

TOSHIBA Diodes for Protecting against ESD

## DF2S6.8SC

Product for Use Only as Protection against Electrostatic Discharge (ESD).

\* This product is for protection against electrostatic discharge (ESD) only and is not intended for any other usage, including without limitation, the constant voltage diode application.

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

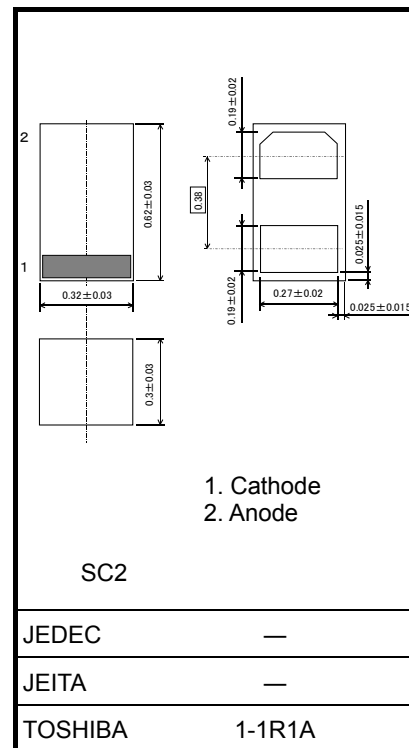
| Characteristic            | Symbol           | Rating     | Unit |
|---------------------------|------------------|------------|------|
| Power dissipation         | P*               | 150        | mW   |
| Junction temperature      | T <sub>j</sub>   | 150        | °C   |
| Storage temperature range | T <sub>stg</sub> | -55 to 150 | °C   |

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

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: mm

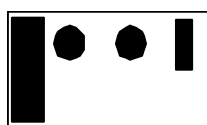


Weight: 0.17mg (typ.)

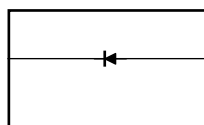
## Electrical Characteristics (Ta = 25°C)

| Characteristic    | Symbol         | Test Condition                  | Min | Typ. | Max | Unit |
|-------------------|----------------|---------------------------------|-----|------|-----|------|
| Zener voltage     | V <sub>Z</sub> | I <sub>Z</sub> = 5mA            | 6.4 | —    | 7.2 | V    |
| Dynamic impedance | Z <sub>Z</sub> | I <sub>Z</sub> = 5mA            | —   | —    | 10  | Ω    |
| Reverse current   | I <sub>R</sub> | V <sub>R</sub> = 5V             | —   | —    | 0.5 | μA   |
| Total capacitance | C <sub>T</sub> | V <sub>R</sub> = 0 V, f = 1 MHz | —   | 15   | —   | pF   |

## Marking



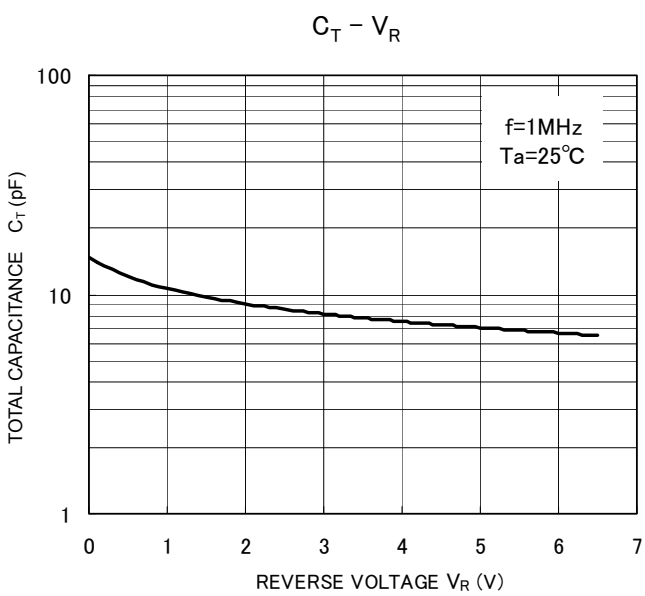
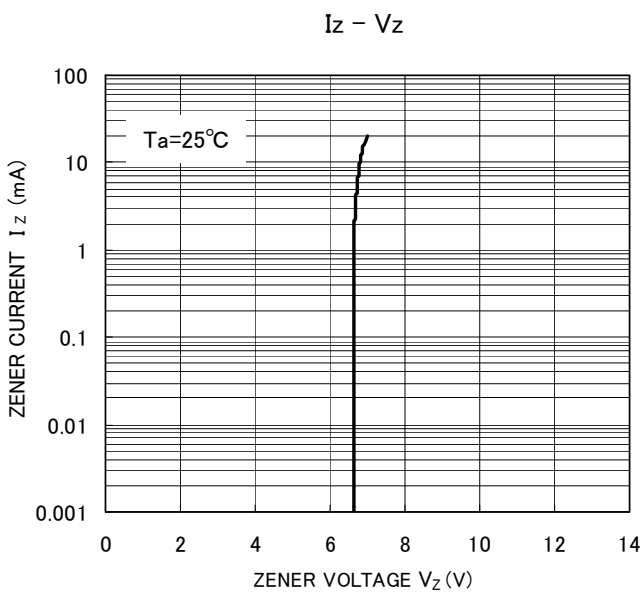
## Equivalent Circuit (top view)



**Guaranteed Level of ESD Immunity**

| Test Condition                      | ESD Immunity Level |
|-------------------------------------|--------------------|
| IEC61000-4-2<br>(Contact discharge) | ±8kV               |

Criterion: No damage to device elements



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