

TOSHIBA Diode Silicon Epitaxial Planar Type

1SV310

VCO for UHF Band Radio

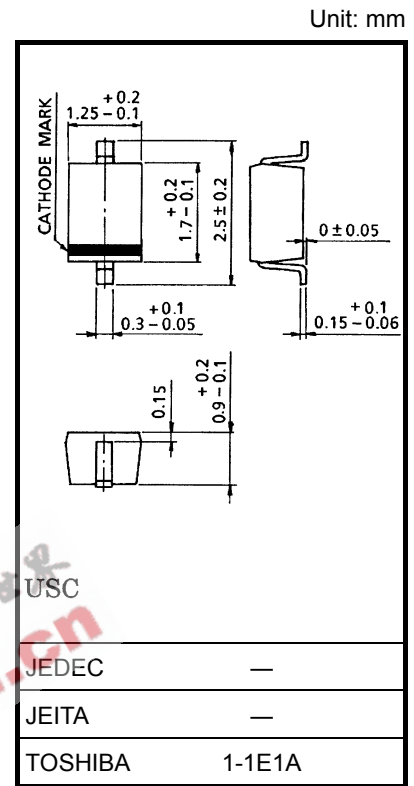
- High capacitance ratio: $C_1 V/C_4 V = 2.1$ (typ.)
- Low series resistance: $r_s = 0.28 \Omega$ (typ.)
- Useful for small size tuner

Absolute Maximum Ratings (Ta = 25°C)

| Characteristics | Symbol | Rating | Unit |
|---------------------------|-----------|---------|------|
| Reverse voltage | V_R | 10 | V |
| Junction temperature | T_j | 125 | °C |
| Storage temperature range | T_{stg} | -55~125 | °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).



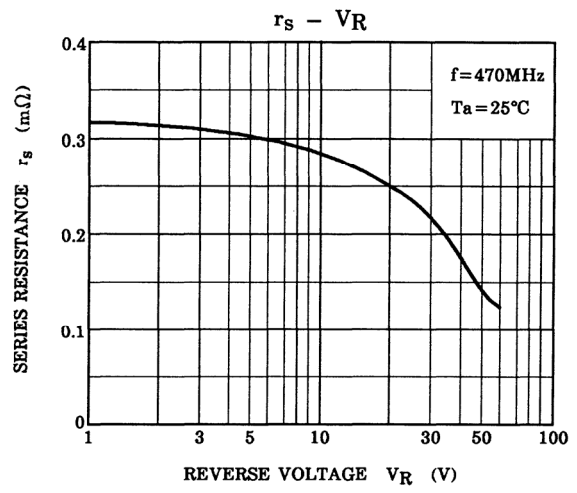
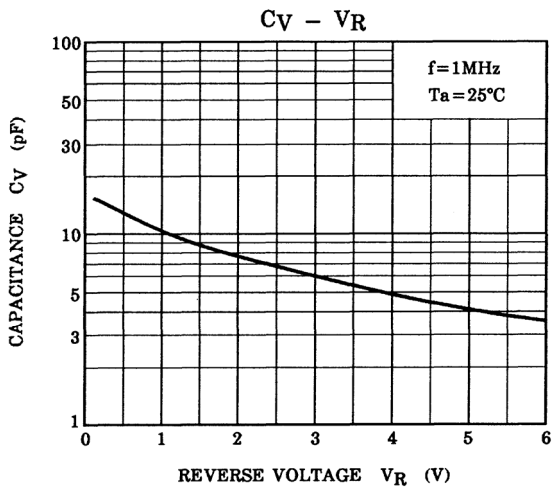
Weight: 0.004 g (typ.)

Electrical Characteristics (Ta = 25°C)

| Characteristics | Symbol | Test Condition | Min | Typ. | Max | Unit |
|-------------------|---------------|--------------------------|------|------|------|----------|
| Reverse voltage | V_R | $I_R = 1 \mu A$ | 10 | — | — | V |
| Reverse current | I_R | $V_R = 10 V$ | — | — | 3 | nA |
| Capacitance | $C_1 V$ | $V_R = 1 V, f = 1 MHz$ | 9.7 | — | 11.1 | pF |
| Capacitance | $C_4 V$ | $V_R = 4 V, f = 1 MHz$ | 4.45 | — | 5.45 | pF |
| Capacitance ratio | $C_1 V/C_4 V$ | — | 1.8 | 2.1 | — | — |
| Series resistance | r_s | $V_R = 1 V, f = 470 MHz$ | — | 0.28 | 0.4 | Ω |

Marking





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20070701-EN GENERAL

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