

TOSHIBA Diodes for Protecting against ESD Epitaxial Planar Type

# DF3A6.8FV

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.
- Because two devices are mounted on an ultra compact package, it is possible to allow reducing the number of the parts and the mounting cost.

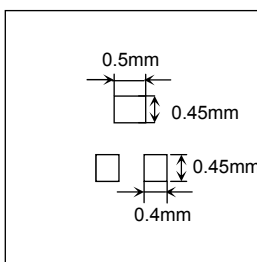
### Absolute Maximum Ratings (Ta = 25°C)

Characteristics	Symbol	Rating	Unit
Power dissipation	P*	150	mW
Junction temperature	T <sub>j</sub>	150	°C
Storage temperature range	T <sub>stg</sub>	-55~150	°C

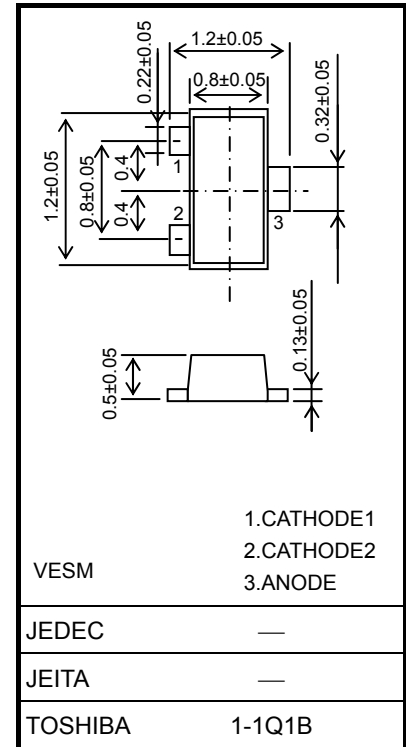
Note: Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in temperature, etc.) may cause this product to decrease in the reliability significantly even if the operating conditions (i.e. operating temperature/current/voltage, etc.)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

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



Unit: mm



VESM

1.CATHODE1  
2.CATHODE2  
3.ANODE

JEDEC

—

JEITA

—

TOSHIBA

1-1Q1B

Weight: 0.0015 g (typ.)

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

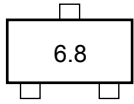
Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Zener voltage	V <sub>Z</sub>	I <sub>Z</sub> = 5 mA	6.4	6.8	7.2	V
Dynamic impedance	Z <sub>Z</sub>	I <sub>Z</sub> = 5 mA	—	—	25	Ω
Reverse current	I <sub>R</sub>	V <sub>R</sub> = 5 V	—	—	0.5	μA
Terminal capacitance (between Cathode and Anode)	C <sub>T</sub>	V <sub>R</sub> = 0, f = 1MHz	—	45	—	pF

## Guaranteed Level of ESD Immunity

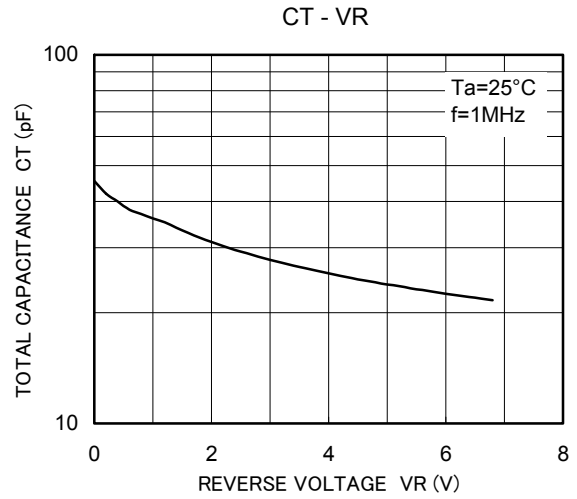
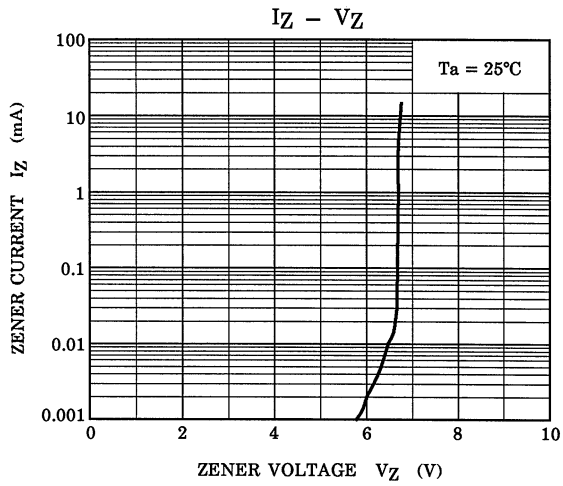
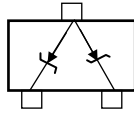
Test Condition	ESD Immunity Level
IEC61000-4-2 (Contact discharge)	± 30kV

Criterion: No damage to device elements

## Marking



## Equivalent Circuit (top view)



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