

TOSHIBA Diode Silicon Epitaxial Schottky Barrier Type

## 1SS319

Low Voltage High Speed Switching

Unit: mm

- Small package : SC-61
- Low forward voltage :  $V_F(3) = 0.54V$  (typ.)
- Low reverse current :  $I_R = 5\mu A$  (max)

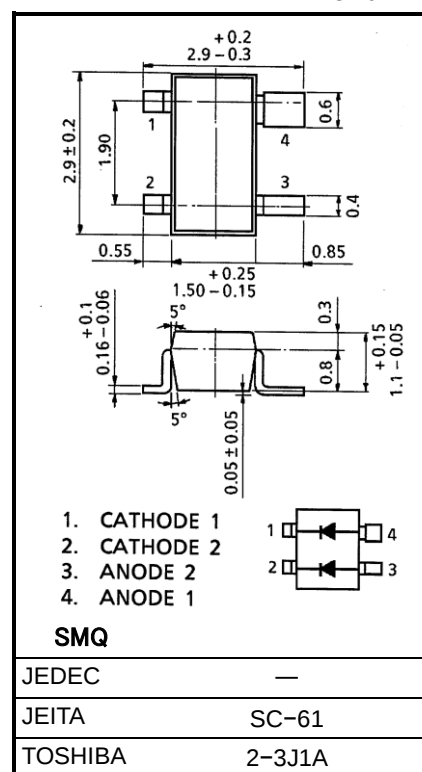
### Absolute Maximum Ratings ( $T_a = 25^\circ C$ )

| Characteristic                 | Symbol    | Rating     | Unit       |
|--------------------------------|-----------|------------|------------|
| Maximum (peak) reverse voltage | $V_{RM}$  | 45         | V          |
| Reverse voltage                | $V_R$     | 40         | V          |
| Maximum (peak) forward current | $I_{FM}$  | 300 (*)    | mA         |
| Average forward current        | $I_O$     | 100 (*)    | mA         |
| Power dissipation              | P         | 150 (*)    | mW         |
| Junction temperature           | $T_j$     | 125        | $^\circ C$ |
| Storage temperature            | $T_{stg}$ | -55 to 125 | $^\circ C$ |

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  $\times$  1.5.

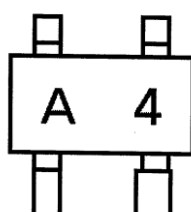


Weight: 0.013 g (typ.)

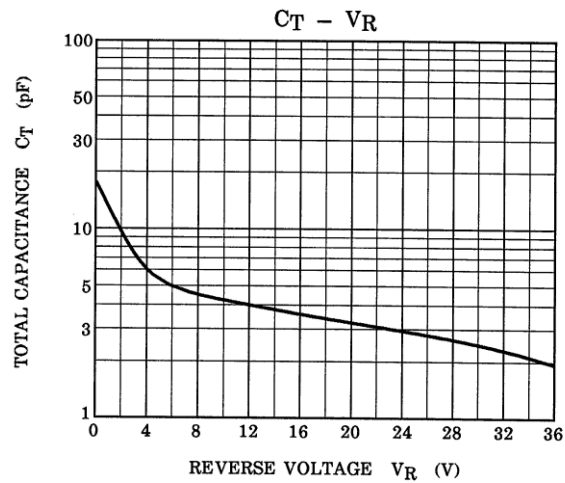
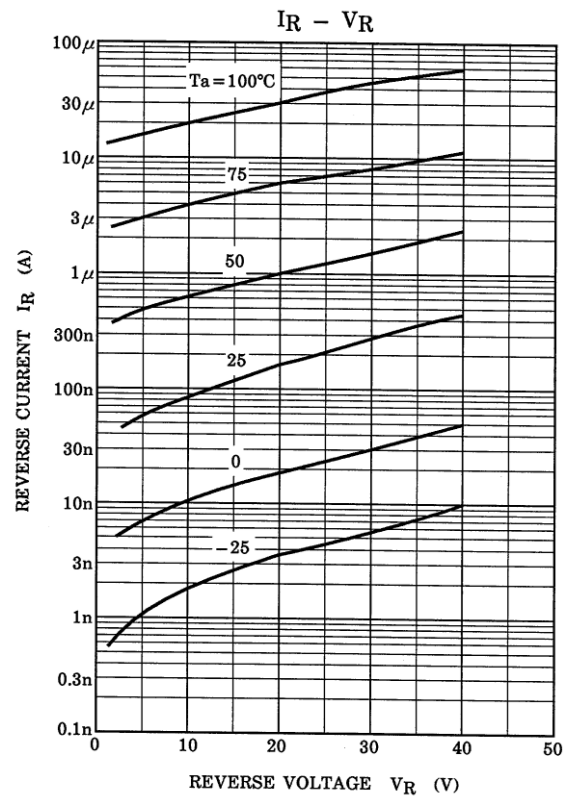
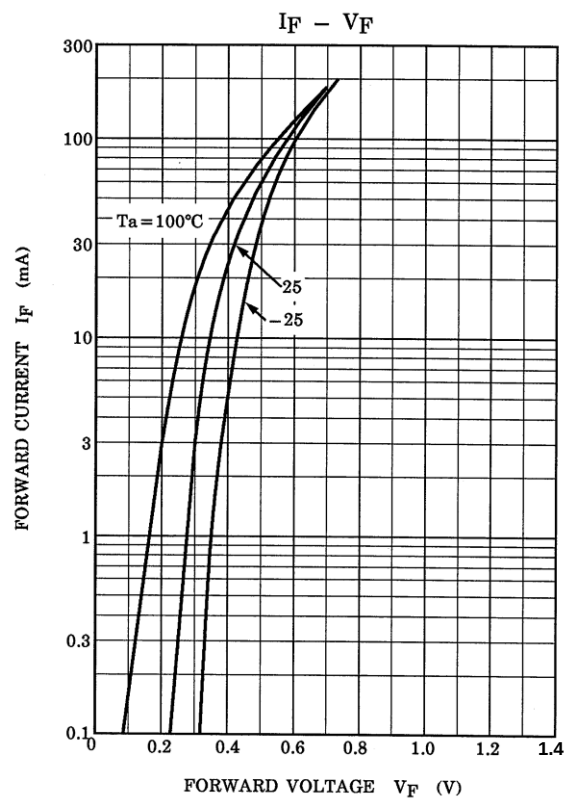
### Electrical Characteristics ( $T_a = 25^\circ C$ )

| Characteristic    | Symbol   | Test Condition      | Min | Typ. | Max  | Unit    |
|-------------------|----------|---------------------|-----|------|------|---------|
| Forward voltage   | $V_F(1)$ | $I_F = 1mA$         | —   | 0.28 | —    | V       |
|                   | $V_F(2)$ | $I_F = 10mA$        | —   | 0.36 | —    |         |
|                   | $V_F(3)$ | $I_F = 100mA$       | —   | 0.54 | 0.60 |         |
| Reverse current   | $I_R$    | $V_R = 40V$         | —   | —    | 5    | $\mu A$ |
| Total capacitance | $C_T$    | $V_R = 0, f = 1MHz$ | —   | 18   | 25   | pF      |

### Marking



Start of commercial production  
1987-06



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