

TOSHIBA Diodes for Protecting Against ESD

DF3A3.3CT

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)

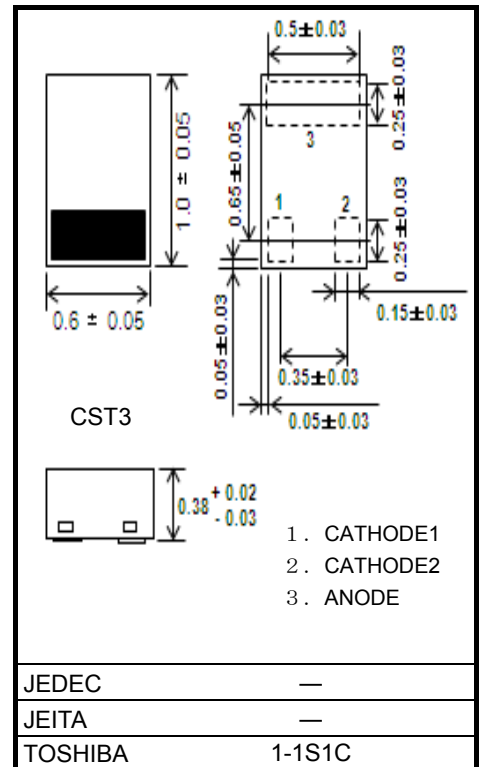
| Characteristic | Symbol | Rating | Unit |
|---------------------------|------------------|---------|------|
| Power dissipation | P | 150* | mW |
| Junction temperature | T _j | 150 | °C |
| Storage temperature range | T _{stg} | -55~150 | °C |

* : Mounted on FR4 board (10 mm × 10 mm × 1 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: 0.75 mg(typ.)

Electrical Characteristics (Ta = 25°C)

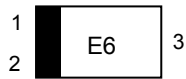
| Characteristic | Symbol | Test Condition | Min | Typ. | Max | Unit |
|--|----------------|--------------------------------|-----|------|-----|------|
| Zener voltage | V _Z | I _Z = 5mA | 3.1 | 3.3 | 3.5 | V |
| Dynamic impedance | Z _Z | I _Z = 5mA | — | — | 130 | Ω |
| Reverse current | I _R | V _R = 1V | — | — | 20 | μA |
| Terminal capacitance (between Cathode and Anode) | C _T | V _R = 0 V, f = 1MHz | — | 115 | — | pF |

Guaranteed Level of ESD Immunity

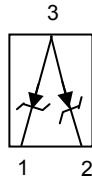
| Test Condition | ESD Immunity Level |
|-------------------------------------|--------------------|
| IEC61000-4-2 (Contact discharge) | $\pm 30\text{kV}$ |

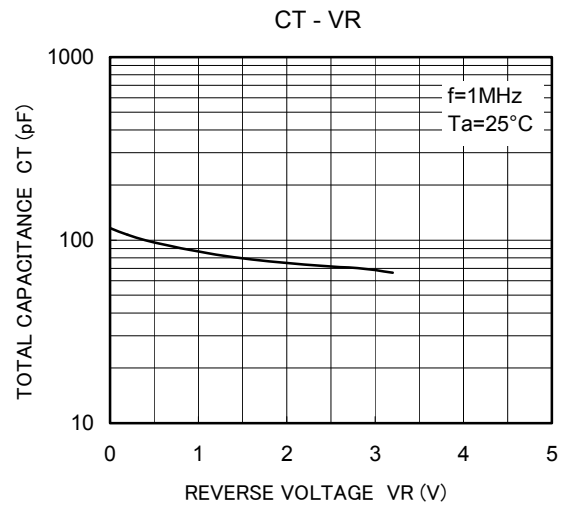
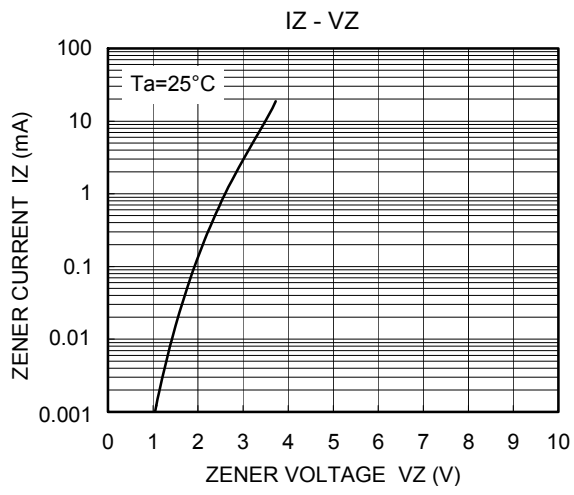
Criterion: No damage to device elements

Marking



Equivalent Circuit (top view)





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