

TOSHIBA Diode Silicon Epitaxial Planar Type

1SS337

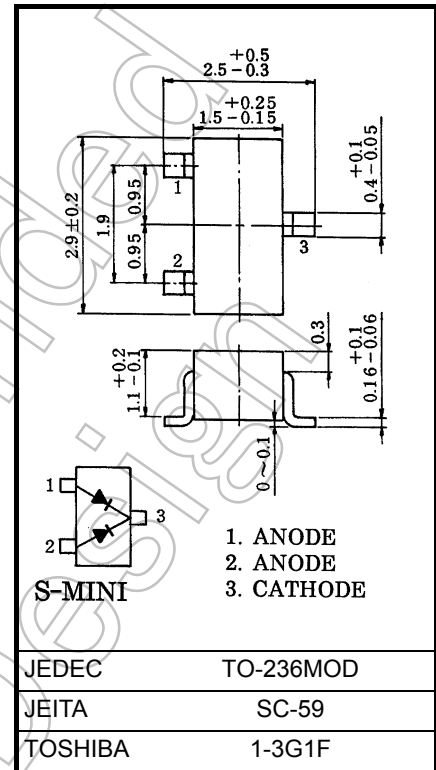
Ultra High-Speed Switching Applications

Unit: mm

- Small package: SC-59
- Low forward voltage: $V_F(3) = 0.88\text{ V}$ (typ.)
- Fast reverse recovery time: $t_{rr} = 6\text{ ns}$ (typ.)
- Small total capacitance: $C_T = 1.6\text{ pF}$ (typ.)

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

| Characteristics | Symbol | Rating | Unit |
|--------------------------------|-----------|------------|------------------|
| Maximum (peak) reverse voltage | V_{RM} | 85 | V |
| Reverse voltage | V_R | 80 | V |
| Maximum (peak) forward current | I_{FM} | 600 * | mA |
| Average forward current | I_O | 200 * | mA |
| Surge current (10 ms) | I_{FSM} | 6 * | A |
| Power dissipation | P | 150 | mW |
| Junction temperature | T_j | 150 | $^\circ\text{C}$ |
| Storage temperature | T_{stg} | -55 to 150 | $^\circ\text{C}$ |



Weight: 0.012 g (typ.)

Note: Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in temperature, etc.) may cause this product to decrease in the reliability significantly even if the operating conditions (i.e. operating temperature/current/voltage, etc.) are within the absolute maximum ratings.

Please design the appropriate reliability upon reviewing the Toshiba Semiconductor Reliability Handbook ("Handling Precautions", "Derating Concept and Methods") and individual reliability data (i.e. reliability test report and estimated failure rate, etc).

