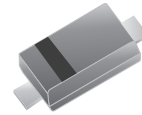


## RB521S-30

$I_o = 200 \text{ mA}$

$V_R = 30 \text{ Volts}$

RoHS Device

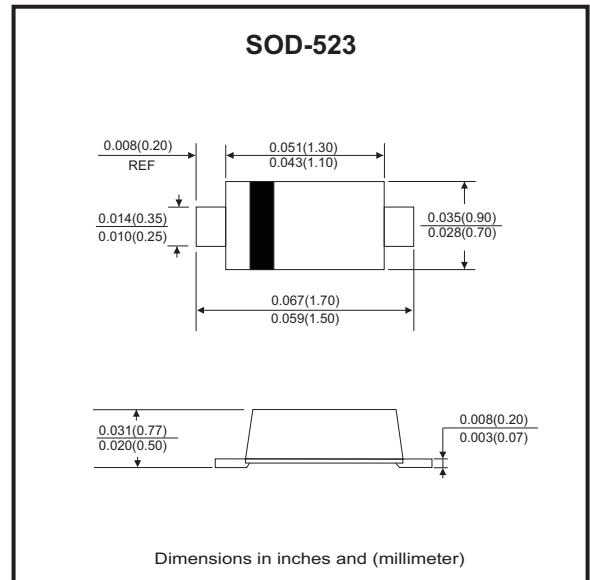


### Features

- Low reverse current.
- Low forward voltage.
- Designed for mounting on small surface.
- Extremely thin package.
- Majority carrier conduction.

### Mechanical data

- Case: SOD-523 standard package, molded plastic.
- Terminals: Solderable per MIL-STD-750, method 2026.
- Polarity: Color band denotes cathode end.
- Mounting position: Any
- Weight: 0.0012 grams(approx.).



### Circuit Diagram



### Maximum Ratings (at $T_A=25^\circ\text{C}$ unless otherwise noted)

| Parameter                                 | Conditions                                                          | Symbol          | Value       | Unit             |
|-------------------------------------------|---------------------------------------------------------------------|-----------------|-------------|------------------|
| DC reverse voltage                        |                                                                     | $V_R$           | 30          | V                |
| Mean rectifying current                   |                                                                     | $I_o$           | 200         | mA               |
| Non-repetitive peak forward surge current | 8.3ms single half sine-wave superimposed on rate load(JEDEC method) | $I_{FSM}$       | 1           | A                |
| Power dissipation                         |                                                                     | $P_D$           | 150         | mW               |
| Thermal resistance                        | Junction to ambient                                                 | $R_{\theta JA}$ | 667         | $^\circ\text{C}$ |
| Junction temperature range                |                                                                     | $T_j$           | -40 to +125 | $^\circ\text{C}$ |
| Storage temperature range                 |                                                                     | $T_{STG}$       | -55 to +150 | $^\circ\text{C}$ |

### Electrical Characteristics (At $T_a=25^\circ\text{C}$ , unless otherwise noted)

| Parameter       | Conditions             | Symbol   | Min | Typ | Max  | Unit          |
|-----------------|------------------------|----------|-----|-----|------|---------------|
| Forward voltage | $I_F = 10 \text{ mA}$  | $V_{F1}$ |     |     | 0.35 | V             |
|                 | $I_F = 200 \text{ mA}$ | $V_{F2}$ |     |     | 0.50 |               |
| Reverse current | $V_R = 10 \text{ V}$   | $I_R$    |     |     | 30   | $\mu\text{A}$ |

