

TOSHIBA Diodes for Protecting against ESD Epitaxial Planar Type

# DF2S5.6ASL

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

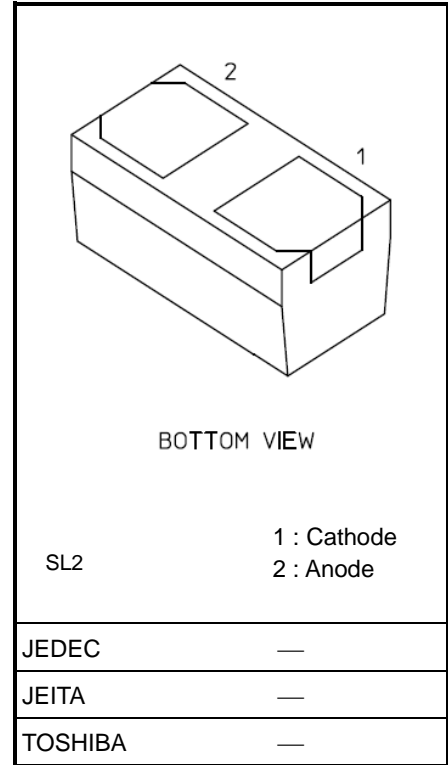
\* This product is for protection against electrostatic discharge (ESD) only and is not intended for any other usage, including without limitation, the constant voltage diode application.

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

Characteristic	Symbol	Rating	Unit
Electrostatic discharge voltage IEC61000-4-2 ( Contact ) IEC610004-2(Air)	$V_{ESD}$ (Note 1)	±30	kV
Junction temperature	$T_j$	150	°C
Storage temperature range	$T_{stg}$	-55~150	°C

Note1 : according to IEC61000-4-2

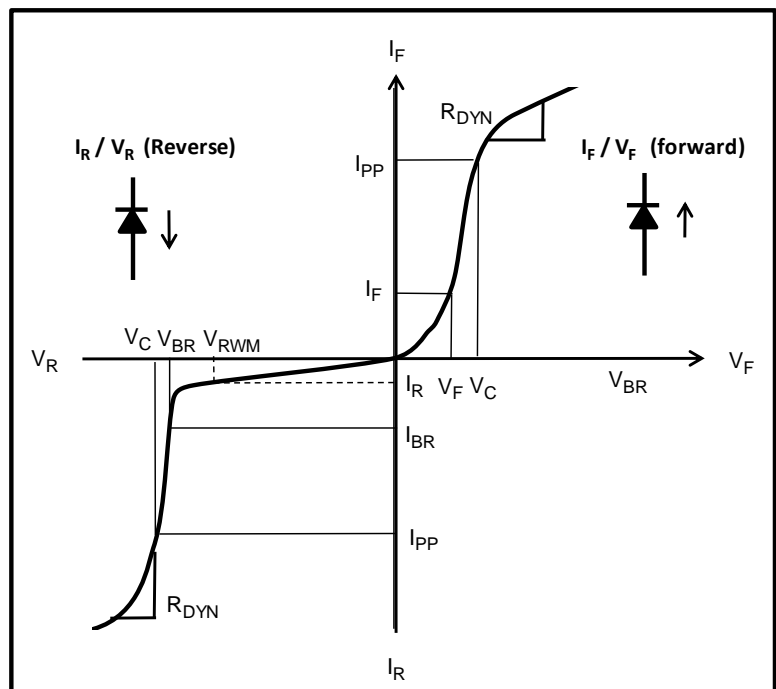
Note2:Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in temperature, etc.) may cause this product to decrease in the reliability significantly even if the operating conditions (i.e. operating temperature/current/voltage, etc.) 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).



Weight: 0.2 mg (typ.)

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

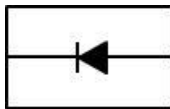
- $V_{RWM}$  : Reverse working voltage maximum
- $V_{BR}$  : Breakdown voltage
- $I_{BR}$  : Breakdown current
- $I_R$  : Reverse current
- $V_C$  : Clamp voltage
- $I_{PP}$  : Peak pulse current
- $R_{DYN}$  : Dynamic resistance
- $I_F$  : Forward current
- $V_F$  : Forward voltage



