

TOSHIBA Diodes for Protecting against ESD

# DF3A6.2LFU

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.

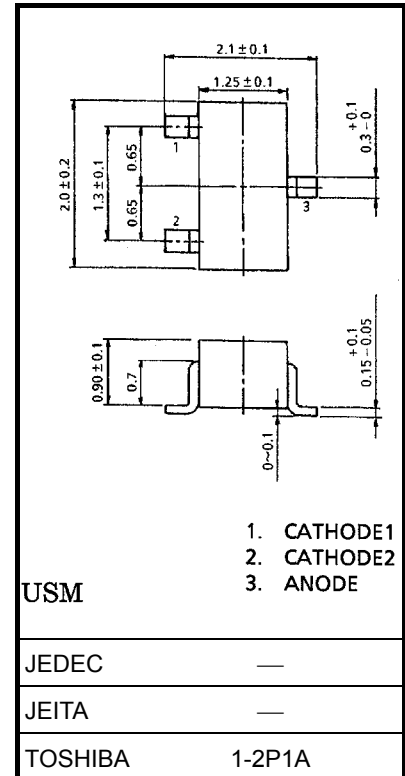
- The mounting of two devices on an ultra-compact package allows the number of parts and the mounting cost to be reduced.
- Low Terminal capacitance:  $C_T = 6.5 \text{ pF}$  (typ.)

### Absolute Maximum Ratings ( $T_a = 25^\circ\text{C}$ )

| Characteristics           | Symbol    | Rating     | Unit             |
|---------------------------|-----------|------------|------------------|
| Power dissipation         | P         | 100        | mW               |
| Junction temperature      | $T_j$     | 125        | $^\circ\text{C}$ |
| Storage temperature range | $T_{stg}$ | -55 to 125 | $^\circ\text{C}$ |

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: 0.006 g (typ.)

### Electrical Characteristics ( $T_a = 25^\circ\text{C}$ )

| Characteristics                                  | Symbol | Test Condition                         | Min | Typ. | Max | Unit          |
|--|--------|--|-----|------|-----|---------------|
| Zener voltage                                    | $V_Z$  | $I_Z = 5 \text{ mA}$                   | 5.9 | 6.2  | 6.5 | V             |
| Dynamic impedance                                | $Z_Z$  | $I_Z = 5 \text{ mA}$                   | —   | —    | 50  | $\Omega$      |
| Reverse current                                  | $I_R$  | $V_R = 5 \text{ V}$                    | —   | —    | 2.5 | $\mu\text{A}$ |
| Terminal capacitance (between Cathode and Anode) | $C_T$  | $V_R = 0 \text{ V}, f = 1 \text{ MHz}$ | —   | 6.5  | —   | pF            |

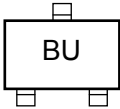
### Guaranteed Level of ESD Immunity

| Test Condition                   | ESD Immunity Level |
|----------------------------------|--------------------|
| IEC61000-4-2 (Contact discharge) | $\pm 8 \text{ kV}$ |

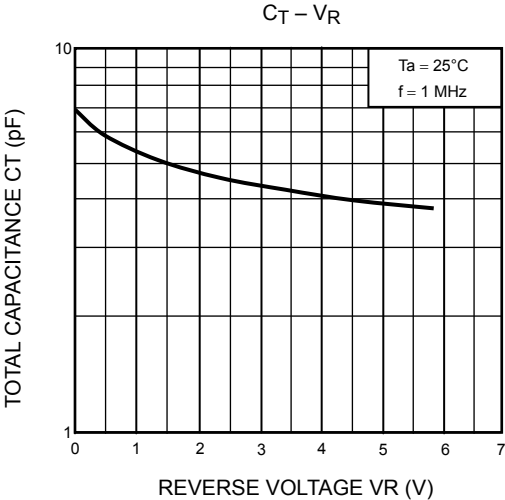
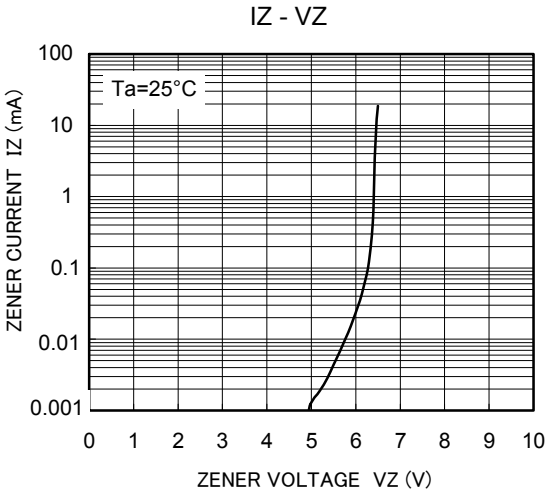
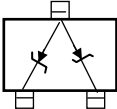
Criterion: No damage to device elements

Start of commercial production  
2003-02

Marking



Equivalent Circuit (top view)



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