

TOSHIBA Diodes for Protecting against ESD

DF5A6.8LJE

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

Unit: mm

* 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.

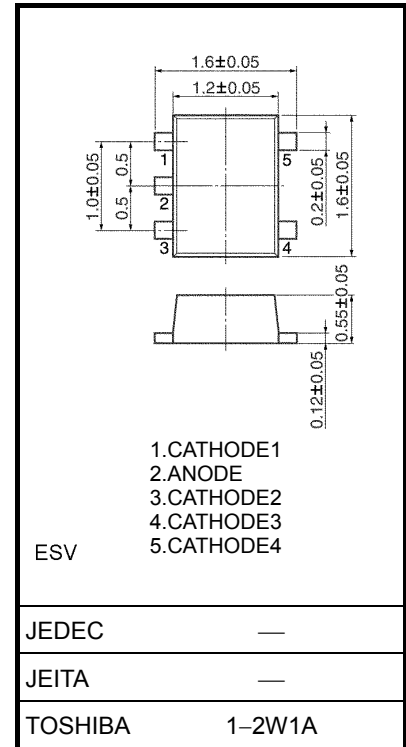
- The mounting of four devices on an ultra-compact package allows the number of parts and the mounting cost to be reduced.
- Low Terminal capacitance (between Cathode and Anode)
: $C_T = 6.0 \text{ pF}$ (typ.)

Absolute Maximum Ratings (Ta = 25°C)

| Characteristics | Symbol | Rating | Unit |
|---------------------------|-----------|------------|------|
| Power dissipation | P | 100 | mW |
| Junction temperature | T_j | 150 | °C |
| Storage temperature range | T_{stg} | -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: 0.003 g (typ.)

Electrical Characteristics (Ta = 25°C)

| Characteristics | Symbol | Test Condition | Min | Typ. | Max | Unit |
|--|--------|--|-----|------|-----|---------------|
| Zener voltage | V_Z | $I_Z = 5 \text{ mA}$ | 6.5 | 6.8 | 7.1 | V |
| Dynamic impedance | Z_Z | $I_Z = 5 \text{ mA}$ | — | — | 50 | Ω |
| Reverse current | I_R | $V_R = 5 \text{ V}$ | — | — | 0.5 | μA |
| Terminal capacitance (between Cathode and Anode) | C_T | $V_R = 0 \text{ V}, f = 1 \text{ MHz}$ | — | 6.0 | — | pF |

Guaranteed Level of ESD Immunity

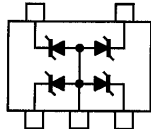
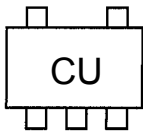
| Test Condition | ESD Immunity Level |
|----------------------------------|--------------------|
| IEC61000-4-2 (Contact discharge) | ± 8 kV |

Criterion: No damage to device elements

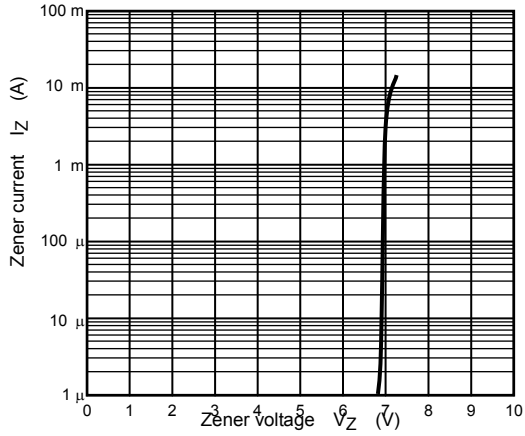
Start of commercial production
2003-02

Marking

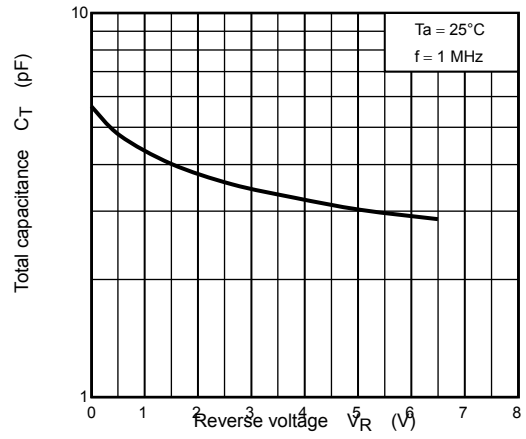
Equivalent Circuit (Top View)



$I_Z - V_Z$



$C_T - V_R$



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