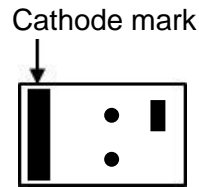
Characteristic	Symbol	Test Condition	Min	Typ.	Max	Unit
Working peak reverse voltage	$V_{RWM}$	—	—	—	3.5	V
Zener voltage (Reverse breakdown voltage)	$V_Z$ $(V_{BR})$	$I_Z = 5\text{mA}$ $(I_{BR} = 5\text{mA})$	5.3	5.6	6.0	V
Dynamic impedance	$Z_Z$	$I_Z = 5\text{mA}$ $(I_{BR} = 5\text{mA})$	—	—	30	$\Omega$
Reverse current	$I_R$	$V_{RWM} = 3.5\text{V}$	—	—	1	$\mu\text{A}$
Total capacitance	$C_t$	$V_R = 0\text{V}$ , $f = 1\text{MHz}$ (Note:1)	—	40	—	pF

Note1 : Guaranteed by design.

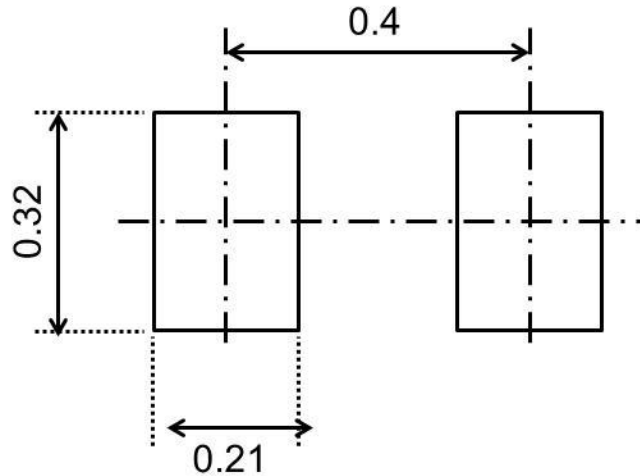
**Equivalent Circuit (Top View)**



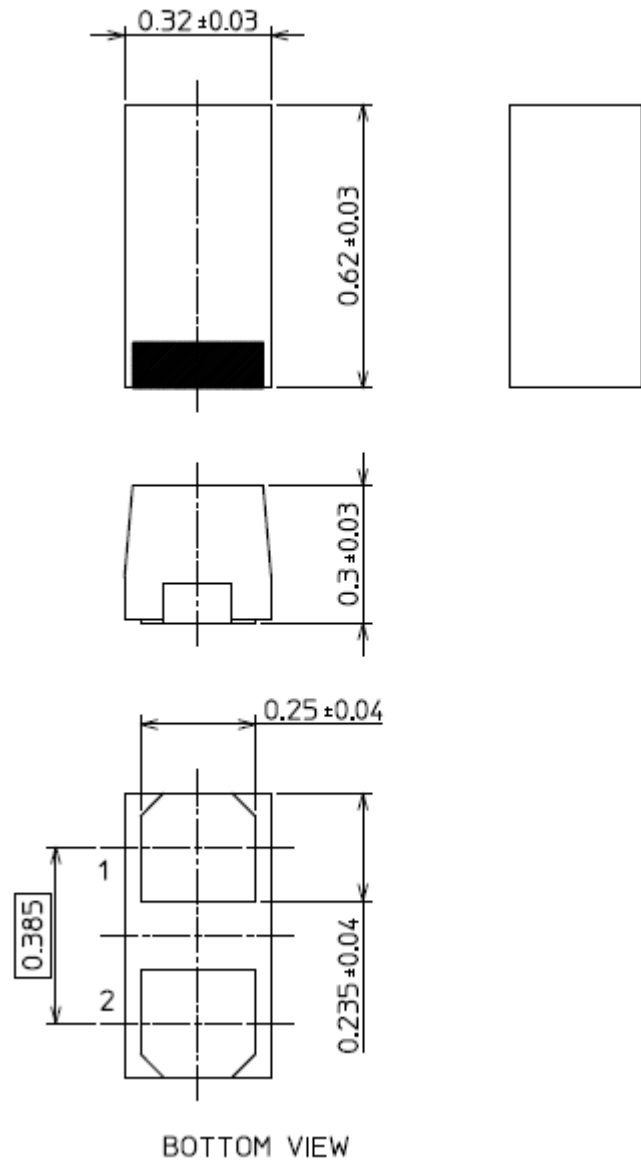
**Marking**



**Land Pattern Dimensions for Reference Only (Unit : mm)**



Land Pattern Dimensions for Reference Only (Unit : mm)



Weight: 0.2 mg (typ.)

Package Name(s)	
TOSHIBA:	
Nickname:	SL2

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