

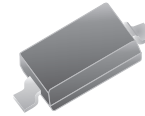
SMD Schottky Barrier Diode



SMD Diodes Specialist

RB551V-30 (RoHS Device)

$I_o = 500 \text{ mA}$
 $V_R = 20 \text{ Volts}$



Features

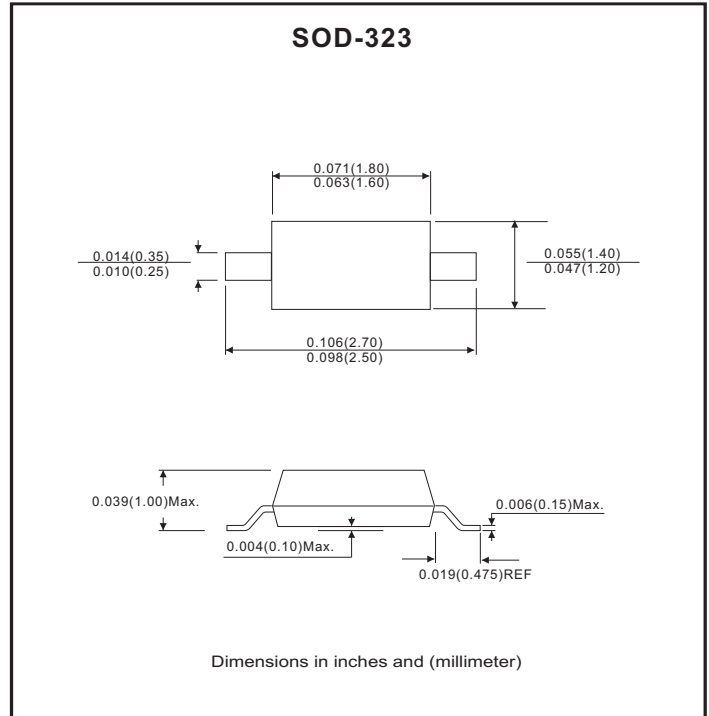
- Low reverse current.
- Designed for mounting on small surface.
- Extremely thin / leadless package.
- Majority carrier conduction.

Mechanical data

Case: SOD-323 Standard package, molded plastic.

Terminals: Gold plated, solderable per MIL-STD-750D, method 2026.

Mounting position: Any.



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

| Parameter | Conditions | Symbol | Min | Typ | Max | Unit |
|---------------------------------|--|-----------|-----|-----|------|------------------|
| Repetitive peak reverse voltage | | V_{RRM} | | | 30 | V |
| Reverse voltage | | V_R | | | 20 | V |
| Average forward current | | I_o | | | 500 | mA |
| Forward current, surge peak | 8.3ms single half sine-wave superimposed on rate load (JEDEC method) | I_{FSM} | | | 2 | A |
| Storage temperature | | T_{STG} | -40 | | +125 | $^\circ\text{C}$ |
| Junction temperature | | T_j | | | +125 | $^\circ\text{C}$ |

Electrical Characteristics (at $T_A=25^\circ\text{C}$ unless otherwise noted)

| Parameter | Conditions | Symbol | Min | Typ | Max | Unit |
|-----------------|--|--------|-----|-----|--------------|---------------|
| Forward voltage | $I_F = 100 \text{ mA}$ $I_F = 500 \text{ mA}$ | V_F | | | 0.36 0.47 | V |
| Reverse current | $V_R = 20 \text{ V}$ | I_R | | | 100 | μA |

RATING AND CHARACTERISTIC CURVES (RB551V-30)

