

TOSHIBA Diode Silicon Epitaxial Schottky Barrier Type

1SS321

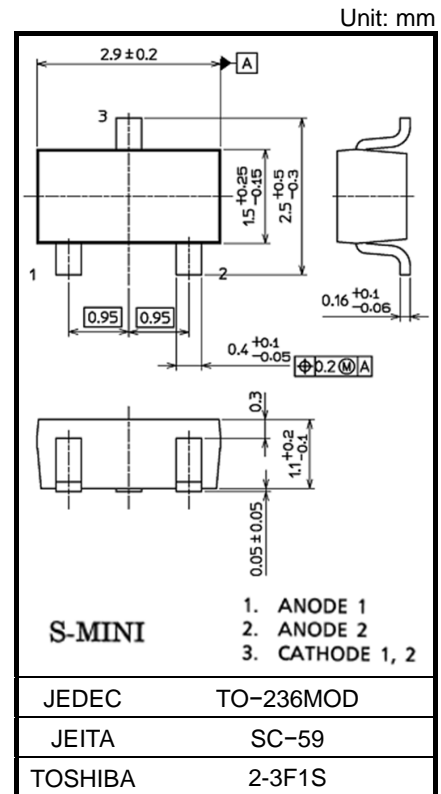
Low-Voltage High-Speed Switching

- AEC-Q101 Qualified (Note1)
- Low forward voltage: $V_F(2) = 0.42 \text{ V (typ.)}$
- Low reverse current: $I_R = 500 \text{ nA (max)}$
- Small package: SC-59

Note1: For detail information, please contact to our sales.

Absolute Maximum Ratings (Ta = 25°C)

| Characteristics | Symbol | Rating | Unit |
|--------------------------------|-----------|------------|------|
| Maximum (peak) reverse voltage | V_{RM} | 12 | V |
| Reverse voltage | V_R | 10 | V |
| Maximum (peak) forward current | I_{FM} | 150* | mA |
| Average forward current | I_O | 50* | mA |
| Surge current (10 ms) | I_{FSM} | 1000* | mA |
| Power dissipation | P | 150 | mW |
| Junction temperature | T_j | 125 | °C |
| Storage temperature | T_{stg} | -55 to 125 | °C |



Weight: 12 mg (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.

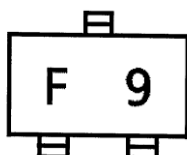
Please design the appropriate reliability upon reviewing the Toshiba Semiconductor Reliability Handbook ("Handling Precautions"/"Derating Concept and Methods") and individual reliability data (i.e. reliability test report and estimated failure rate, etc).

