

1SS355

Silicon Epitaxial Planar Switching Diode

Features

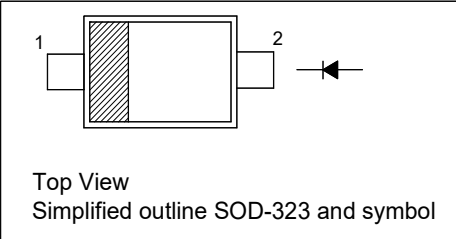
- Small plastic package suitable for surface mounted design
- High reliability with high surge current handling capability

Applications

- High speed switching

PINNING

| PIN | DESCRIPTION |
|-----|-------------|
| 1 | Cathode |
| 2 | Anode |



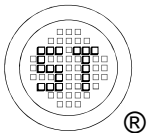
Absolute Maximum Ratings (T_a = 25°C)

| Parameter | Symbol | Value | Unit |
|--------------------------------------|--------------------|---------------|------|
| Peak Reverse Voltage | V _{RM} | 90 | V |
| Reverse Voltage | V _R | 80 | V |
| Average Rectified Forward Current | I _{F(AV)} | 100 | mA |
| Peak Forward Current | I _{FM} | 225 | mA |
| Surge Forward Current (1 s) | I _{FSM} | 500 | mA |
| Power Dissipation | P _D | 200 | mW |
| Operating Junction Temperature Range | T _j | - 55 to + 150 | °C |
| Storage Temperature Range | T _{stg} | - 55 to + 150 | °C |

Thermal Characteristics

| Parameter | Symbol | Max. | Unit |
|---|------------------|------|------|
| Thermal Resistance from Junction to Ambient ¹⁾ | R _{θJA} | 625 | °C/W |

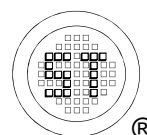
¹⁾ Device mounted on FR-4 substrate PC board, 2oz copper, with minimum recommended pad layout.



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Electrical Characteristics ($T_a = 25^\circ\text{C}$)

| Parameter | Symbol | Min. | Max. | Unit |
|---|-------------|------|------|---------------|
| Reverse Breakdown Voltage at $I_R = 100\ \mu\text{A}$ | $V_{(BR)R}$ | 80 | - | V |
| Forward Voltage at $I_F = 100\ \text{mA}$ | V_F | - | 1.2 | V |
| Reverse Current at $V_R = 80\ \text{V}$ | I_R | - | 0.1 | μA |
| Capacitance between Terminals at $V_R = 0.5\ \text{V}$, $f = 1\ \text{MHz}$ | C_T | - | 3 | pF |
| Reverse Recovery Time at $I_F = 10\ \text{mA}$, $I_{rr} = 0.1 \times I_R$, $V_R = 6\ \text{V}$, $R_L = 100\ \Omega$ | t_{rr} | - | 4 | ns |



