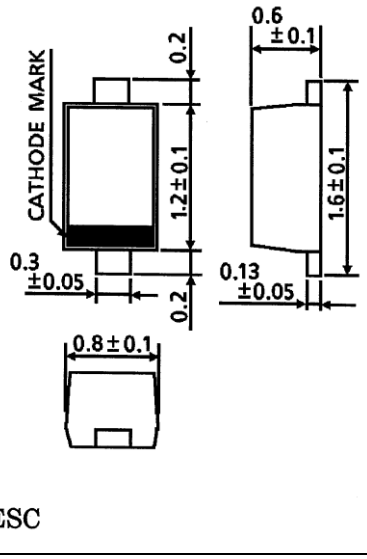
TOSHIBA Diode Silicon Epitaxial Schottky Barrier Type

# 1SS388

High Speed Switching Application

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

Unit: mm




ESC

| | |
|---|---|
| JEDEC | — |
| JEITA | — |
| TOSHIBA | 1-1G1A |

Weight: 1.4mg (typ.)

## 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 to 125 | °C |
| Operating temperature range | $T_{opr}$ | −40 to 100 | °C |

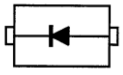
Note: Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in temperature, etc.) may cause this product to decrease in the reliability significantly even if the operating conditions (i.e. operating temperature/current/voltage, etc.)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

* Mounted on a glass epoxy circuit board of 20 × 20 mm, pad dimension of 4 × 4 mm.

## Electrical Characteristics (Ta = 25°C)

| Characteristic | Symbol | 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)

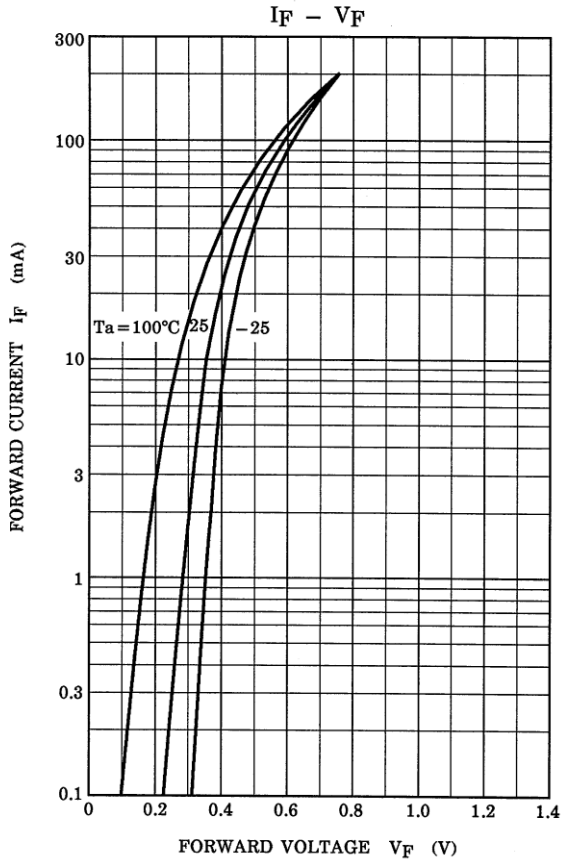


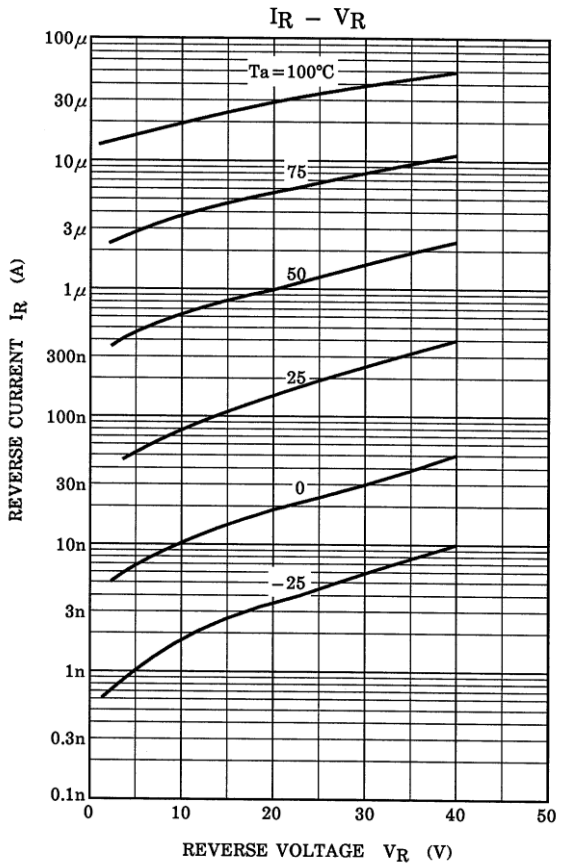
## Marking

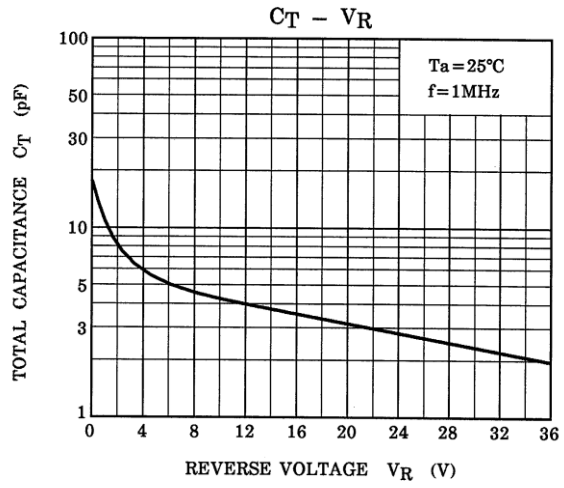


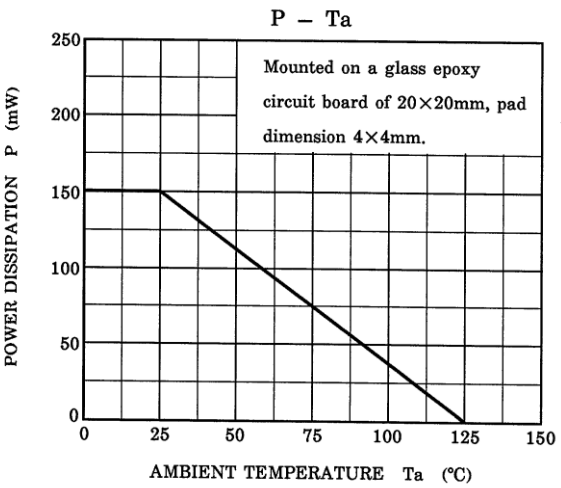

Start of commercial production
1994-11

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