

TOSHIBA Diode Silicon Epitaxial Planar Type

1SS381

VHF Tuner Band Switch Applications

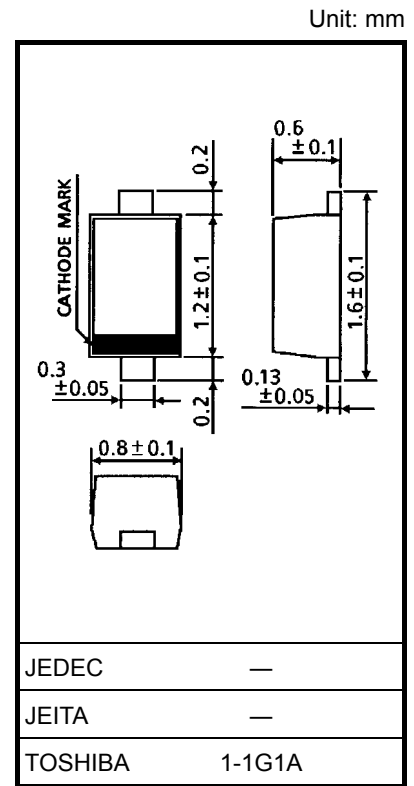
- Small package
- Small total capacitance: $C_T = 1.2 \text{ pF}$ (max)
- Low series resistance: $r_s = 0.6 \text{ } \Omega$ (typ.)

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} | -55~125 | $^\circ\text{C}$ |

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).



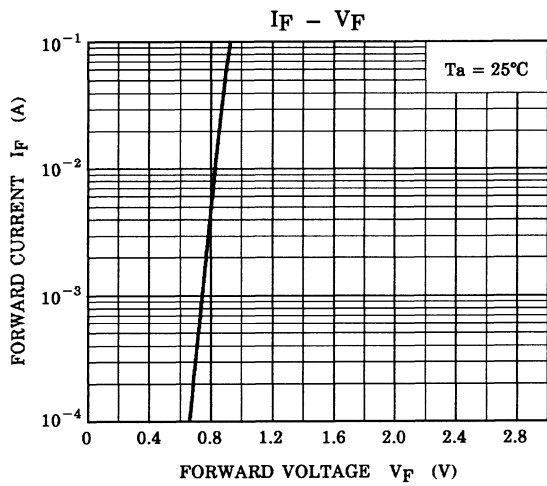
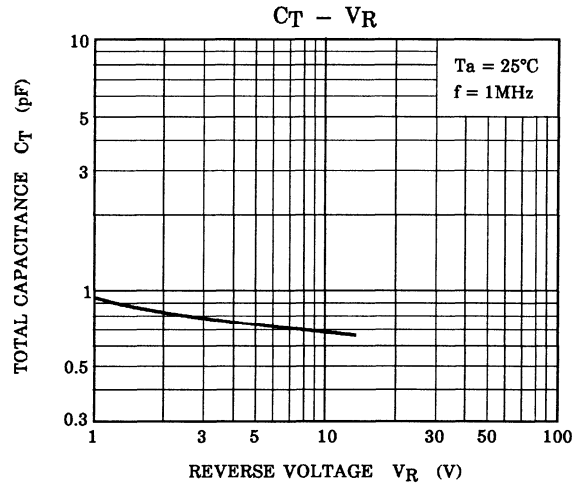
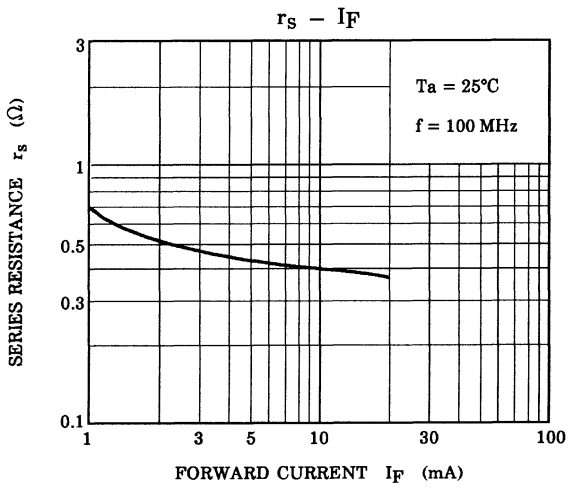
Weight: 0.0014 g (typ.)

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 | μA |
| Reverse voltage | V_R | $I_R = 1 \text{ } \mu\text{A}$ | 30 | — | — | V |
| Total capacitance | C_T | $V_R = 6 \text{ V}, f = 1 \text{ MHz}$ | — | 0.7 | 1.2 | pF |
| Series resistance | r_s | $I_F = 2 \text{ mA}, f = 100 \text{ MHz}$ | — | 0.6 | 0.9 | Ω |

Marking





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Тел: +7 (812) 336 43 04 (многоканальный)

Email: org@lifeelectronics.ru