

TOSHIBA Diode Silicon Epitaxial Planar Type

## 1SS314

## VHF Tuner Band Switch Applications

Unit: mm

- Small package.
- Small total capacitance:  $C_T = 1.2 \text{ pF}$  (max)
- Low series resistance:  $r_s = 0.5 \Omega$  (typ.)

Absolute Maximum Ratings ( $T_a = 25^\circ\text{C}$ )

| Characteristics           | Symbol    | Rating         | Unit             |
|---------------------------|-----------|----------------|------------------|
| Reverse voltage           | $V_R$     | 30             | V                |
| Forward current           | $I_F$     | 100            | mA               |
| Junction temperature      | $T_j$     | 125            | $^\circ\text{C}$ |
| Storage temperature range | $T_{stg}$ | $-55 \sim 125$ | $^\circ\text{C}$ |

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).

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

Weight: 0.004 g (typ.)

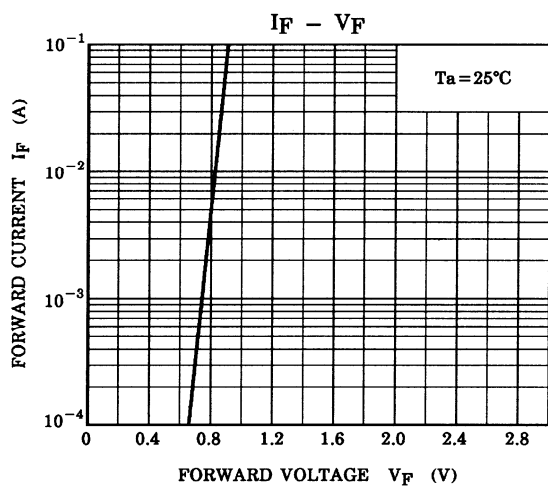
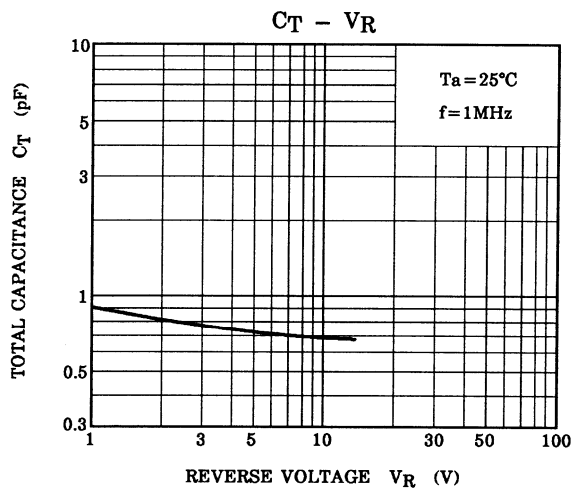
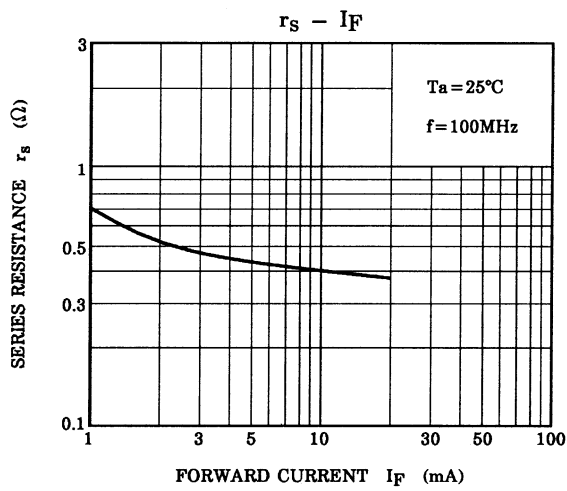
Electrical Characteristics ( $T_a = 25^\circ\text{C}$ )

| Characteristics   | Symbol | Test Condition                            | Min | Typ. | Max  | Unit          |
|-------------------|--------|-------------------------------------------|-----|------|------|---------------|
| Forward voltage   | $V_F$  | $I_F = 2 \text{ mA}$                      | —   | —    | 0.85 | V             |
| Reverse current   | $I_R$  | $V_R = 15 \text{ V}$                      | —   | —    | 0.1  | $\mu\text{A}$ |
| Reverse voltage   | $V_R$  | $I_R = 1 \mu\text{A}$                     | 30  | —    | —    | V             |
| Total capacitance | $C_T$  | $V_R = 6 \text{ V}, f = 1 \text{ MHz}$    | —   | 0.7  | 1.2  | pF            |
| Series resistance | $r_s$  | $I_F = 2 \text{ mA}, f = 100 \text{ MHz}$ | —   | 0.5  | 0.9  | $\Omega$      |

## Marking



Start of commercial production  
1987-05



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