

TOSHIBA DIODE SILICON EPITAXIAL PLANAR TYPE

# 1SS196

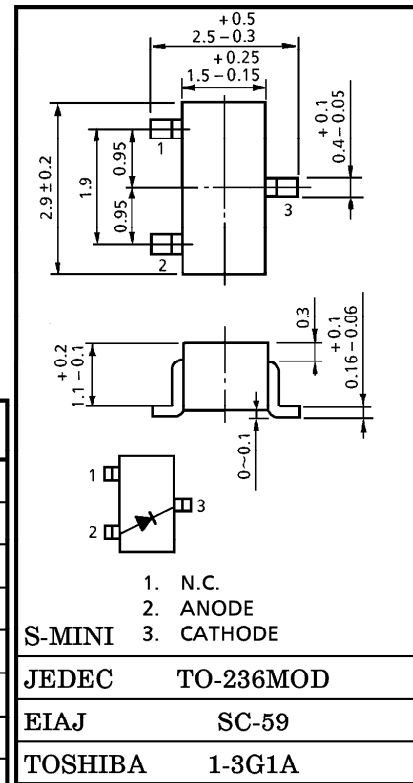
ULTRA HIGH SPEED SWITCHING APPLICATION.

Unit in mm

- 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 :  $C_T = 0.9pF$  (Typ.)

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        | $I_O$     | 100     | mA   |
| Surge Current (10ms)           | $I_{FSM}$ | 2       | A    |
| Power Dissipation              | P         | 150     | mW   |
| Junction Temperature           | $T_j$     | 125     | °C   |
| Storage Temperature Range      | $T_{stg}$ | -55~125 | °C   |

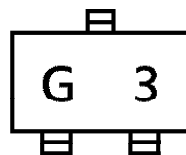


Weight : 0.012g

ELECTRICAL CHARACTERISTICS (Ta = 25°C)

| CHARACTERISTIC        | SYMBOL   | TEST CONDITION       | MIN. | TYP. | 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  | $\mu A$ |
|                       | $I_R(2)$ | $V_R = 80V$          | —    | —    | 0.5  |         |
| Total Capacitance     | $C_T$    | $V_R = 0, f = 1MHz$  | —    | 0.9  | 3.0  | pF      |
| Reverse Recovery Time | $t_{rr}$ | $I_F = 10mA$ (Fig.1) | —    | 1.6  | 4.0  | ns      |