*: Unit rating. Total rating = unit rating × 1.5

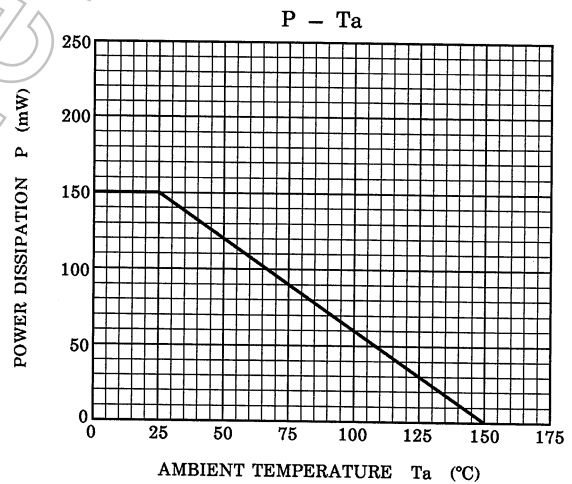
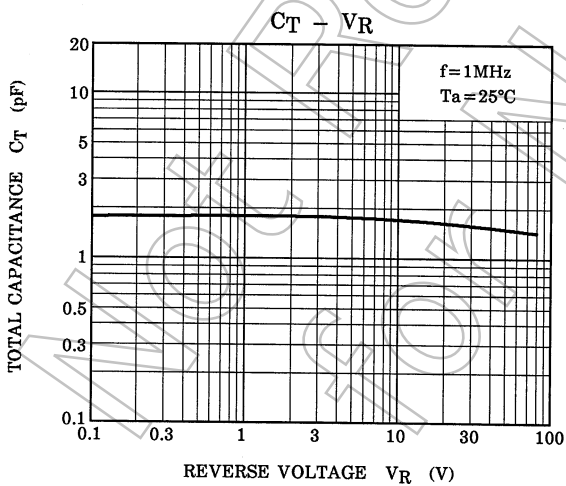
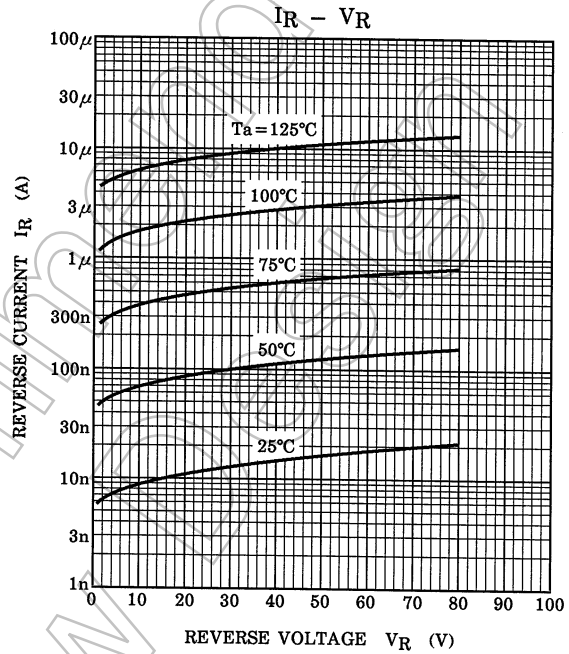
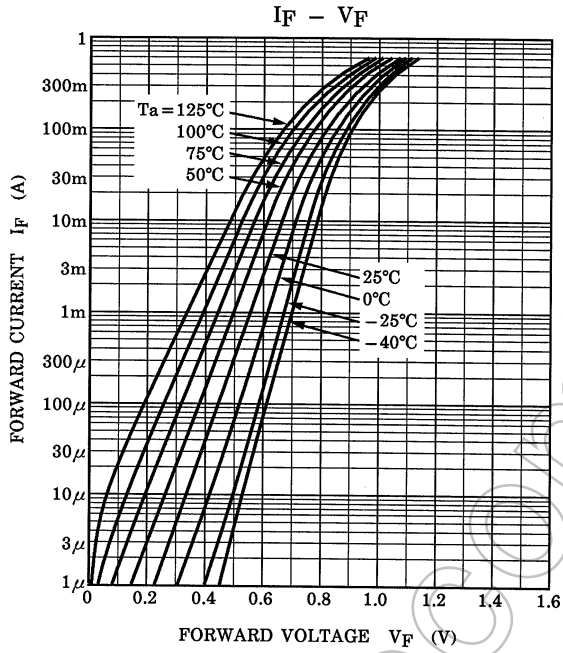
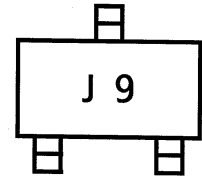
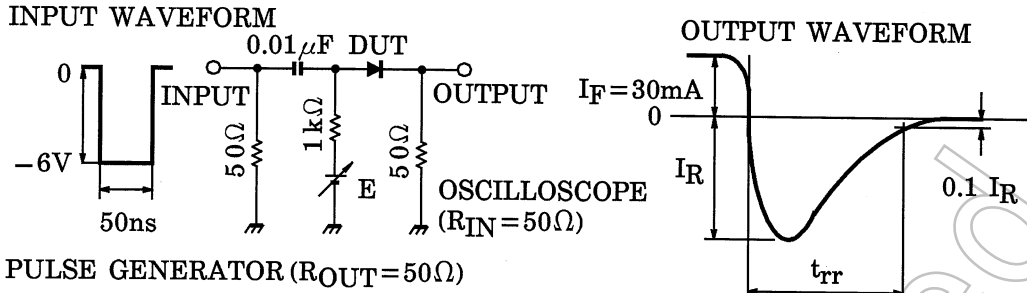
Electrical Characteristics ($T_a = 25^\circ\text{C}$)

| Characteristics | Symbol | Test Circuit | Test Condition | Min | Typ. | Max | Unit |
|-----------------------|----------|--------------|------------------------------------|-----|------|------|---------------|
| Forward voltage | $V_F(1)$ | — | $I_F = 10\text{ mA}$ | — | 0.66 | — | V |
| | $V_F(2)$ | — | $I_F = 100\text{ mA}$ | — | 0.80 | — | |
| | $V_F(3)$ | — | $I_F = 200\text{ mA}$ | — | 0.88 | 1.20 | |
| Reverse current | $I_R(1)$ | — | $V_R = 30\text{ V}$ | — | — | 0.25 | μA |
| | $I_R(2)$ | — | $V_R = 80\text{ V}$ | — | — | 0.50 | |
| Total capacitance | C_T | — | $V_R = 0, f = 1\text{ MHz}$ | — | 1.6 | — | pF |
| Reverse recovery time | t_{rr} | — | $I_F = 30\text{ mA}, \text{Fig.1}$ | — | 6 | 20 | ns |

Start of commercial production
1989-11

Fig.1 Reverse Recovery Time (t_{rr}) Test Circuit

Marking



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