

TOSHIBA Diodes for Protecting against ESD

# DF3A6.8LFV

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 in an ultra-compact package enables a reduction in the number of parts and in the mounting cost.
- Low terminal capacitance:  $C_T = 6.0 \text{ pF (typ.)}$

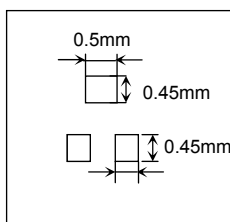
### Absolute Maximum Ratings ( $T_a = 25^\circ\text{C}$ )

Characteristic	Symbol	Rating	Unit
Power dissipation	P	150*	mW
Junction temperature	$T_j$	150	$^\circ\text{C}$
Storage temperature range	$T_{stg}$	-55 to 150	$^\circ\text{C}$

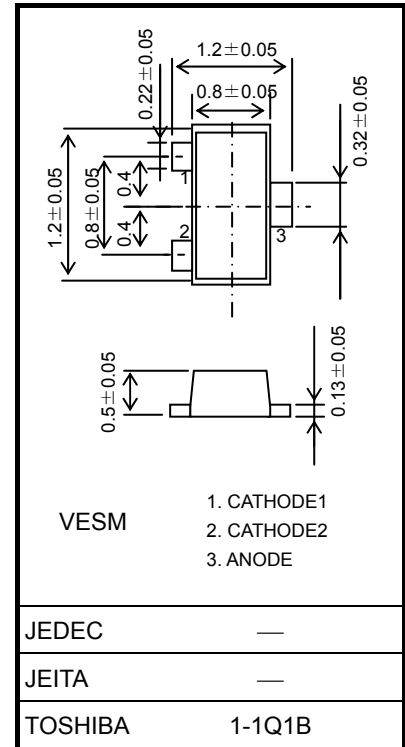
Note: Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in temperature, etc.) may cause this product to decrease in the reliability significantly even if the operating conditions (i.e. operating temperature/current/voltage, etc.) 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).

\*: Mounted on an FR4 board (25.4 mm × 25.4 mm × 1.6 mm)



Unit: mm



Weight: 1.5 mg (typ.)

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

Characteristic	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	$\Omega$
Reverse current	$I_R$	$V_R = 5 \text{ V}$	—	—	0.5	$\mu\text{A}$
Terminal capacitance (between cathode and anode)	$C_T$	$V_R = 0 \text{ V}, f = 1 \text{ MHz}$	—	6.0	—	pF

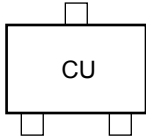
Start of commercial production  
2005-05

## Guaranteed Level of ESD Immunity

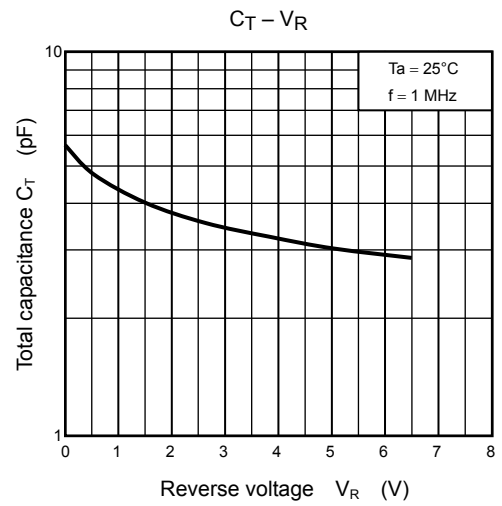
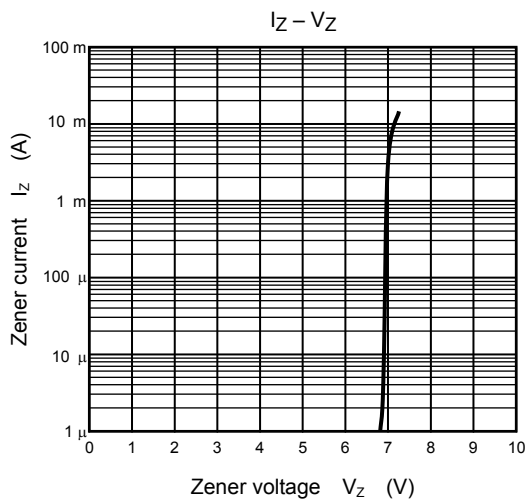
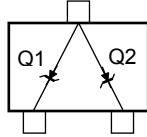
Test Condition	ESD Immunity Level
IEC61000-4-2 (Contact discharge)	± 8 kV

Criterion: No damage to device elements

## Marking



## Equivalent Circuit (top view)



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