Fig.1 Forward Characteristics

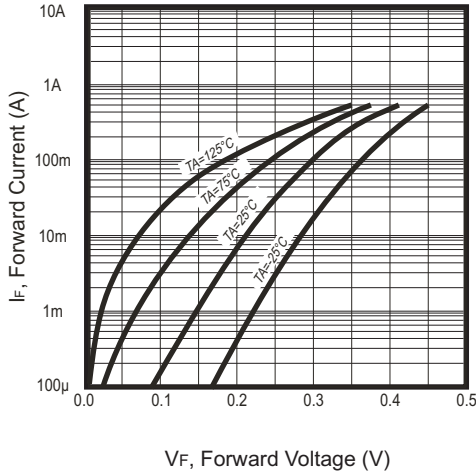


Fig. 2 - Reverse characteristics

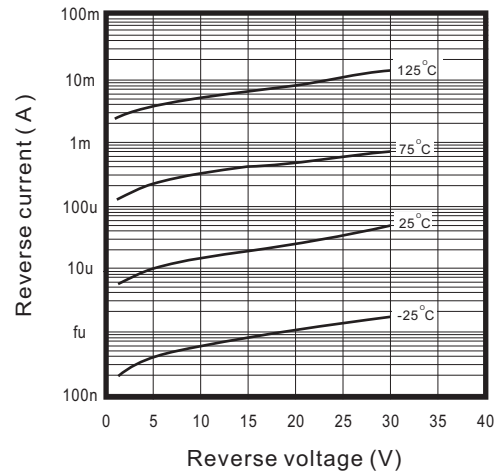


Fig. 3 - Capacitance between terminals characteristics

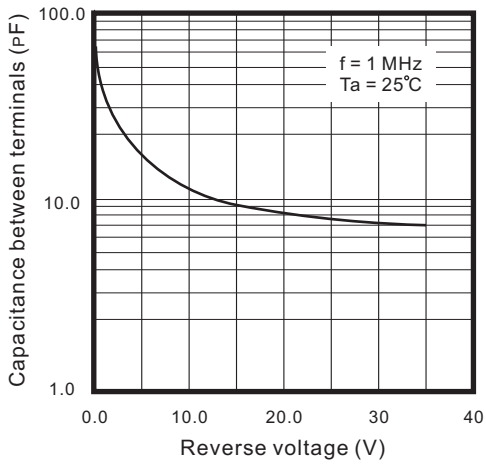
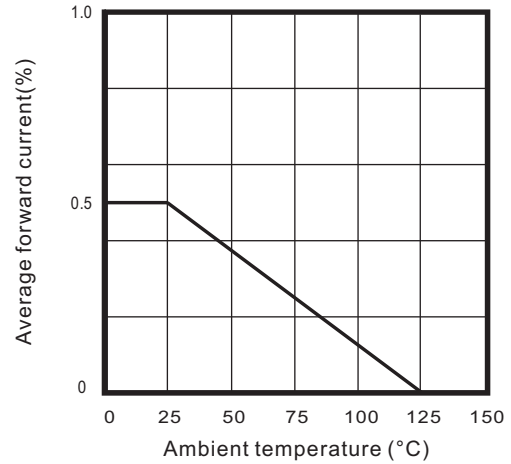
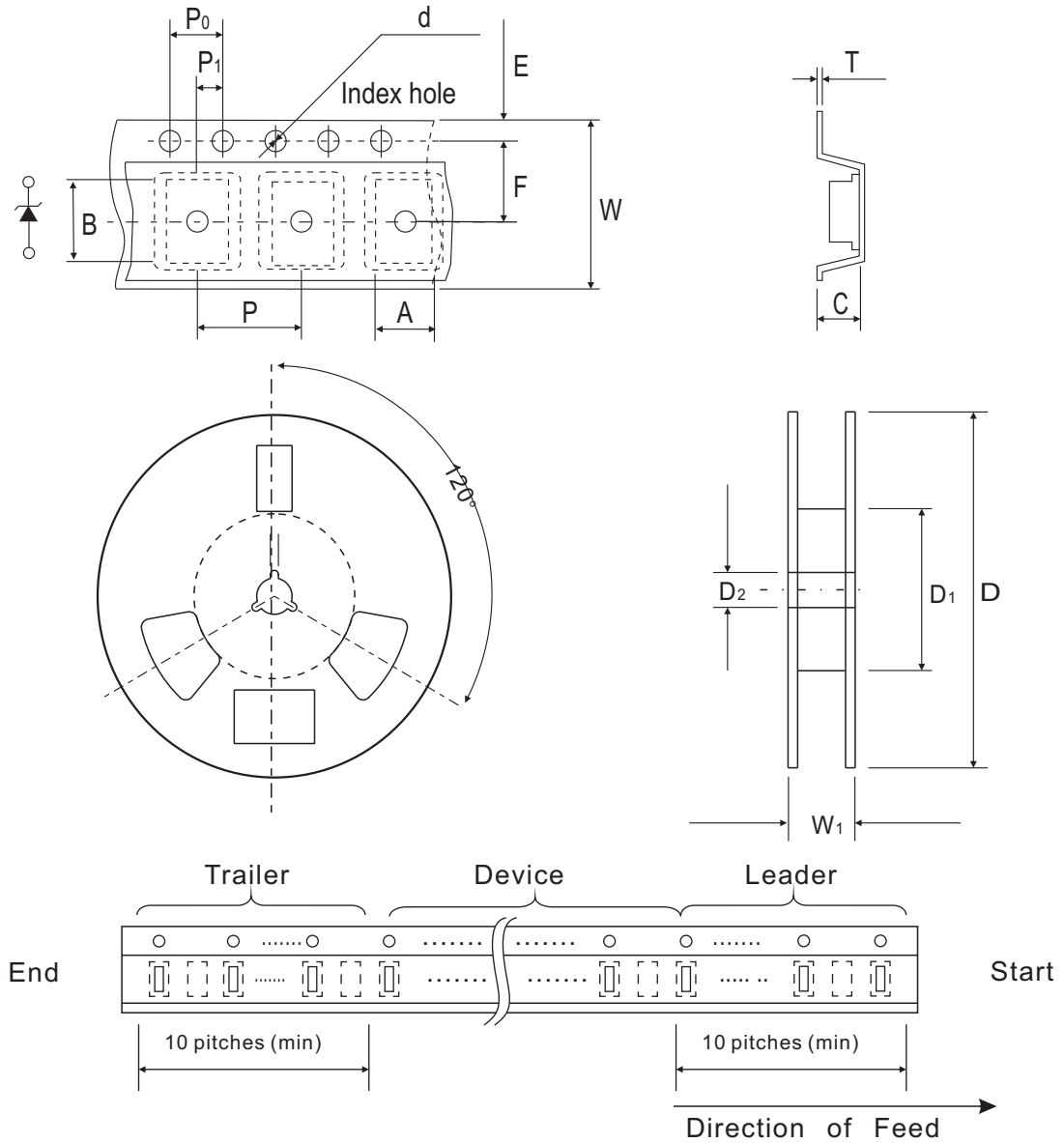


