

TOSHIBA Diodes for Protecting against ESD

DF5A6.8LF

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)
: $C_T = 6.0$ pF (typ.)

Absolute Maximum Ratings (Ta = 25°C)

Characteristics	Symbol	Rating	Unit
Power dissipation	P	200	mW
Junction temperature	T _j	125	°C
Storage temperature range	T _{stg}	-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.

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).

		1.CATHODE 1 2. ANODE 3.CATHODE2 4.CATHODE3 5.CATHODE4
SMV		
JEDEC	—	
JEITA	—	
TOSHIBA	1-3H1A	

Weight: 0.014 g (typ.)

Electrical Characteristics (Ta = 25°C)

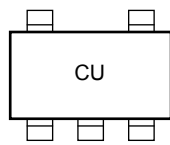
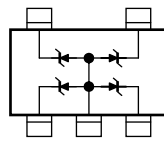
Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Zener voltage	V _Z	I _Z = 5 mA	6.5	6.8	7.1	V
Dynamic impedance	Z _Z	I _Z = 5 mA	—	—	50	Ω
Knee dynamic impedance	Z _{ZK}	I _Z = 0.5 mA	—	—	100	Ω
Reverse current	I _R	V _R = 5 V	—	—	0.5	μA
Terminal capacitance (between Cathode and Anode)	C _T	V _R = 0 V, f = 1 MHz	—	6.0	—	pF

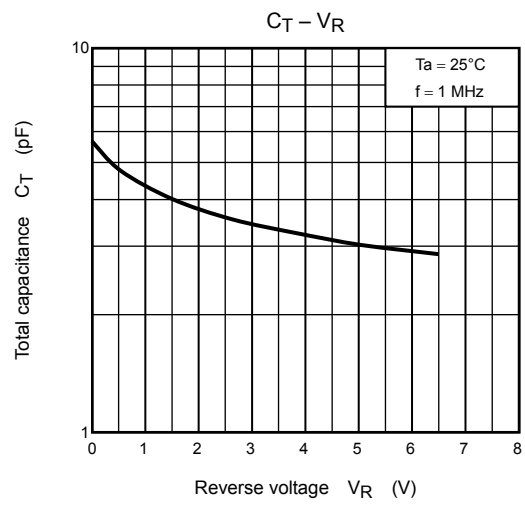
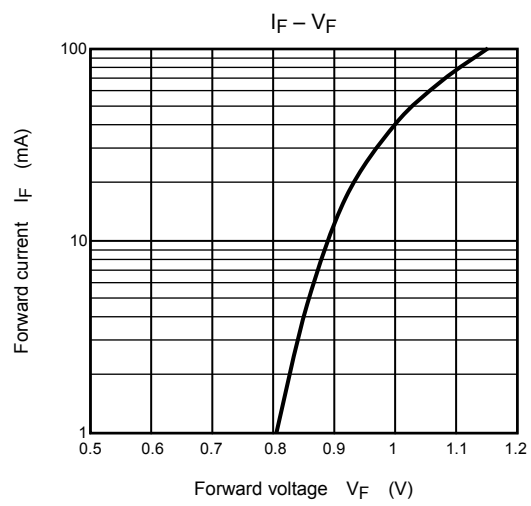
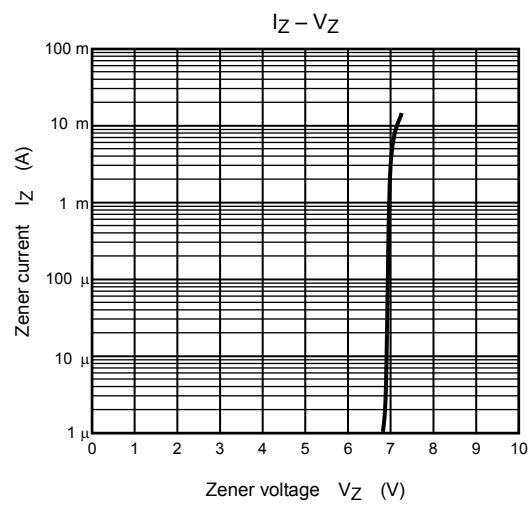
Guaranteed Level of ESD Immunity

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)**



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