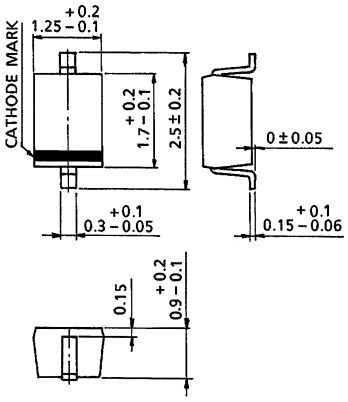
TOSHIBA Diode Silicon Epitaxial Planar Type

# 1SS403

High Voltage Switching Applications

- Two-pin small packages are suitable for higher mounting densities.
- Excellent in forward current and forward voltage characteristics : $V_{F\ (2)}$ = 0.90V (typ.)
- Fast reverse recovery time : $t_{rr}$ = 60ns (typ.)
- Small total capacitance : $C_T$ = 1.5pF (typ.)

Unit in mm




| | |
|---|---|
| JEDEC | — |
| JEITA | — |
| TOSHIBA | 1-1E1A |

Weight: 0.0045g(typ.)

## Maximum Ratings (Ta = 25°C)

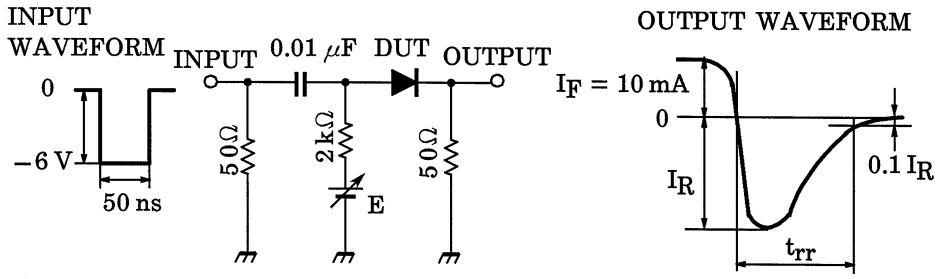
| Characteristic | Symbol | Rating | Unit |
|---|---|---|---|
| Maximum (peak) reverse voltage | $V_{RM}$ | 250 | V |
| Reverse voltage | $V_R$ | 200 | V |
| Maximum (peak) forward current | $I_{FM}$ | 300 | mA |
| Average forward current | $I_O$ | 100 | mA |
| Surge current (10ms) | $I_{FSM}$ | 2 | A |
| Power dissipation | P | 200 * | mW |
| Junction temperature | $T_j$ | 125 | °C |
| Storage temperature range | $T_{stg}$ | −55~125 | °C |

*: When mounted on a glass epoxy board PCB: 20 mm × 20 mm, with copper pad 4 mm × 4 mm.

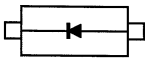
## Electrical Characteristics (Ta = 25°C)

| Characteristic | Symbol | Test Circuit | Test Condition | Min | Typ. | Max | Unit |
|---|---|---|---|---|---|---|---|
| Forward voltage | $V_{F\ (1)}$ | — | $I_F$ = 10mA | — | 0.72 | 1.0 | V |
| | $V_{F\ (2)}$ | — | $I_F$ = 100mA | — | 0.90 | 1.2 | |
| Reverse current | $I_{R\ (1)}$ | — | $V_R$ = 50V | — | — | 0.1 | μA |
| | $I_{R\ (2)}$ | — | $V_R$ = 200V | — | — | 1.0 | |
| Total capacitance | $C_T$ | — | $V_R$ = 0, f = 1MHz | — | 1.5 | 3.0 | pF |
| Reverse recovery time | $t_{rr}$ | — | $I_F$ = 10mA (Fig. 1) | — | 10 | 60 | ns |

**Fig.1 Reverse Recovery Time ($t_{rr}$) Test Circuit**




**Equivalent Circuit(Top View)**



**Marking**