TOSHIBA Diode Silicon Epitaxial Planar Type

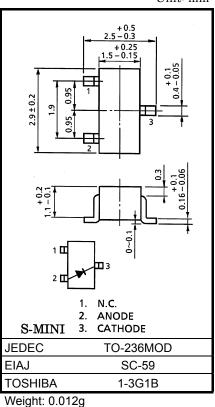
1SS196

Ultra High Speed Switching Application

- Small package : SC-59
- Low forward voltage $: V_{F(3)} = 0.9V (typ.)$
- Fast reverse recovery time: t_{rr} = 1.6ns (typ.)
- Small total capacitance $: C_T = 0.9 pF (typ.)$

Absolute Maximum Ratings (Ta = 25°C)

| Characteristic | Symbol | Rating | Unit | |
|--------------------------------|------------------|---------|------|--|
| Maximum (peak) reverse voltage | V _{RM} | 85 | V | |
| Reverse voltage | V _R | 80 | V | |
| Maximum (peak) forward current | I _{FM} | 300 | mA | |
| Average forward current | Ι _Ο | 100 | mA | |
| Surge current (10ms) | I _{FSM} | 2 | А | |
| Power dissipation | Р | 150 | mW | |
| Junction temperature | Tj | 125 | °C | |
| Storage temperature range | T _{stg} | -55~125 | °C | |



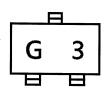
Note: Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in

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).

Electrical Characteristics (Ta = 25°C)

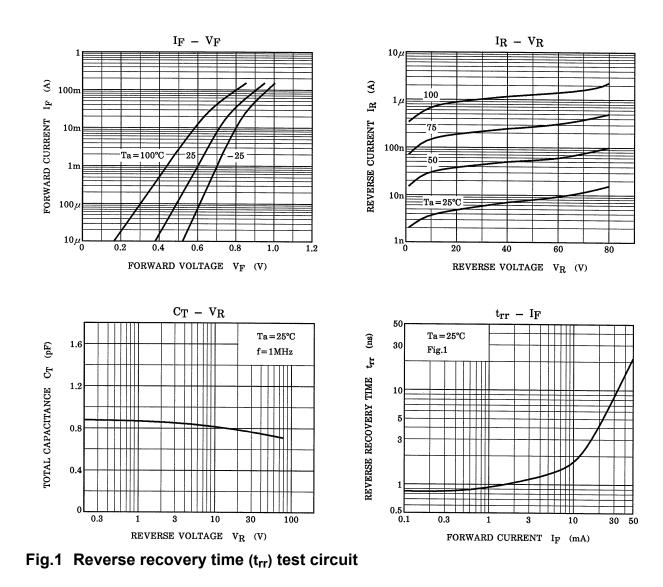
| Characteristic | Symbol | Test Circuit | Test Condition | Min | Тур. | Max | Unit | |
|-----------------------|--------------------|-----------------|-------------------------------|-----|------|------|------|--|
| Forward voltage | V _{F (1)} | — | I _F = 1mA | | 0.60 | | V | |
| | V _{F (2)} | — | I _F = 10mA | - | 0.72 | | | |
| | V _{F (3)} | _ | I _F = 100mA | _ | 0.90 | 1.20 | | |
| Reverse current | I _{R (1)} | _ | V _R = 30V | _ | — | 0.1 | μA | |
| | I _{R (2)} | _ | V _R = 80V | _ | — | 0.5 | μΑ | |
| Total capacitance | CT | _ | V _R = 0, f = 1MHz | _ | 0.9 | 3.0 | pF | |
| Reverse recovery time | trr | _ | I _F = 10mA (Fig.1) | _ | 1.6 | 4.0 | ns | |

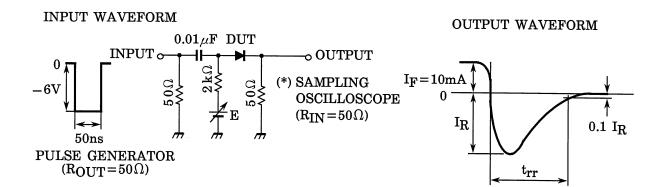
Marking



Unit: mm

TOSHIBA





2007-11-01

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20070701-EN GENERAL

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