TOSHIBA Diodes for Protecting against ESD

# DF3A6.8LFV

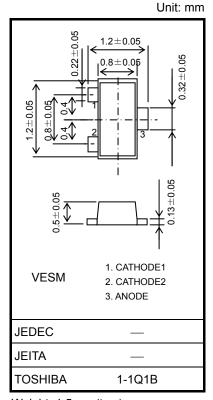
Product for Use Only as Protection against Electrostatic Discharge (ESD)

- \* 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<sub>T</sub> = 6.0 pF (typ.)

#### **Absolute Maximum Ratings (Ta = 25°C)**

Characteristic	Symbol	Rating	Unit
Power dissipation	Р	150*	mW
Junction temperature	Tj	150	°C
Storage temperature range	T <sub>stg</sub>	-55 to 150	°C

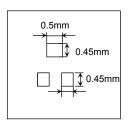
Note: Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in temperature, etc.) may cause this product to decrease in the reliability significantly even if the operating conditions (i.e. operating temperature/current/voltage, etc.)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



Weight: 1.5 mg (typ.)

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  $\times$  25.4 mm  $\times$  1.6 mmt)



#### **Electrical Characteristics (Ta = 25°C)**

Characteristic	Symbol	Test Condition	Min	Тур.	Max	Unit
Zener voltage	VZ	$I_Z = 5 \text{ mA}$	6.5	6.8	7.1	V
Dynamic impedance	Z <sub>Z</sub>	$I_Z = 5 \text{ mA}$	_	_	50	Ω
Reverse current	I <sub>R</sub>	V <sub>R</sub> = 5 V	_	_	0.5	μΑ
Terminal capacitance (between cathode and anode)	CT	V <sub>R</sub> = 0 V, f = 1 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

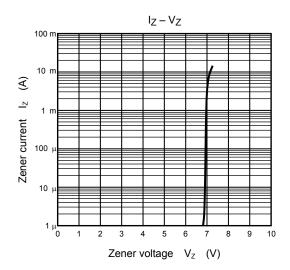
Criterion: No damage to device elements

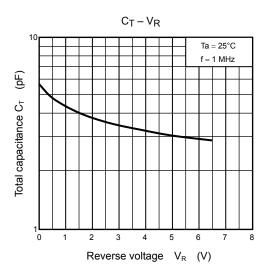
### Marking

# **Equivalent Circuit (top view)**









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