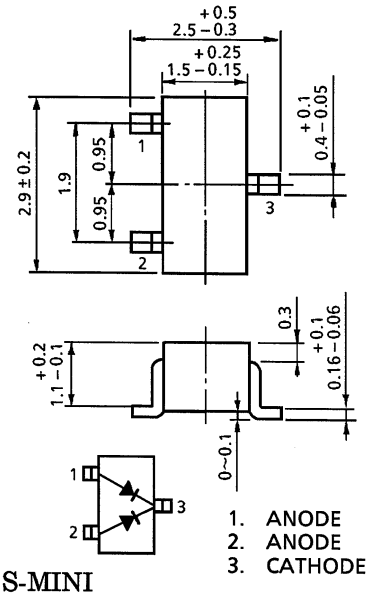
TOSHIBA Diode Silicon Epitaxial Schottky Barrier Type

# 1SS392

High Speed Switching Application

Unit: mm

- Low forward voltage : $V_{F\ (3)}$ = 0.54V (typ.)
- Low reverse current : $I_R$ = 5μA (max)
- Small package : SC-59




| | |
|---|---|
| JEDEC | TO-236MOD |
| EIAJ | SC-59 |
| TOSHIBA | 1-3G1F |

Weight: 0.012g

## Absolute Maximum Ratings (Ta = 25°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 |
| Surge current (10ms) | $I_{FSM}$ | 1 * | A |
| Power dissipation | P | 150 * | mW |
| Junction temperature | $T_j$ | 125 | °C |
| Storage temperature range | $T_{stg}$ | −55~125 | °C |
| Operating temperature range | $T_{opr}$ | −40~100 | °C |

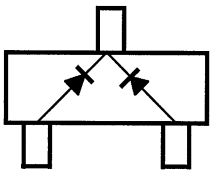
Note: Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in temperature, etc.) may cause this product to decrease in the reliability significantly even if the operating conditions (i.e. operating temperature/current/voltage, etc.) 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 × 1.5

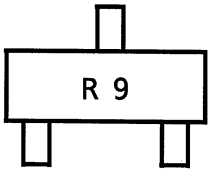
## Electrical Characteristics (Ta = 25°C)

| Characteristic | Symbol | Test Circuit | 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 | μA |
| Total capacitance | $C_T$ | — | $V_R$ = 0, f = 1MHz | — | 18 | 25 | pF |

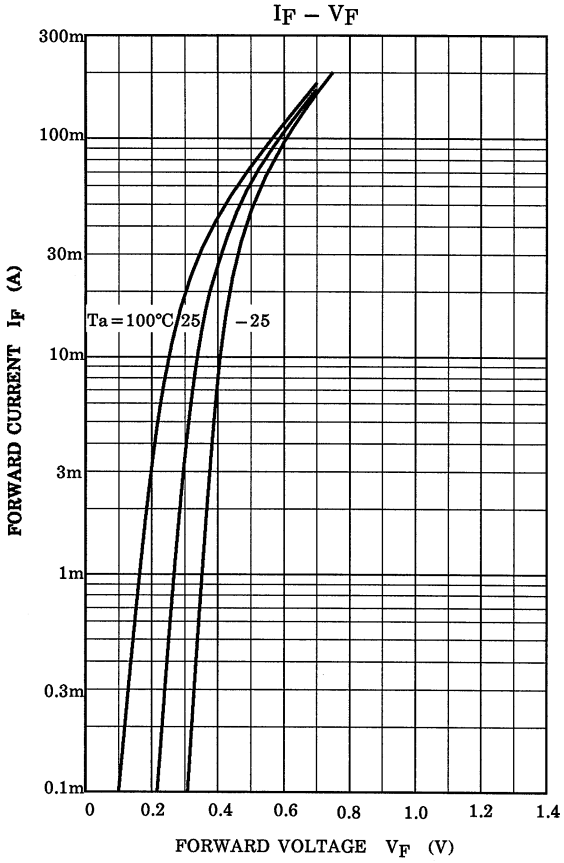
## Equivalent Circuit (Top View)



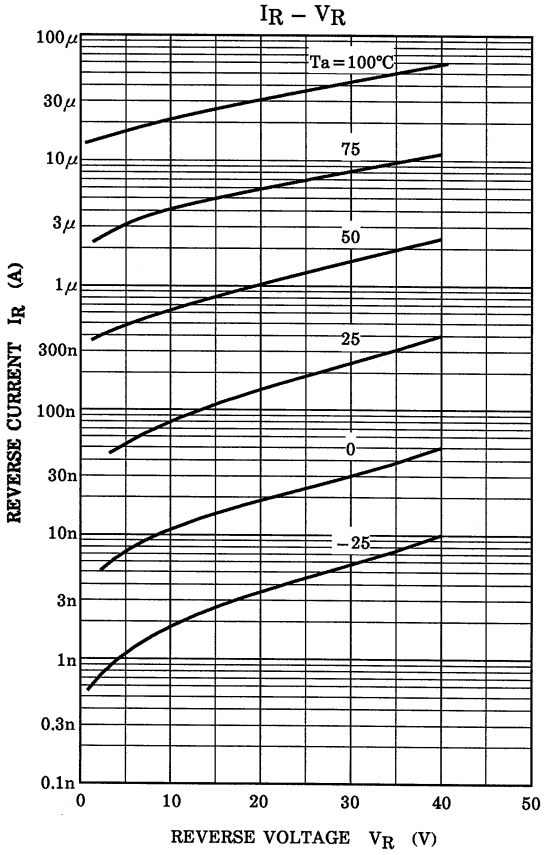
## Marking



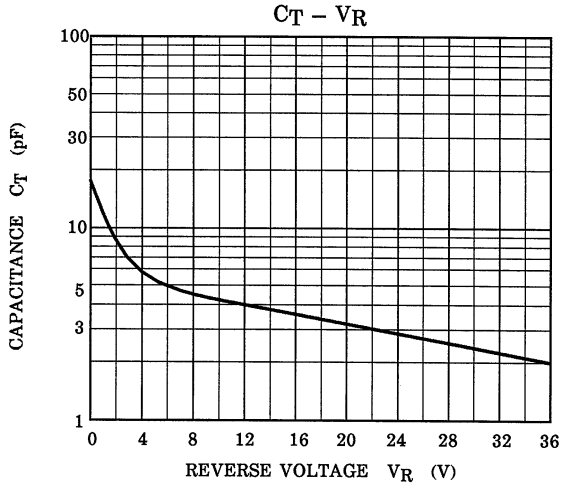

$I_F - V_F$



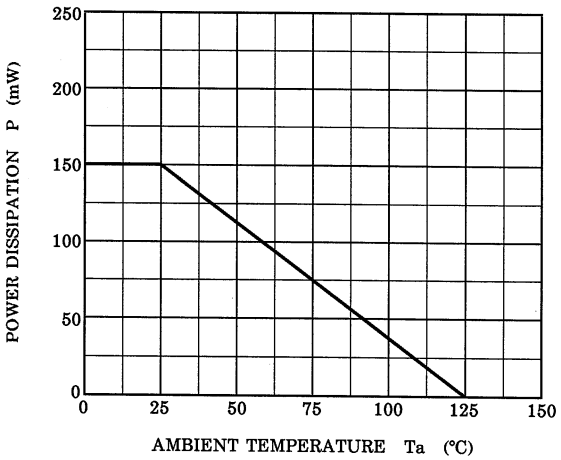

$I_R - V_R$




$C_T - V_R$




P – Ta



## RESTRICTIONS ON PRODUCT USE

20070701-EN GENERAL

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