

1SS301

ULTRA HIGH SPEED SWITCHING APPLICATIONS.

Unit in mm

- Small Package : SC-70
- Low Forward Voltage :  $V_F(3)=0.90V$  (Typ.)
- Fast Reverse Recovery Time :  $t_{rr}=1.6ns$  (Typ.)
- Small Total Capacitance :  $C_T=0.9pF$  (Typ.)

MAXIMUM RATINGS (Ta = 25°C)

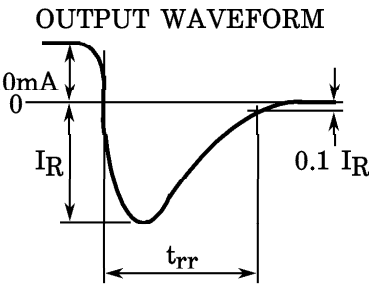
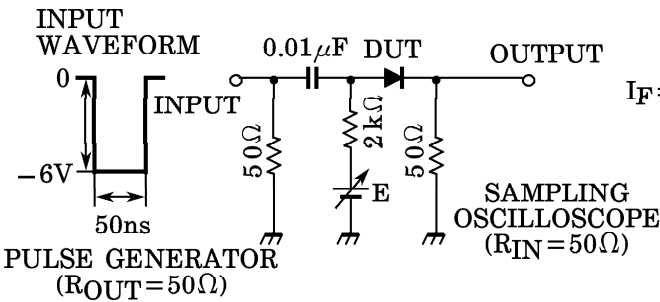
| CHARACTERISTIC                 | SYMBOL    | RATING  | UNIT |
|--------------------------------|-----------|---------|------|
| Maximum (Peak) Reverse Voltage | $V_{RM}$  | 85      | V    |
| Reverse Voltage                | $V_R$     | 80      | V    |
| Maximum (Peak) Forward Current | $I_{FM}$  | 300 (*) | mA   |
| Average Forward Current        | $I_O$     | 100 (*) | mA   |
| Surge Current (10ms)           | $I_{FSM}$ | 2 (*)   | A    |
| Power Dissipation              | P         | 100     | mW   |
| Junction Temperature           | $T_j$     | 125     | °C   |
| Storage Temperature Range      | $T_{stg}$ | -55~125 | °C   |

(\*) Unit Rating. Total Rating=Unit Rating×1.5

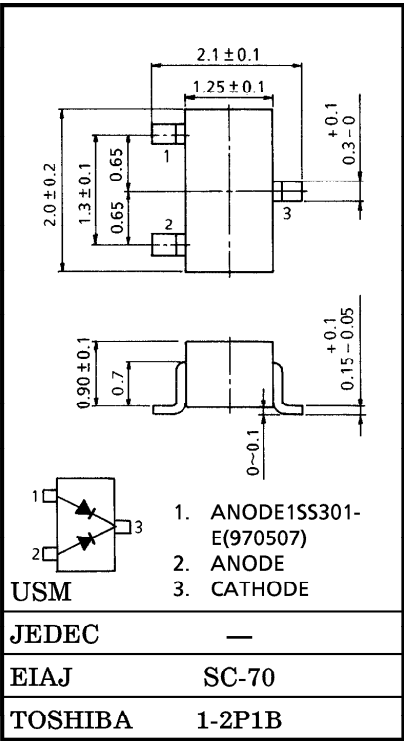
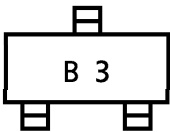
ELECTRICAL CHARACTERISTICS (Ta = 25°C)

| 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      |

Fig.1 REVERSE RECOVERY TIME ( $t_{rr}$ ) TEST CIRCUIT

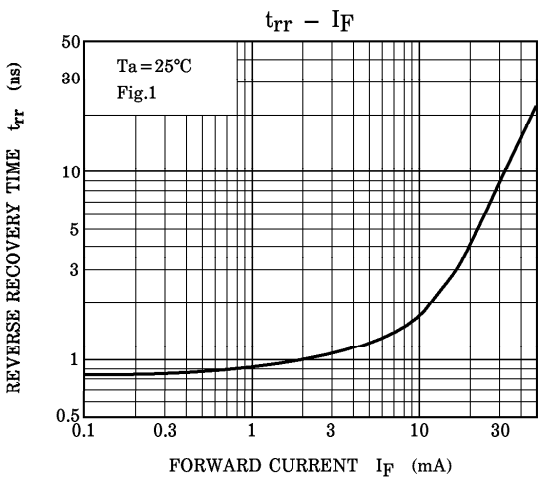
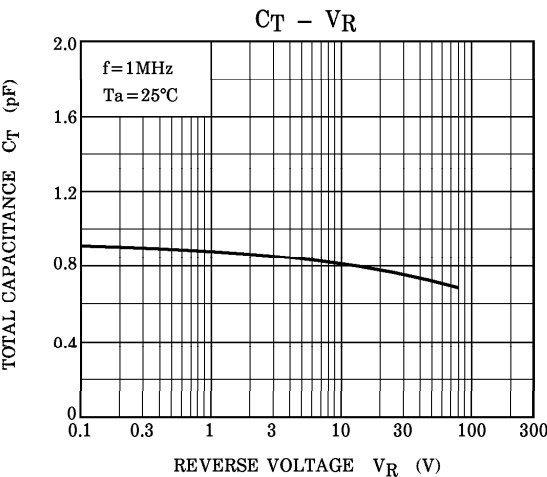
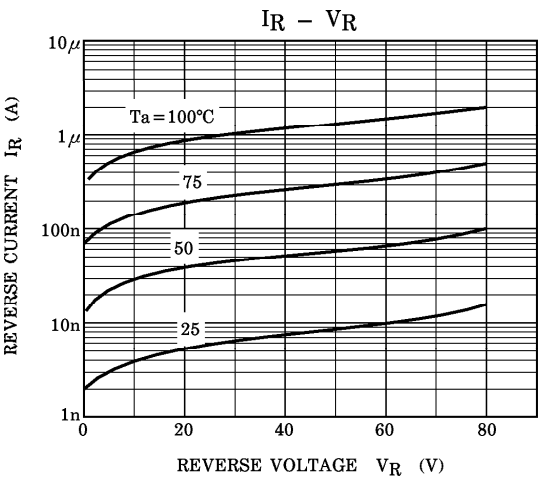
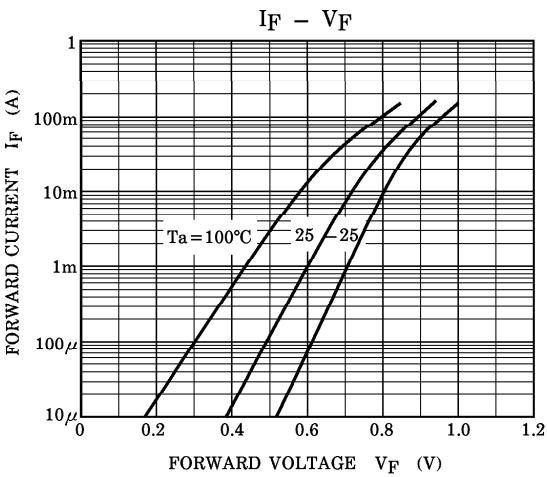


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