## RATING AND CHARACTERISTIC CURVES (RB521S-30)

Fig.1 - Typical Forward Characteristics

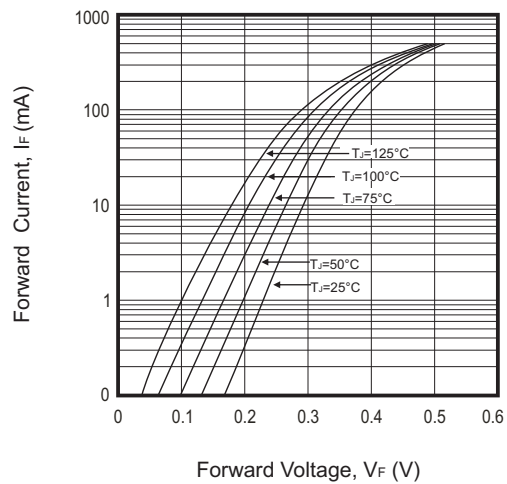


Fig.2 - Typical Reverse Characteristics

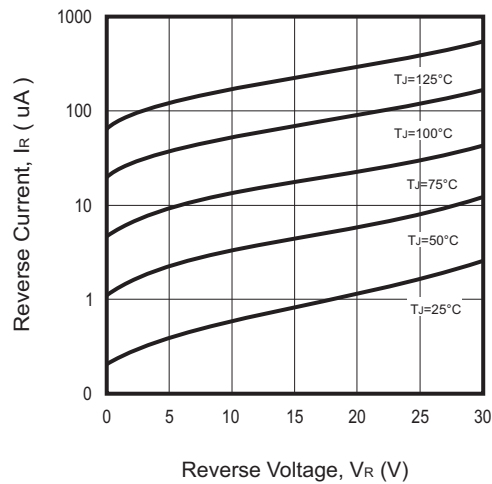


Fig.3 - Typical Capacitance Characteristics

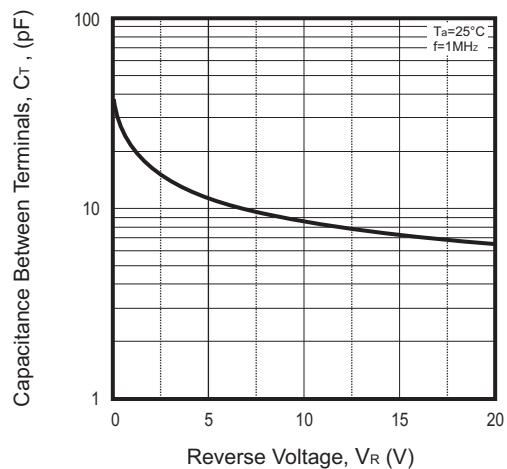
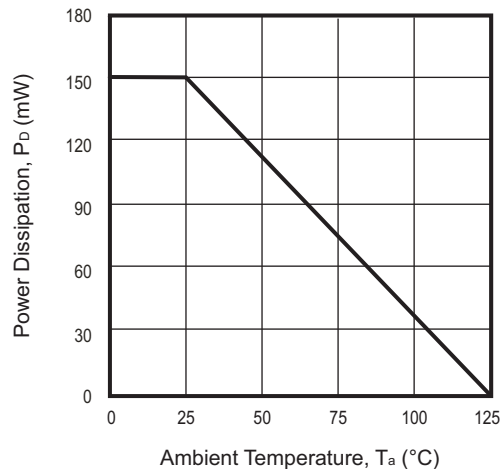
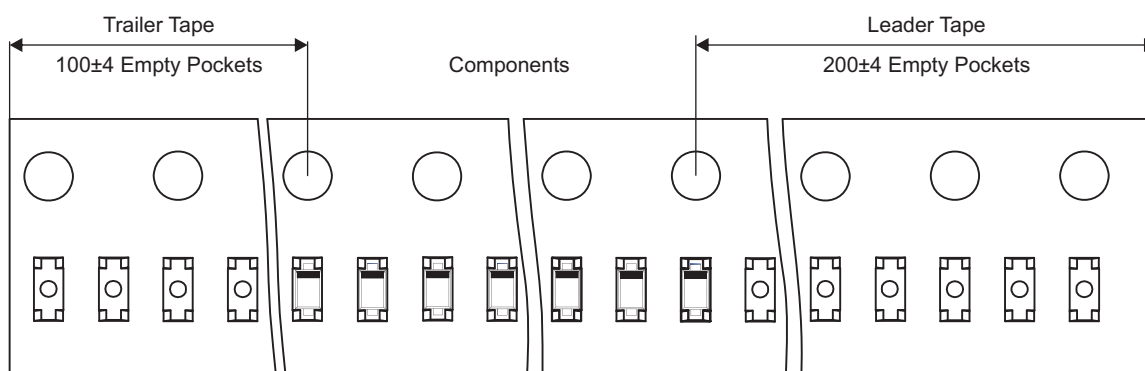
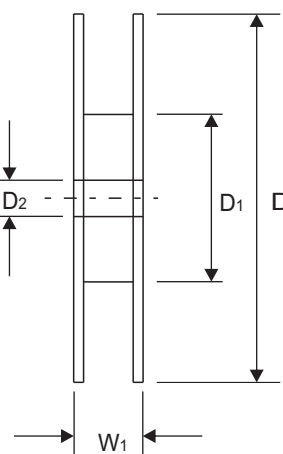
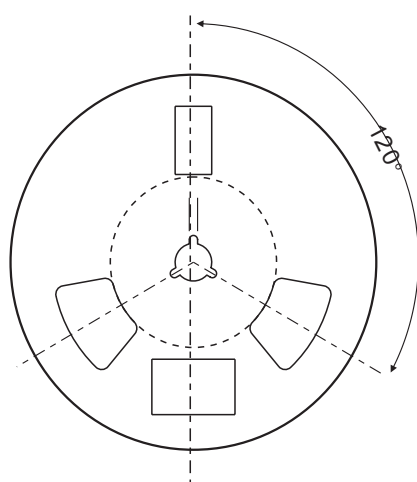
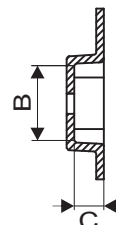
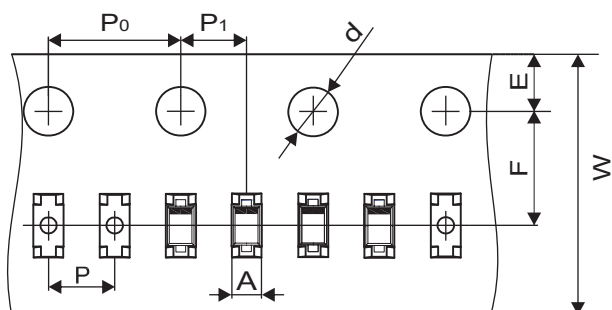


