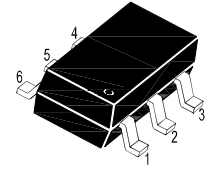
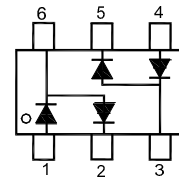


■ Silicon Epitaxial Planar Switching Diode



1. A1 2. C1 3. AC2  
4. A2 5. C2 6. AC1

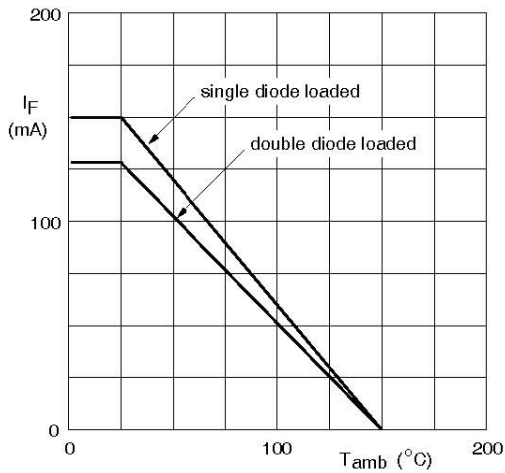
■ Simplified outline(SOT-363)

■ Absolute Maximum Ratings ( $T_a = 25^\circ\text{C}$ )

| Parameter                                   | Symbol          | Value         | Unit                      |
|---|-----------------|---------------|---------------------------|
| Repetitive Peak Reverse Voltage             | $V_{RRM}$       | 85            | V                         |
| Reverse Voltage                             | $V_R$           | 75            | V                         |
| Continuous Forward Current                  | $I_F$           | 150           | mA                        |
| Single Diode Load<br>Double Diode Load      |                 | 130           |                           |
| Repetitive Peak Forward Current             | $I_{FRM}$       | 500           | mA                        |
| Non-Repetitive Peak Forward Surge Current   | $I_{FSM}$       | 4             | A                         |
| at $t = 1 \mu\text{s}$                      |                 | 1             |                           |
| at $t = 1 \text{ms}$<br>at $t = 1 \text{s}$ |                 | 0.5           |                           |
| Total Power Dissipation                     | $P_{tot}$       | 200           | mW                        |
| Thermal Resistance from Junction to Ambient | $R_{\theta JA}$ | 625           | $^\circ\text{C}/\text{W}$ |
| Junction Temperature                        | $T_j$           | 150           | $^\circ\text{C}$          |
| Storage Temperature Range                   | $T_{stg}$       | - 55 to + 150 | $^\circ\text{C}$          |

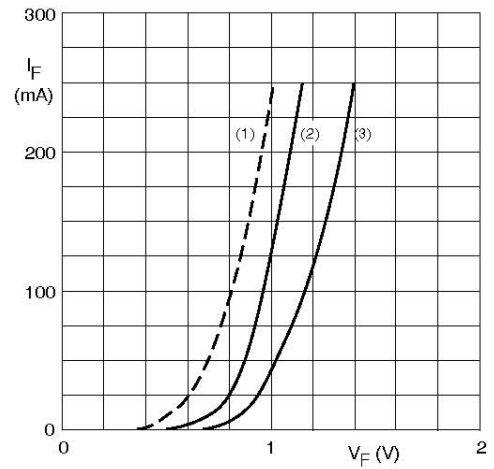
■ Characteristics at  $T_a = 25^\circ\text{C}$

| Parameter   | Symbol   | Max.  | Unit          |
|---|----------|-------|---------------|
| Forward Voltage<br>at $I_F = 1 \text{mA}$<br>at $I_F = 10 \text{mA}$<br>at $I_F = 50 \text{mA}$<br>at $I_F = 150 \text{mA}$   | $V_F$    | 0.715 | V             |
|   |          | 0.855 |               |
|   |          | 1     |               |
|   |          | 1.25  |               |
| Reverse Current<br>at $V_R = 25 \text{V}$<br>at $V_R = 75 \text{V}$<br>at $V_R = 25 \text{V}, T_j = 150^\circ\text{C}$<br>at $V_R = 75 \text{V}, T_j = 150^\circ\text{C}$ | $I_R$    | 30    | nA            |
|   |          | 1     | $\mu\text{A}$ |
|   |          | 30    | $\mu\text{A}$ |
|   |          | 50    | $\mu\text{A}$ |
| Diode Capacitance<br>at $V_R = 0, f = 1 \text{MHz}$   | $C_d$    | 1.5   | pF            |
| Reverse Recovery Time<br>at $I_F = I_R = 10 \text{mA}, I_{tr} = 0.1 \times I_R, R_L = 100 \Omega$   | $t_{tr}$ | 4     | ns            |



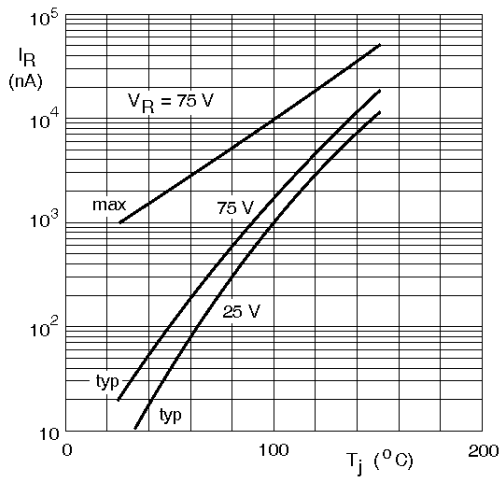
Device mounted on an FR4 printed-circuit board.

