

TOSHIBA Diodes For Protecting Against ESD

DF3A6.8F

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.

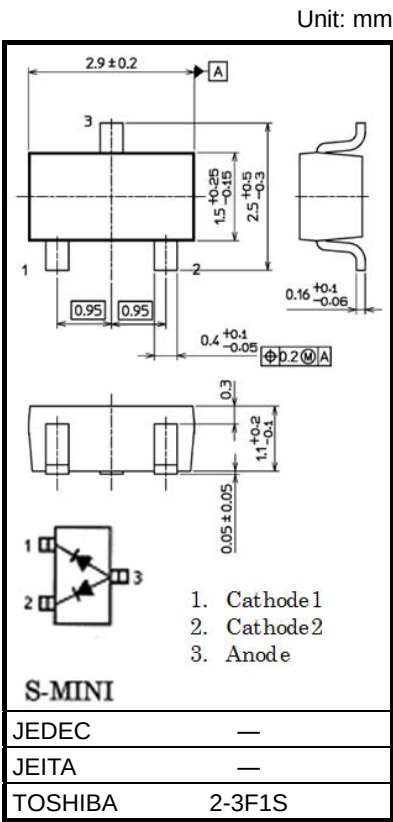
- The mounting of two devices on an ultra-compact package allows the number of parts and the mounting cost to be reduced.

Absolute Maximum Ratings (Ta = 25°C)

| Characteristics           | Symbol | Rating     | Unit |
|---------------------------|--------|------------|------|
| Power dissipation         | P      | 150        | mW   |
| Junction temperature      | Tj     | 150        | °C   |
| Storage temperature range | Tstg   | −55 to 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).



Weight: 12 mg (typ.)

Electrical Characteristics (Ta = 25°C)

| Characteristics                                  | Symbol         | Test Condition                  | Min | Typ. | Max | Unit |
|--------------------------------------------------|----------------|---------------------------------|-----|------|-----|------|
| Zener voltage                                    | VZ             | I <sub>Z</sub> = 5 mA           | 6.4 | 6.8  | 7.2 | V    |
| Dynamic impedance                                | Z <sub>Z</sub> | I <sub>Z</sub> = 5 mA           | —   | 3    | 25  | Ω    |
| Reverse current                                  | I <sub>R</sub> | V <sub>R</sub> = 5 V            | —   | —    | 0.5 | μA   |
| Terminal capacitance (between Cathode and Anode) | C <sub>T</sub> | V <sub>R</sub> = 0 V, f = 1 MHz | —   | 45   | —   | pF   |

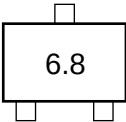
Start of commercial production  
2005-12

Guaranteed Level of ESD Immunity

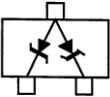
| Test Condition                      | ESD Immunity Level |
|-------------------------------------|--------------------|
| IEC61000-4-2<br>(Contact discharge) | $\pm 30\text{ kV}$ |

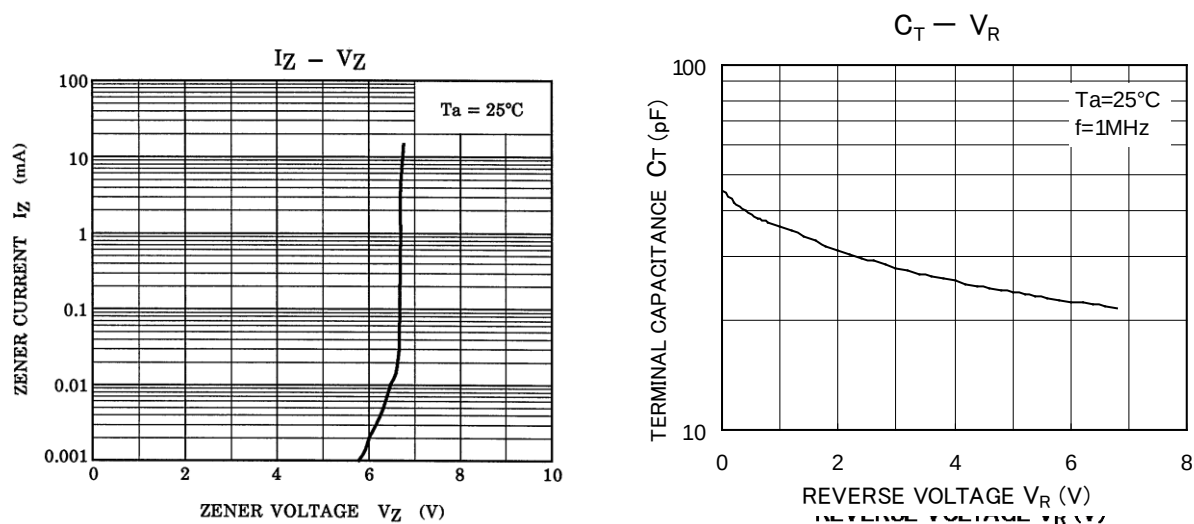
Criterion: No damage to device elements

Marking



Equivalent Circuit (Top View)





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