Fig.4 - Power Derating Curve



## Reel Taping Specification

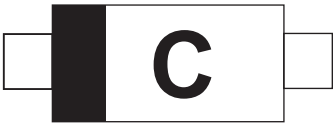


| SOD-523 | SYMBOL | A                 | B                 | C                 | d                 | D                 | D1                | D2                |
|---------|--------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
|         | (mm)   | $0.90 \pm 0.10$   | $1.94 \pm 0.10$   | $0.73 \pm 0.10$   | $1.50 \pm 0.10$   | $178 \pm 1.00$    | $54.40 \pm 0.40$  | $13.00 \pm 0.20$  |
|         | (inch) | $0.035 \pm 0.004$ | $0.076 \pm 0.004$ | $0.029 \pm 0.004$ | $0.059 \pm 0.004$ | $7.008 \pm 0.039$ | $2.142 \pm 0.016$ | $0.512 \pm 0.008$ |

| SOD-523 | SYMBOL | E                 | F                 | P                 | P0                | P1                | W                         | W1                |
|---------|--------|-------------------|-------------------|-------------------|-------------------|-------------------|---------------------------|-------------------|
|         | (mm)   | $1.75 \pm 0.10$   | $3.50 \pm 0.05$   | $2.00 \pm 0.10$   | $4.00 \pm 0.10$   | $2.00 \pm 0.10$   | $8.00 + 0.30 / - 0.10$    | $12.30 \pm 1.00$  |
|         | (inch) | $0.069 \pm 0.004$ | $0.138 \pm 0.002$ | $0.079 \pm 0.004$ | $0.158 \pm 0.004$ | $0.079 \pm 0.004$ | $0.315 + 0.012 / - 0.004$ | $0.484 \pm 0.039$ |

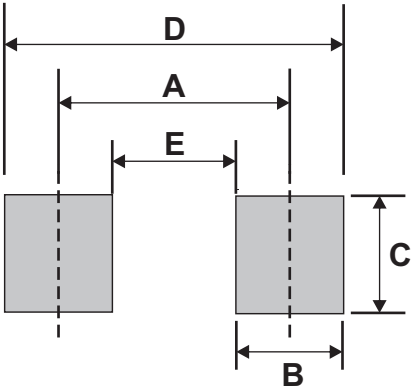
## Marking Code

| Part Number | Marking Code |
|-------------|--------------|
| RB521S-30   | C            |



## Suggested PAD Layout

| SIZE | SOD-523 |        |
|------|---------|--------|
|      | (mm)    | (inch) |
| A    | 1.42    | 0.056  |
| B    | 0.60    | 0.024  |
| C    | 0.70    | 0.028  |
| D    | 2.02    | 0.080  |
| E    | 0.82    | 0.032  |



## Standard Packaging

| Case Type | REEL PACK       |                     |
|-----------|-----------------|---------------------|
|           | REEL<br>( pcs ) | Reel Size<br>(inch) |
| SOD-523   | 8,000           | 7                   |