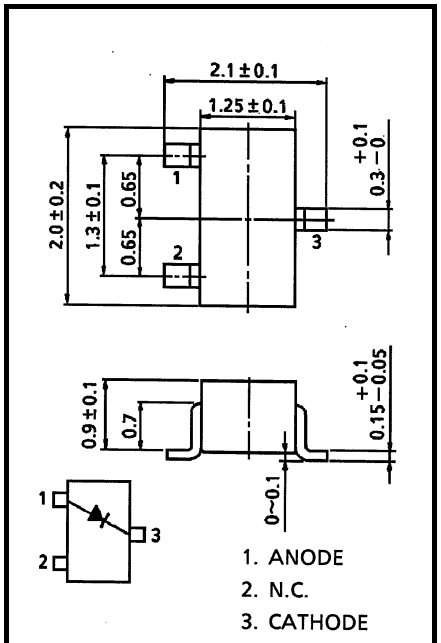
TOSHIBA Diode Silicon Epitaxial Planar Type

# 1SS370

High Voltage, High Speed Switching Applications

- Low forward voltage : $V_{F\ (2)}$ = 0.9V (typ.)
- Fast reverse recovery time : $t_{rr}$ = 60ns (max)
- Small total capacitance : $C_T$ = 1.5pF (typ.)
- Small package : SC-70

Unit: mm




| | |
|---|---|
| JEDEC | — |
| JEITA | SC−70 |
| TOSHIBA | 1-2P1D |

Weight: 0.006g (typ.)

## Absolute Maximum Ratings (Ta = 25°C)

| Characteristic | Symbol | Rating | Unit |
|---|---|---|---|
| Maximum (peak) reverse voltage | $V_{RM}$ | 250 | V |
| Reverse voltage | $V_R$ | 200 | 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 to 125 | °C |

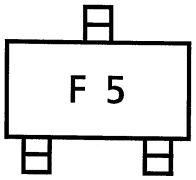
Note: Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in temperature, etc.) may cause this product to decrease in the reliability significantly even if the operating conditions (i.e. operating temperature/current/voltage, etc.) 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).

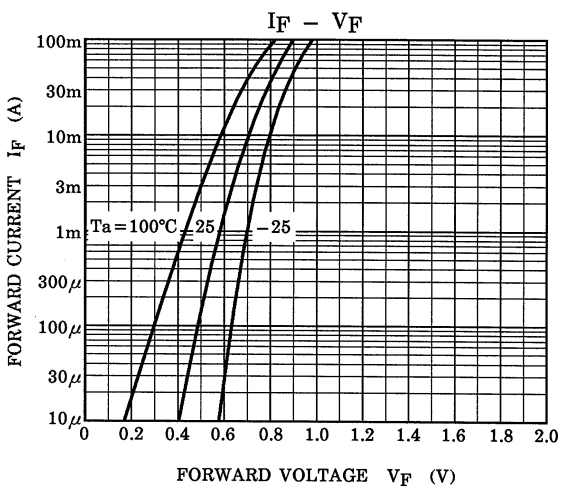
## Electrical Characteristics (Ta = 25°C)