MARKING



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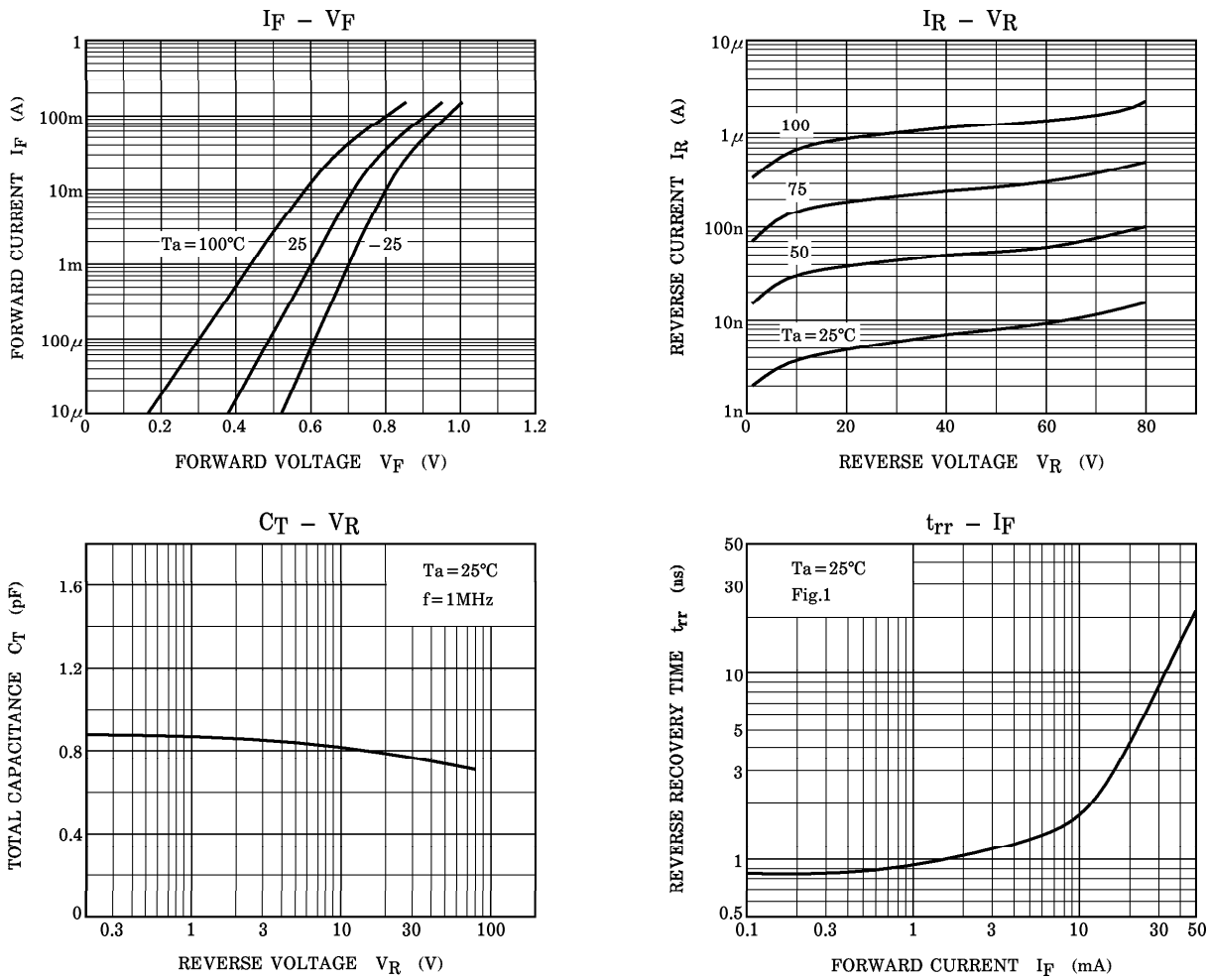
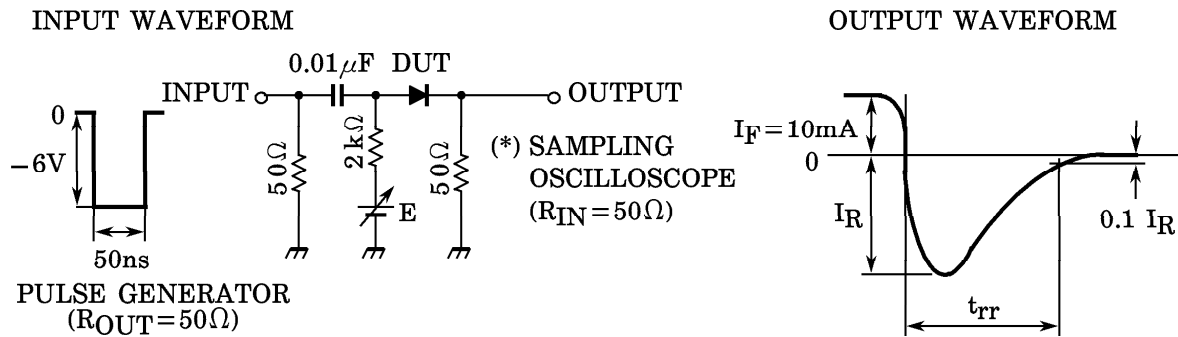


Fig.1 Reverse recovery time ( $t_{rr}$ ) test circuit



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