Maximum permissible continuous forward current as a function of ambient temperature.

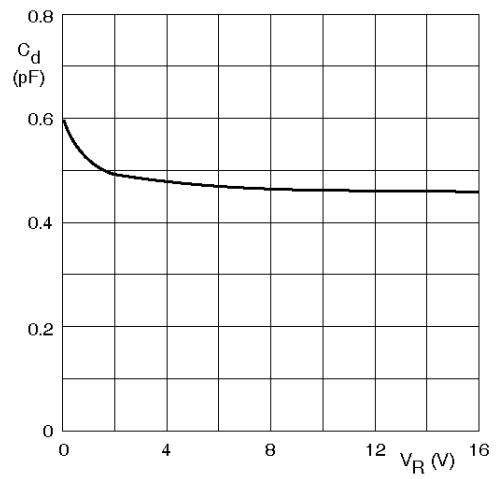


- (1)  $T_j = 150^\circ\text{C}$ ; typical values.
- (2)  $T_j = 25^\circ\text{C}$ ; typical values.
- (3)  $T_j = 25^\circ\text{C}$ ; maximum values.

Forward current as a function of forward voltage.



Reverse current as a function of junction temperature.

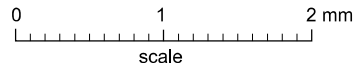
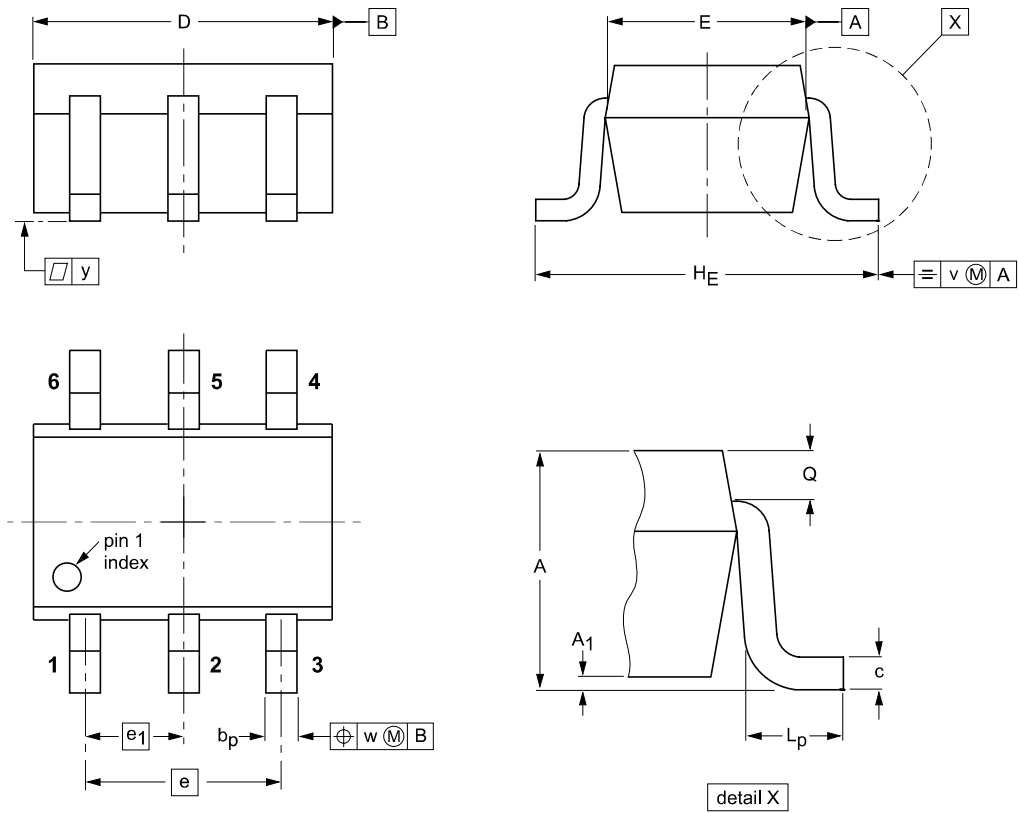


$f = 1\text{ MHz}$ ;  $T_j = 25^\circ\text{C}$ .

Diode capacitance as a function of reverse voltage; typical values.

Package Outline

SOT-363



DIMENSIONS (mm are the original dimensions)

| UNIT | A          | A <sub>1</sub><br>max | b <sub>p</sub> | c            | D          | E            | e   | e <sub>1</sub> | H <sub>E</sub> | L <sub>p</sub> | Q            | v   | w   | y   |
|------|------------|-----------------------|----------------|--------------|------------|--------------|-----|----------------|----------------|----------------|--------------|-----|-----|-----|
| mm   | 1.1<br>0.8 | 0.1                   | 0.30<br>0.20   | 0.25<br>0.10 | 2.2<br>1.8 | 1.35<br>1.15 | 1.3 | 0.65           | 2.2<br>2.0     | 0.45<br>0.15   | 0.25<br>0.15 | 0.2 | 0.2 | 0.1 |

Summary of Packing Options

| Package | Package Description | Packing Quantity | Industry Standard |
|---------|---------------------|------------------|-------------------|
| SOT-363 | Tape/Reel, 7" reel  | 3000             | EIA-481-1         |