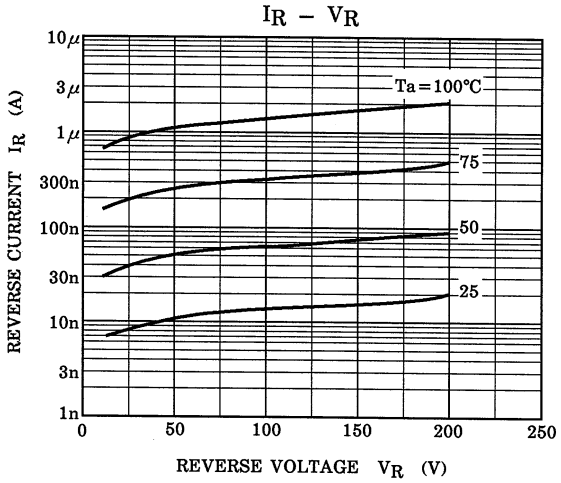
| Characteristic | Symbol | Test Circuit | Test Condition | Min | Typ. | Max | Unit |
|---|---|---|---|---|---|---|---|
| Forward voltage | $V_{F\ (1)}$ | — | $I_F$ = 10mA | — | 0.72 | 1.0 | V |
| | $V_{F\ (2)}$ | — | $I_F$ = 100mA | — | 0.90 | 1.2 | |
| Reverse current | $I_{R\ (1)}$ | — | $V_R$ = 50V | — | — | 0.1 | μA |
| | $I_{R\ (2)}$ | — | $V_R$ = 200V | — | — | 1.0 | |
| Total capacitance | $C_T$ | — | $V_R$ = 0, f = 1MHz | — | 1.5 | 3.0 | pF |
| Reverse recovery time | $t_{rr}$ | — | $I_F$ = 10mA, Fig.1 | — | 10 | 60 | ns |

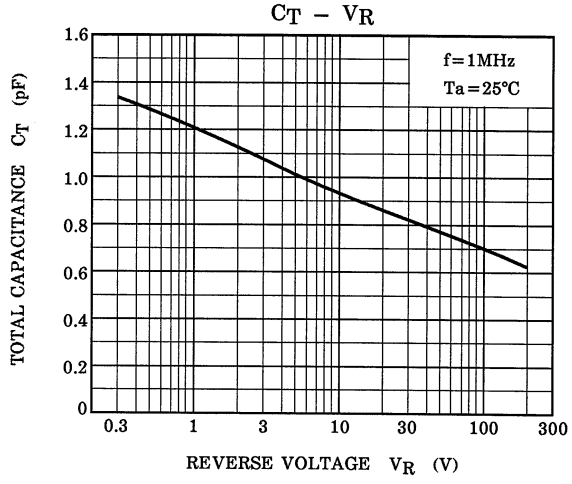
Start of commercial production
1993-09

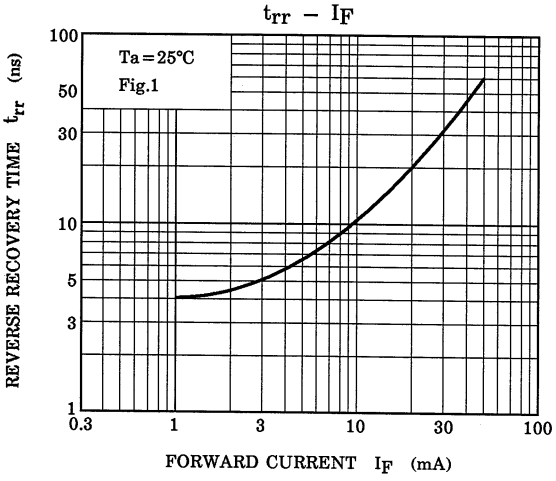
## Marking



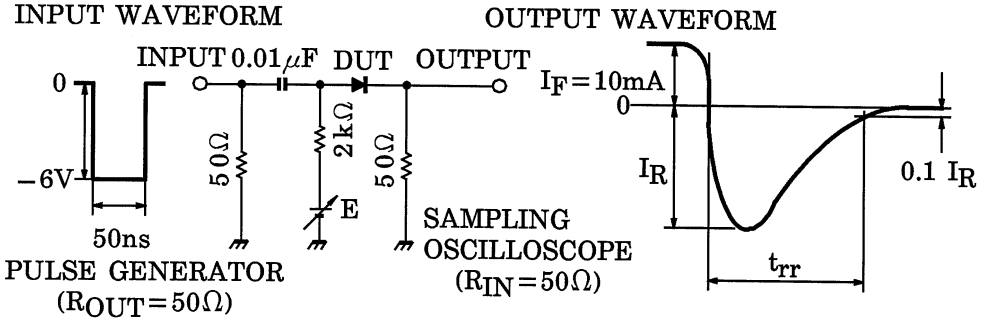




## Fig.1 Reverse Recovery Time ($t_{rr}$) Test Circuit



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