Fig.4 - Current derating curve



Reel Taping Specification



| SOD-323 | SYMBOL | A | B | C | d | D | D1 | D2 |
|---------|--------|---------------|---------------|---------------|---------------|---------------|------------|---------------|
| | (mm) | 1.52 ± 0.10 | 2.90 ± 0.10 | 1.35 ± 0.10 | 1.50 ± 0.10 | 178 ± 1 | 54.4 MIN. | 13.0 ± 0.20 |
| | (inch) | 0.060 ± 0.004 | 0.114 ± 0.004 | 0.053 ± 0.004 | 0.059 ± 0.004 | 7.008 ± 0.040 | 2.142 MIN. | 0.512 ± 0.008 |

| SOD-323 | SYMBOL | E | F | P | P0 | P1 | W | W1 |
|---------|--------|---------------|---------------|---------------|---------------|---------------|---------------|------------|
| | (mm) | 1.75 ± 0.10 | 3.50 ± 0.05 | 4.00 ± 0.10 | 4.00 ± 0.10 | 2.00 ± 0.05 | 8.00 ± 0.30 | 9.5 MAX. |
| | (inch) | 0.069 ± 0.004 | 0.138 ± 0.002 | 0.157 ± 0.004 | 0.157 ± 0.004 | 0.079 ± 0.002 | 0.315 ± 0.012 | 0.374 MAX. |

Marking Code

| Part Number | Marking Code |
|-------------|--------------|
| RB551V-30 | D |



Suggested PAD Layout

| SIZE | SOD-323 | |
|------|---------|--------|
| | (mm) | (inch) |
| A | 2.33 | 0.092 |
| B | 0.70 | 0.028 |
| C | 0.70 | 0.028 |
| D | 3.03 | 0.119 |
| E | 1.63 | 0.064 |



Standard Package

| Case Type | Qty per Reel | Reel Size |
|-----------|--------------|-----------|
| | (Pcs) | (inch) |
| SOD-323 | 3000 | 7 |