

TOSHIBA Diodes for Protecting against ESD Epitaxial Planar Type

DF2S8.2ASL

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

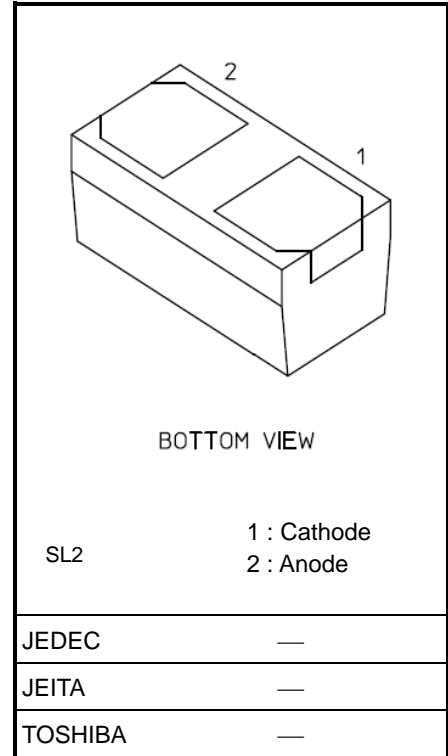
* This product is for protection against electrostatic discharge (ESD) only and is not intended for any other usage, including without limitation, the constant voltage diode application.

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

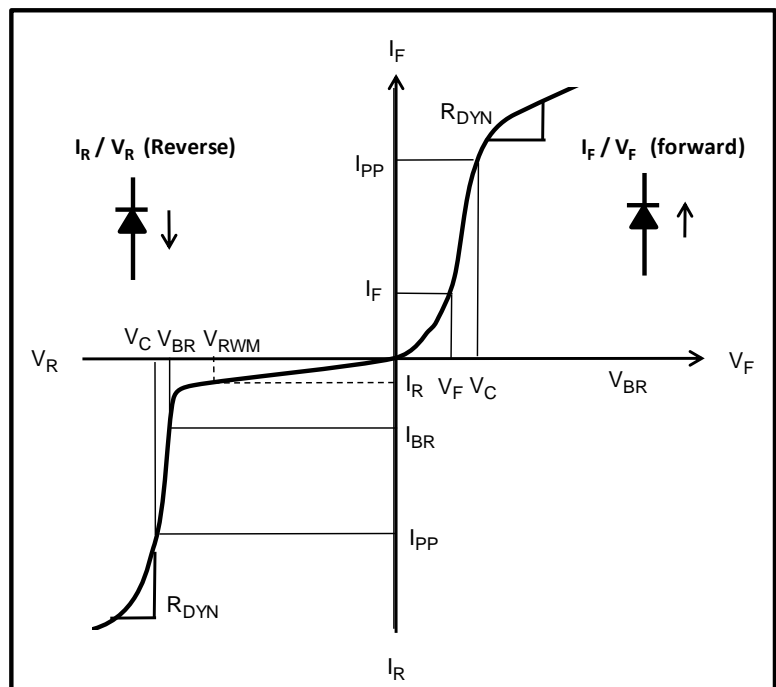
Note2:Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in temperature, etc.) may cause this product to decrease in the reliability significantly even if the operating conditions (i.e. operating temperature/current/voltage, etc.)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

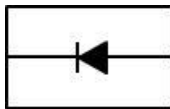
- V_{RWM} : Reverse working voltage maximum
- V_{BR} : Breakdown voltage
- I_{BR} : Breakdown current
- I_R : Reverse current
- V_C : Clamp voltage
- I_{PP} : Peak pulse current
- R_{DYN} : Dynamic resistance
- I_F : Forward current
- V_F : Forward voltage



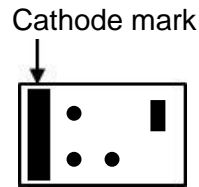
| Characteristic | Symbol | Test Condition | Min | Typ. | Max | Unit |
|---|-----------------------|--|-----|------|-----|---------------|
| Working peak reverse voltage | V_{RWM} | — | — | — | 6.5 | V |
| Zener votage (Reverse breakdown voltage) | V_Z (V_{BR}) | $I_Z = 5\text{mA}$ (I_{BR}) | 7.7 | 8.2 | 8.7 | V |
| Dynamic impedance | Z_Z | $I_Z = 5\text{mA}$ (I_{BR}) | — | — | 30 | Ω |
| Reverse current | I_R | $V_{RWM} = 6.5\text{V}$ | — | — | 0.5 | μA |
| Total capacitance | C_t | $V_R = 0\text{V}$, $f = 1\text{MHz}$ (Note:1) | — | 20 | — | pF |

Note1 : Guaranteed by design.