Electrical Characteristics Curves

Fig 1. Power Derating Curve

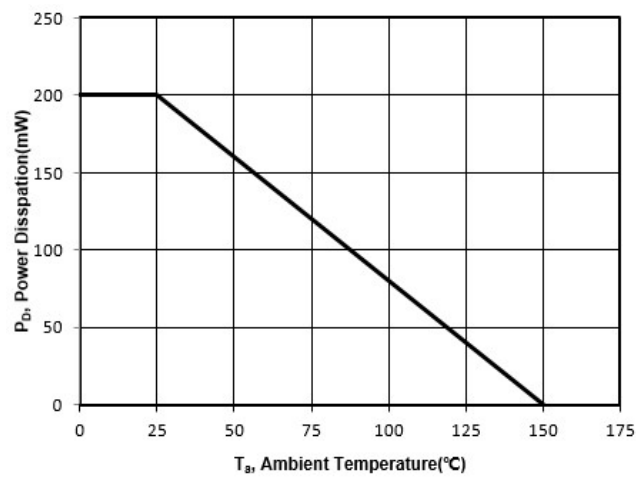


Fig 2. Total Capacitance vs. Reverse Voltage

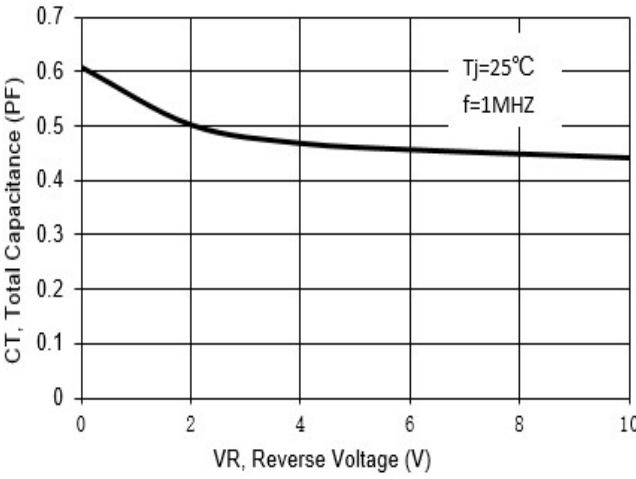


Fig 3. Reverse Current vs. Reverse Voltage

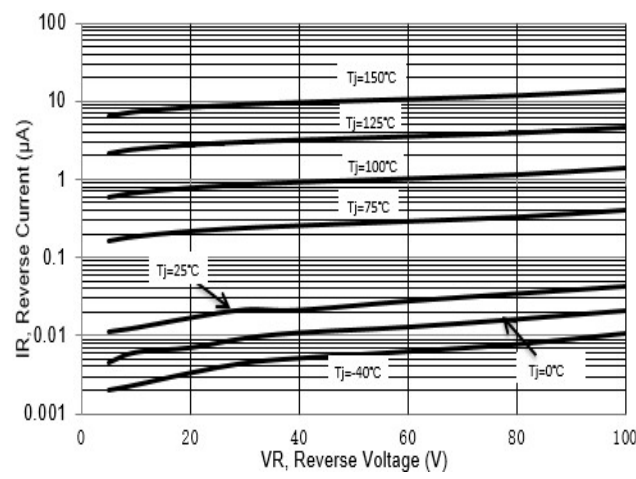
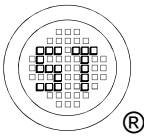
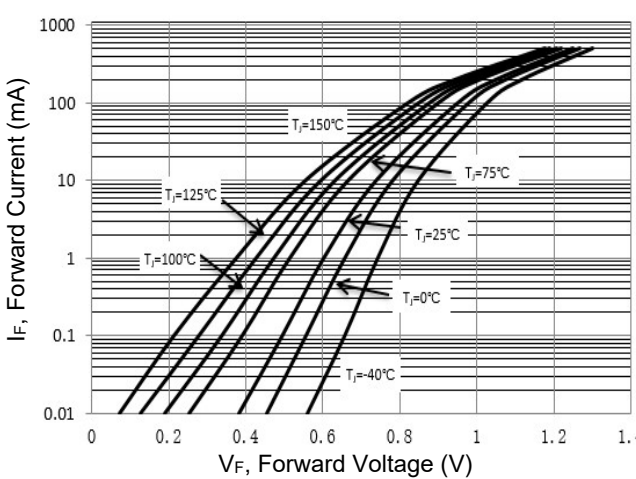


Fig 4. Forward Characteristics

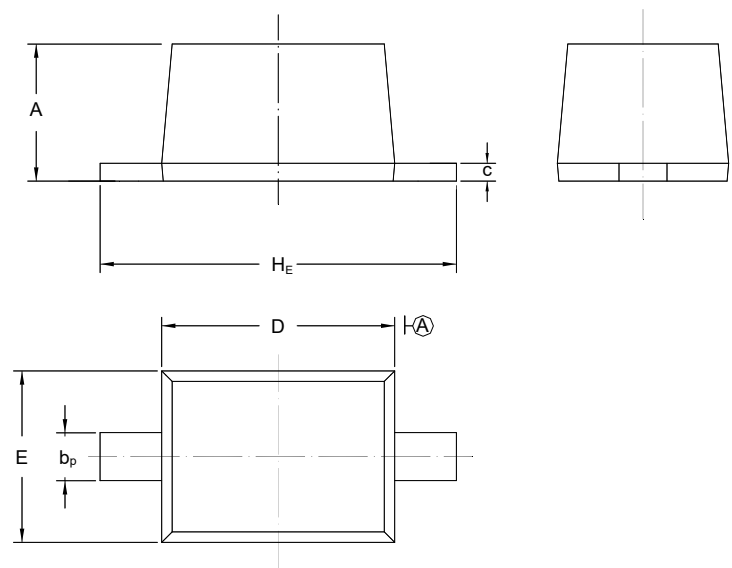


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PACKAGE OUTLINE

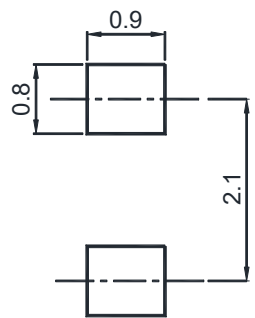
Plastic surface mounted package; 2 leads

SOD-323



| UNIT | A | b _p | C | D | E | H _E |
|------|--------------|----------------|--------------|--------------|--------------|----------------|
| mm | 1.10 0.80 | 0.40 0.25 | 0.15 0.10 | 1.80 1.60 | 1.35 1.15 | 2.80 2.30 |

Recommended Soldering Footprint



Packing information

| Package | Tape Width (mm) | Pitch | | Reel Size | | Per Reel Packing Quantity |
|---------|-----------------|---------|---------------|-----------|------|---------------------------|
| | | mm | inch | mm | inch | |
| SOD-323 | 8 | 4 ± 0.1 | 0.157 ± 0.004 | 178 | 7 | 3,000 |

Marking information

" W2 " = Part No.
" III " = Cathode line
Font type: Arial



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