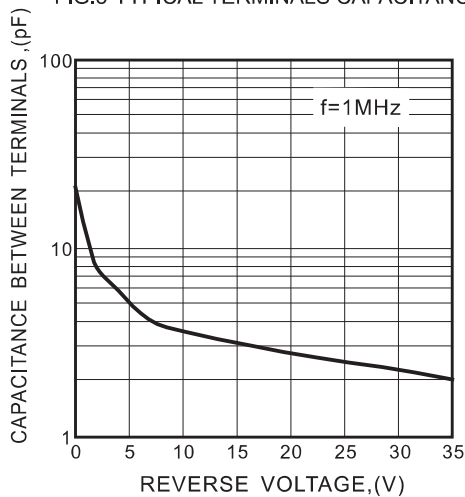
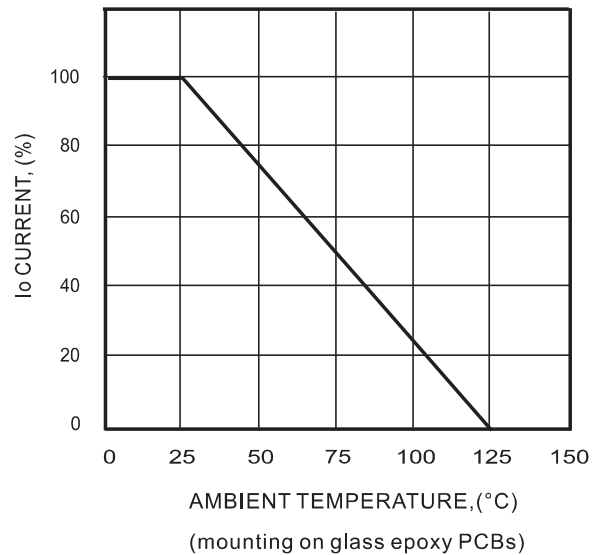




FIG.4- DERATING CURVE



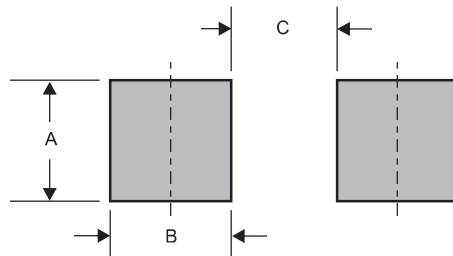
Pinning information

| Pin | Simplified outline | Symbol |
|----------------------------|---|---|
| Pin1 cathode Pin2 anode |  |  |

Marking

| Type number | Marking code |
|-------------|--------------|
| RB520S-30 | B |

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) |