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

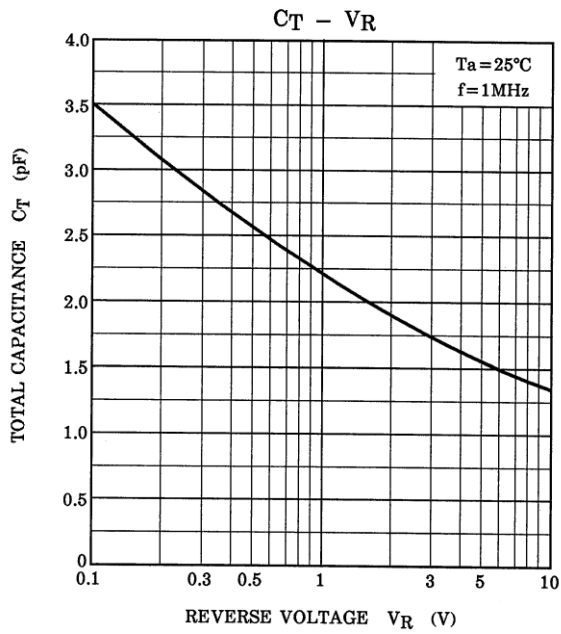
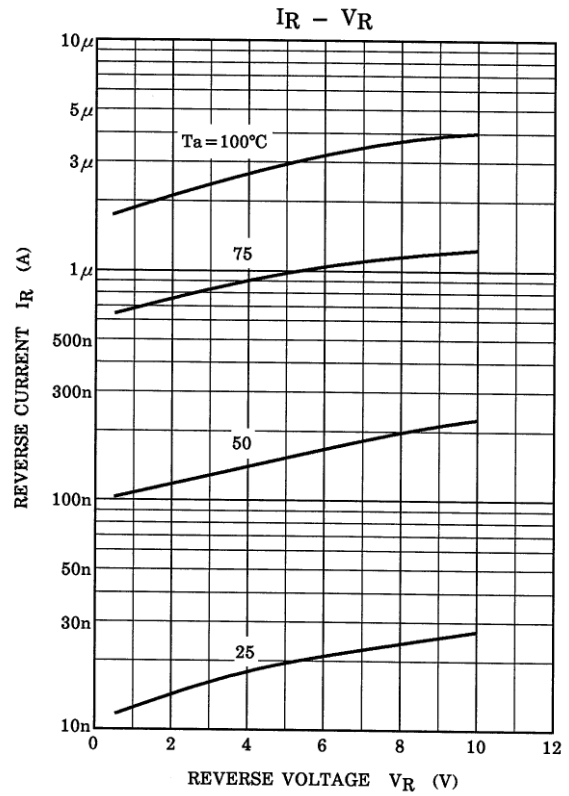
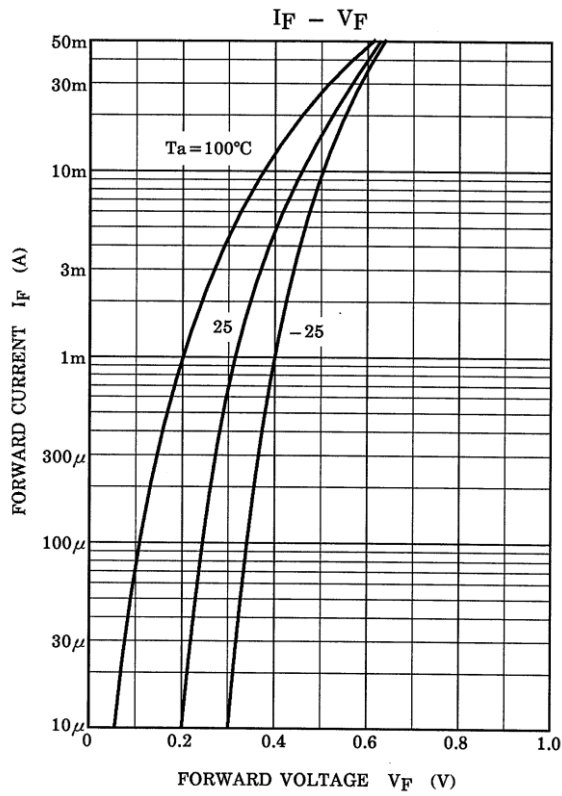
Electrical Characteristics (Ta = 25°C)

| Characteristics | Symbol | Test Condition | Min | Typ. | Max | Unit |
|-------------------|----------|--|-----|------|------|------|
| Forward voltage | $V_F(1)$ | $I_F = 1 \text{ mA}$ | — | 0.32 | — | V |
| | $V_F(2)$ | $I_F = 10 \text{ mA}$ | — | 0.42 | — | |
| | $V_F(3)$ | $I_F = 50 \text{ mA}$ | — | 0.63 | 1.00 | |
| Reverse current | I_R | $V_R = 10 \text{ V}$ | — | — | 500 | nA |
| Total capacitance | C_T | $V_R = 0 \text{ V}, f = 1 \text{ MHz}$ | — | 3.2 | 4.5 | pF |

Marking



Start of commercial production
1987-10



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