TOSHIBA Diodes for Protecting against ESD

# DF3A6.8LFU

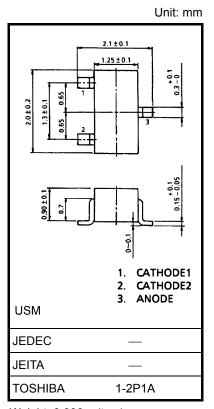
Product for Use Only as Protection against Electrostatic Discharge (ESD)

- \* 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 on an ultra-compact package allows the number of parts and the mounting cost to be reduced.
- Low terminal capacitance: C<sub>T</sub> = 6.0 pF (typ.)

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

Characteristics	Symbol	Rating	Unit
Power dissipation	Р	100	mW
Junction temperature	Tj	125	°C
Storage temperature range	T <sub>stg</sub>	-55 to 125	°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: 0.006 g (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).

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

Characteristics	Symbol	Test Condition	Min	Тур.	Max	Unit
Zener voltage	$V_Z$	$I_Z = 5 \text{ mA}$	6.5	6.8	7.1	V
Dynamic impedance	Z <sub>Z</sub>	I <sub>Z</sub> = 5 mA	_	_	50	Ω
Knee dynamic impedance	Z <sub>ZK</sub>	$I_Z = 0.5 \text{ mA}$	_	_	100	Ω
Reverse current	I <sub>R</sub>	V <sub>R</sub> = 5 V	_	_	0.5	μА
Terminal capacitance (between Cathode and Anode)	C <sub>T</sub>	V <sub>R</sub> = 0 V, f = 1 MHz		6.0		pF

## **Guaranteed Level of ESD Immunity**

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

Criterion: No damage to device elements

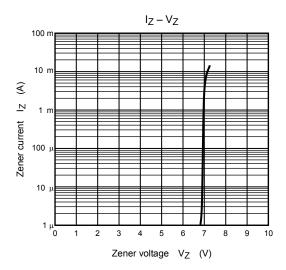
Start of commercial production 1999-04

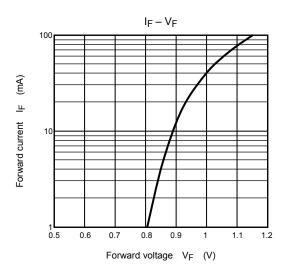
# Marking

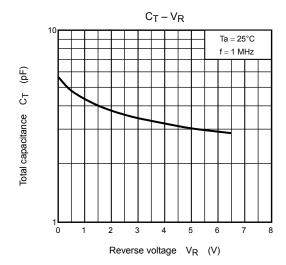
## **Equivalent Circuit (top view)**











2

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