

TOSHIBA Diode Silicon Epitaxial Planar Type

1SV314

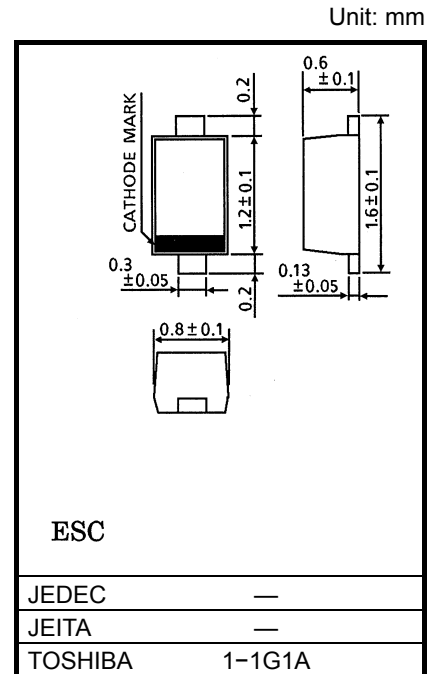
VCO for UHF Band Radio

- High Capacitance Ratio : $C_{0.5V} / C_{2.5V} = 2.5$ (Typ.)
- Low Series Resistance : $r_s = 0.35 \Omega$ (Typ.)
- Useful for Small Size Tuner

Absolute Maximum Ratings (Ta = 25°C)

| CHARACTERISTIC | SYMBOL | RATING | UNIT |
|---------------------------|-----------|------------|------|
| Reverse Voltage | V_R | 10 | V |
| Junction Temperature | T_j | 125 | °C |
| Storage Temperature Range | T_{stg} | -55 to 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).

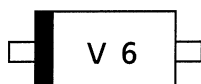


Weight: 0.0014g (typ.)

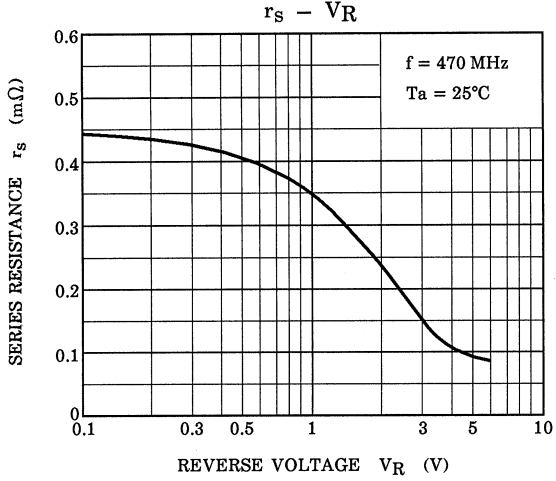
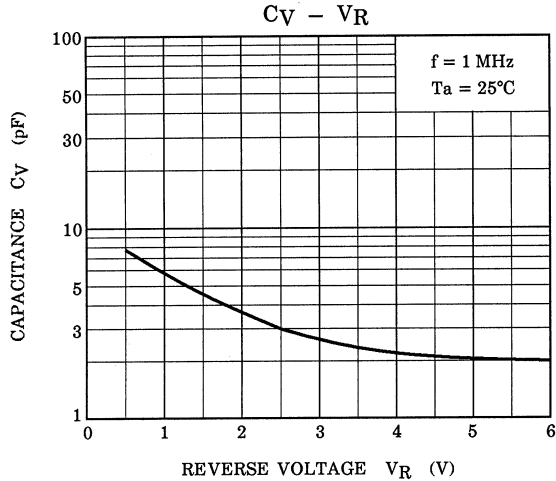
Electrical Characteristics (Ta = 25°C)

| CHARACTERISTIC | 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 | $C_{0.5V}$ | $V_R = 0.5 V, f = 1 MHz$ | 7.3 | — | 8.4 | pF |
| Capacitance | $C_{2.5V}$ | $V_R = 2.5 V, f = 1 MHz$ | 2.75 | — | 3.4 | pF |
| Capacitance Ratio | $C_{0.5V} / C_{2.5V}$ | — | 2.4 | 2.5 | — | — |
| Series Resistance | r_s | $V_R = 1 V, f = 470 MHz$ | — | 0.35 | 0.45 | Ω |

Marking



Start of commercial production
1998-06



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