

TOSHIBA Diode Silicon Epitaxial Schottky Barrier Type

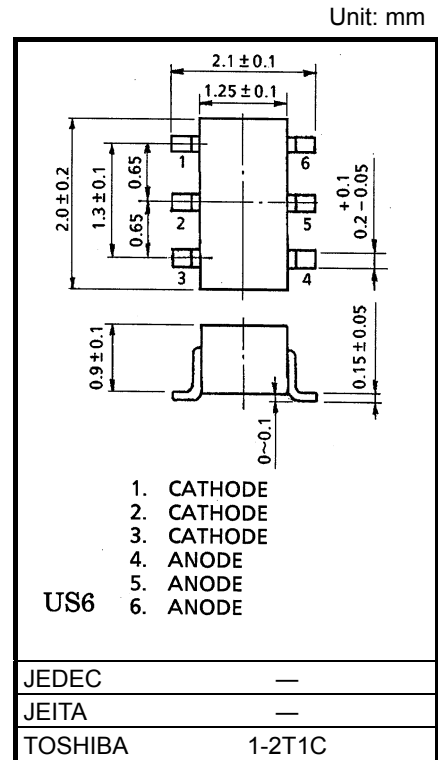
HN2S03FU

High Speed Switching Application

- HN2S03FU is composed of 3 independent diodes.
- Low forward voltage : $V_F(3) = 0.50V$ (typ.)
- Low reverse current : $I_R = 0.5\mu A$ (max)
- Small total capacitance : $C_T = 3.9pF$ (typ.)

Absolute Maximum Ratings (Ta = 25°C)

| Characteristic | Symbol | Rating | Unit |
|--------------------------------|-----------|------------|------|
| Maximum (peak) reverse Voltage | V_{RM} | 25 | V |
| Reverse voltage | V_R | 20 | V |
| Maximum (peak) forward current | I_{FM} | 100 * | mA |
| Average forward current | I_O | 50 * | mA |
| Surge current (10ms) | I_{FSM} | 1 * | A |
| Power dissipation | P | 200 ** | mW |
| Junction temperature | T_j | 125 | °C |
| Storage temperature range | T_{stg} | -55 to 125 | °C |
| Operating temperature range | T_{opr} | -40 to 110 | °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).

* : This is absolute maximum rating of single diode (Q1 or Q2 or Q3).
In the case of using 2 or 3 diodes, the absolute maximum ratings per diodes is 75 % of the single diode one.

** :Total rating

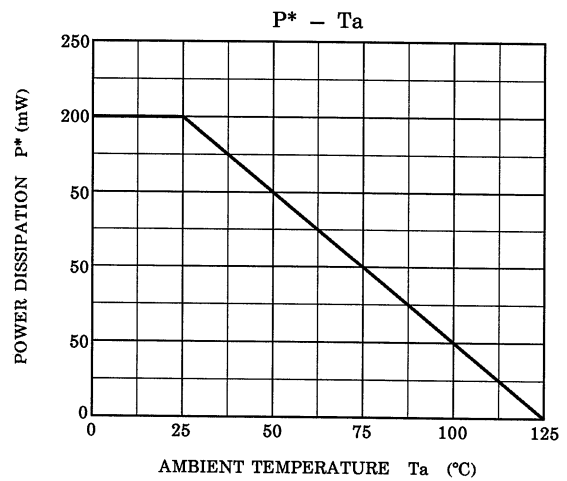
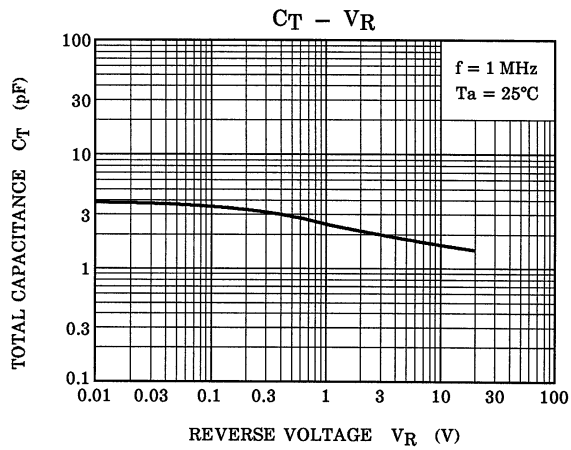
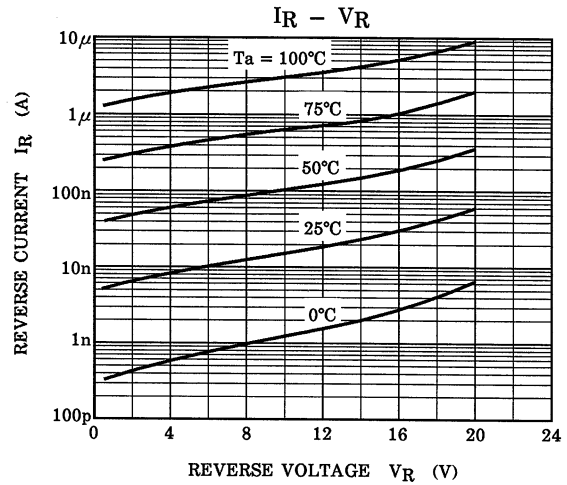
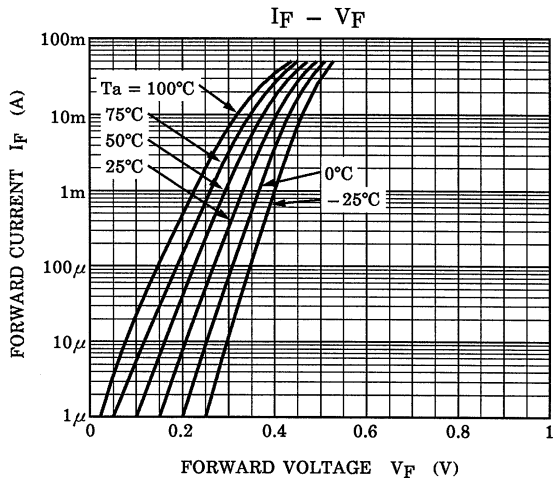
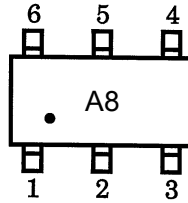
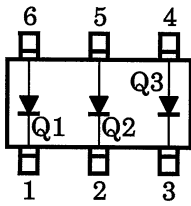
Electrical Characteristics (Q1, Q2, Q3 Common, Ta = 25°C)

| Characteristic | Symbol | Test Circuit | Test Condition | Min | Typ. | Max | Unit |
|-------------------|----------|--------------|---------------------|-----|------|------|---------|
| Forward voltage | $V_F(1)$ | — | $I_F = 1mA$ | — | 0.33 | — | V |
| | $V_F(2)$ | — | $I_F = 5mA$ | — | 0.38 | — | |
| | $V_F(3)$ | — | $I_F = 50mA$ | — | 0.50 | 0.55 | |
| Reverse current | I_R | — | $V_R = 20V$ | — | — | 0.5 | μA |
| Total capacitance | C_T | — | $V_R = 0, f = 1MHz$ | — | 3.9 | — | pF |

Start of commercial production
2001-11

Pin Assignment (Top View)

Marking



* : Total Rating

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