Unit: mm

 $0 \pm 0.05$ 

TOSHIBA Diodes for Protecting against ESD Epitaxial Planar Type

# **DF2S6.2FS**

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.
- 2terminal ultra small package suitable for mounting on small space.

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

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

0.2

0.1±0.05

0.48<sup>+0.02</sup>

0.48<sup>+0.02</sup>

JEDEC

JEITA

TOSHIBA

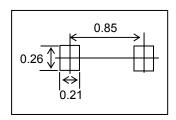
1-1L1A

CATHODE MARK

Weight: 0.0006 g (typ.)

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

### Pad Dimension(Reference)Unit: mm



### **Electrical Characteristics (Ta = 25°C)**

| Characteristic    | Symbol         | Test<br>Circuit | Test Condition              | Min | Тур. | Max | Unit |
|-------------------|----------------|-----------------|-----------------------------|-----|------|-----|------|
| Zener voltage     | VZ             | _               | $I_Z = 5mA$                 | 5.8 | 6.2  | 6.6 | V    |
| Dynamic impedance | Z <sub>Z</sub> | _               | I <sub>Z</sub> = 5mA        | _   | _    | 30  | Ω    |
| Reverse current   | I <sub>R</sub> | _               | V <sub>R</sub> =5V          | _   | _    | 2.5 | μΑ   |
| Total capacitance | Ст             | _               | V <sub>R</sub> = 0V, f=1MHz | _   | 32   | _   | pF   |

## **Guaranteed Level of ESD Immunity**

| Test Condition                      | ESD Immunity Level |  |
|-------------------------------------|--------------------|--|
| IEC61000-4-2<br>(Contact discharge) | ± 30 kV            |  |

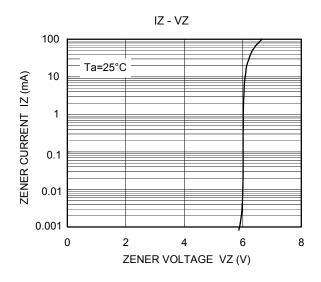
Criterion: No damage to device elements

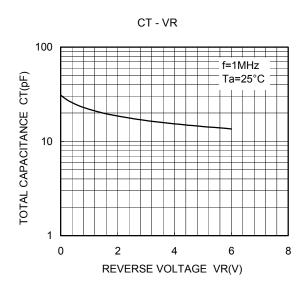
## Marking

## **Equivalent Circuit (Top View)**









#### **RESTRICTIONS ON PRODUCT USE**

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