TOSHIBA Diodes For Protecting Against ESD Epitaxial Planar Type

DF3A6.8LFE

Diodes for Protecting Against ESD

- Because two devices are mounted on an ultra compact package, it is possible to allow reducing the number of the parts and the mounting
- Zener voltage correspond to E24 Series.
- Low total capacitance: $C_T = 6.0 \text{ pF (typ.)}$

Maximum Ratings (Ta = 25°C)

Characteristics	Symbol	Rating	Unit
Power dissipation	Р	100	mW
Junction temperature	Tj	125	°C
Storage temperature range	T _{stg}	-55 to 125	°C

1. CATHODE1 2. CATHODE2 3. ANODE JEDEC EIAJ TOSHIBA 1-6 ± 0.1 --80

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 _Z	$I_Z = 5 \text{ mA}$	_	_	50	Ω
Knee dynamic impedance	Z _{ZK}	$I_Z = 0.5 \text{ mA}$	_	_	100	Ω
Reverse current	I _R	V _R = 5 V	_	_	0.5	μΑ
Total capacitance	C _T	V _R = 0 V, f = 1 MHz	_	6.0	_	pF

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In developing your designs, please ensure that TOSHIBA products are used within specified operating ranges as set forth in the most recent TOSHIBA products specifications. Also, please keep in mind the precautions and conditions set forth in the "Handling Guide for Semiconductor Devices," or "TOSHIBA Semiconductor Reliability Handbook" etc.

[•] TOSHIBA is continually working to improve the quality and reliability of its products. Nevertheless, semiconductor devices in general can malfunction or fail due to their inherent electrical sensitivity and vulnerability to physical stress. It is the responsibility of the buyer, when utilizing TOSHIBA products, to comply with the standards of safety in making a safe design for the entire system, and to avoid situations in which a malfunction or failure of such TOSHIBA products could cause loss of human life, bodily injury or damage to property.

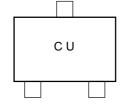
[•] The TOSHIBA products listed in this document are intended for usage in general electronics applications (computer, personal equipment, office equipment, measuring equipment, industrial robotics, domestic appliances, etc.). These TOSHIBA products are neither intended nor warranted for usage in equipment that requires extraordinarily high quality and/or reliability or a malfunction or failure of which may cause loss of human life or bodily injury ("Unintended Usage"). Unintended Usage include atomic energy control instruments, airplane or spaceship instruments, transportation instruments, traffic signal instruments, combustion control instruments, medical instruments, all types of safety devices, etc.. Unintended Usage of TOSHIBA products listed in this document shall be made at the customer's own risk.

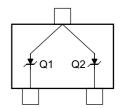
Guaranteed Level of ESD Immunity

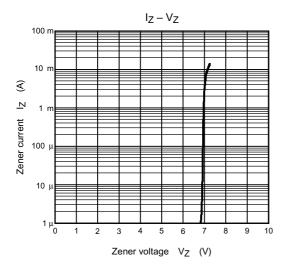
Test Condition	ESD Immunity Level		
IEC61000-4-2	±8 kV		
(contact discharge)	<u>-0</u> KV		

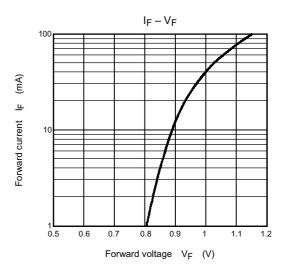
Marking

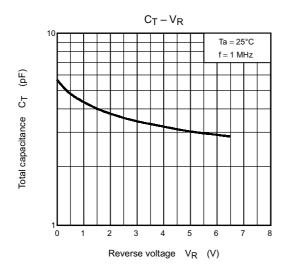
Equivalent Circuit (top view)











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