

TOSHIBA Diodes for Protecting against ESD Epitaxial Planar Type

# DF3A5.6LFV

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:  $C_T = 8.0 \text{ pF}$  (typ.)

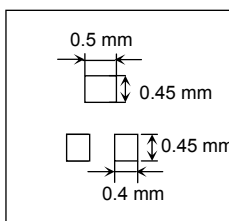
### Absolute Maximum Ratings ( $T_a = 25^\circ\text{C}$ )

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

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).

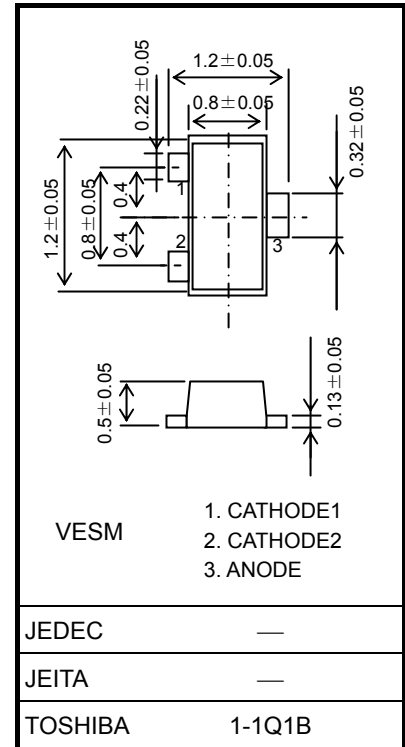
\*: Mounted on an FR4 board (25.4 mm × 25.4 mm × 1.6 mm)



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

Characteristic	Symbol	Test Condition	Min	Typ.	Max	Unit
Zener voltage	$V_Z$	$I_Z = 5 \text{ mA}$	5.3	5.6	6.0	V
Dynamic impedance	$Z_Z$	$I_Z = 5 \text{ mA}$	—	3	—	$\Omega$
Reverse current	$I_R$	$V_R = 3.5 \text{ V}$	—	—	1.0	$\mu\text{A}$
Terminal capacitance (between cathode and anode)	$C_T$	$V_R = 0 \text{ V}, f = 1 \text{ MHz}$	—	8	—	pF

Unit: mm



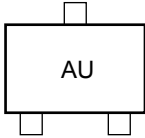
Weight: 1.5 mg (typ.)

## Guaranteed Level of ESD Immunity

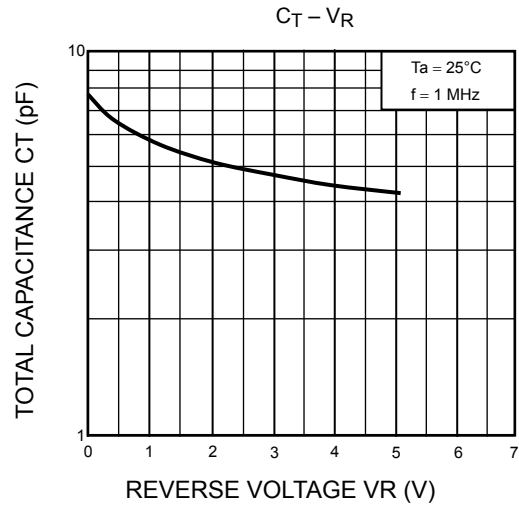
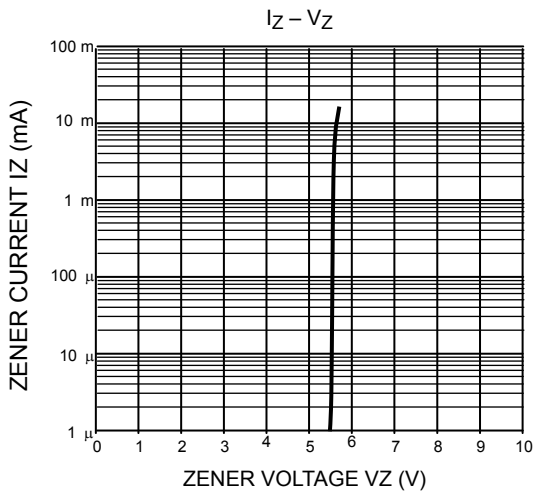
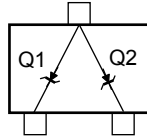
Test Condition	ESD Immunity Level
IEC61000-4-2 (Contact discharge)	$\pm 8$ kV

Criterion: No damage to device elements

## Marking



## Equivalent Circuit (top view)



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