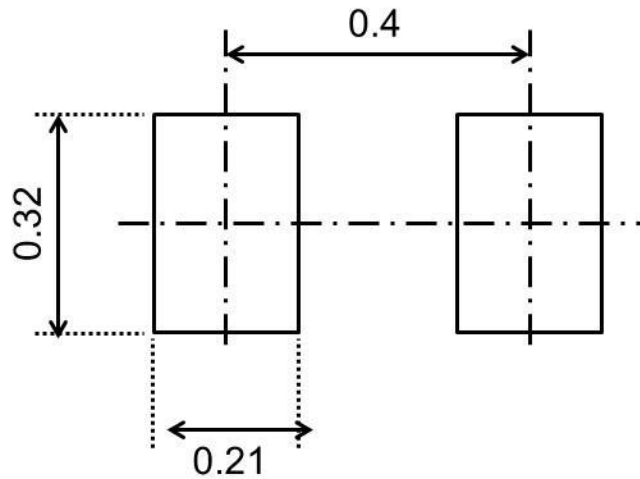
Equivalent Circuit (Top View)



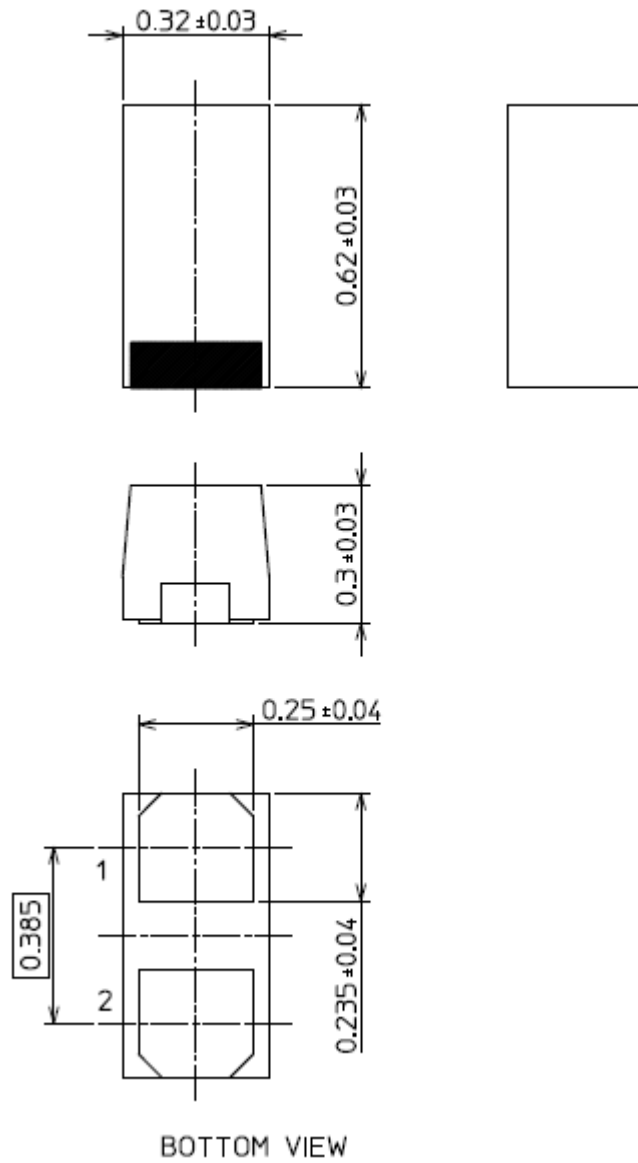
Marking



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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