

TOSHIBA Diodes for Protecting against ESD

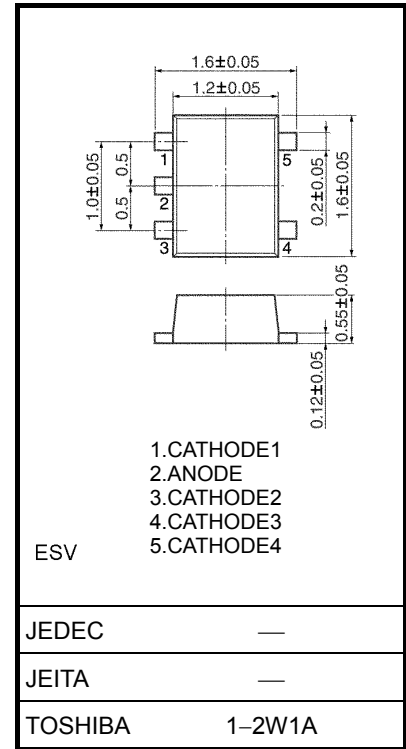
DF5A6.8LJE

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

Unit: mm

* 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 four devices on an ultra-compact package allows the number of parts and the mounting cost to be reduced.
- Low Terminal capacitance (between Cathode and Anode)
: $C_T = 6.0 \text{ pF}$ (typ.)



Weight: 0.003 g (typ.)

Absolute Maximum Ratings (Ta = 25°C)

Characteristics	Symbol	Rating	Unit
Power dissipation	P	100	mW
Junction temperature	T_j	150	°C
Storage temperature range	T_{stg}	-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.

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	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	Ω
Reverse current	I_R	$V_R = 5 \text{ V}$	—	—	0.5	μA
Terminal capacitance (between Cathode and Anode)	C_T	$V_R = 0 \text{ V}, f = 1 \text{ MHz}$	—	6.0	—	pF

Guaranteed Level of ESD Immunity

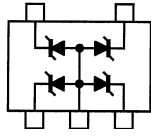
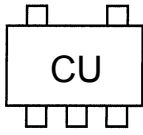
Test Condition	ESD Immunity Level
IEC61000-4-2 (Contact discharge)	$\pm 8 \text{ kV}$

Criterion: No damage to device elements

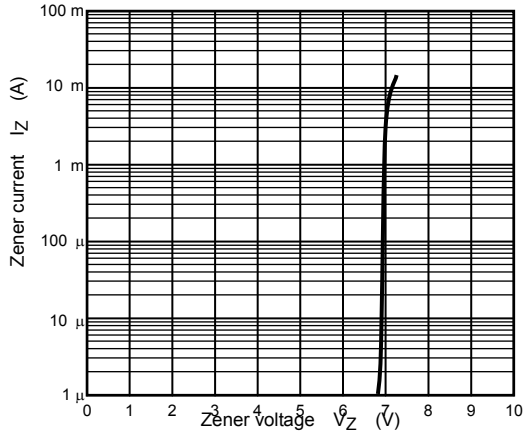
Start of commercial production
2003-02

Marking

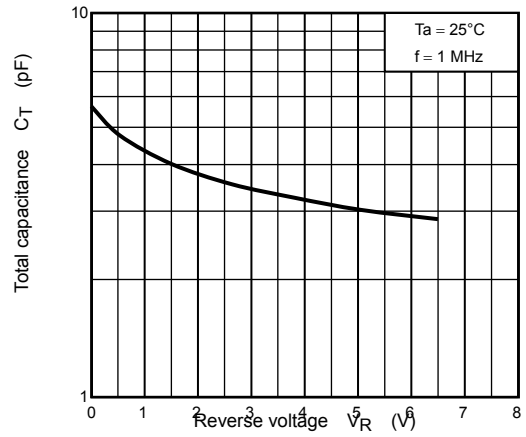
Equivalent Circuit (Top View)



$I_Z - V_Z$



$C_T - V_R$



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