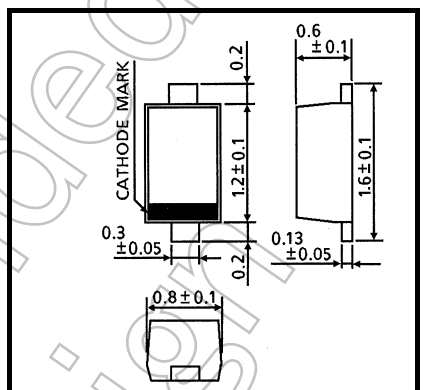
TOSHIBA Diode Silicon Epitaxial Planar Type

# 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 Ω (Typ.)
- Useful for Small Size Tuner

Unit: mm




| | |
|---|---|
| ESC | |
| JEDEC | — |
| JEITA | — |
| TOSHIBA | 1−1G1A |

Weight:0.0014g (typ.)

## Absolute Maximum Ratings (Ta = 25°C)

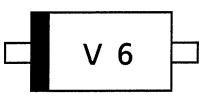
| CHARACTERISTIC | SYMBOL | RATING | UNIT |
|---|---|---|---|
| Reverse Voltage | $V_R$ | 10 | V |
| Junction Temperature | $T_j$ | 125 | °C |
| Storage Temperature Range | $T_{stg}$ | −55 to 125 | °C |

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).

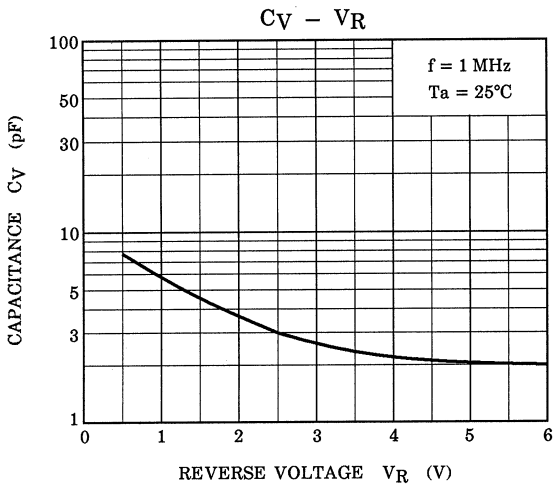
## Electrical Characteristics (Ta = 25°C)

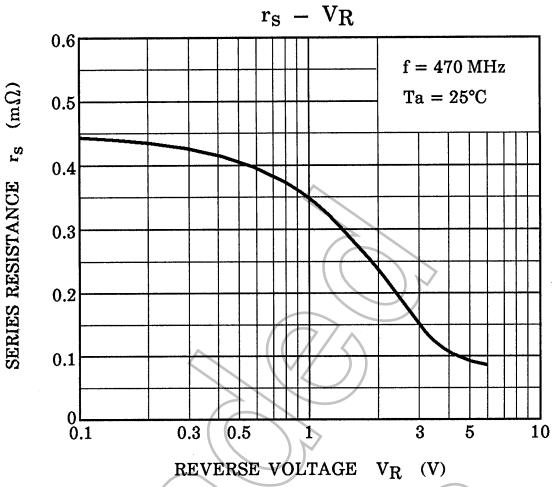
| CHARACTERISTIC | SYMBOL | TEST CONDITION | MIN | TYP. | MAX | UNIT |
|---|---|---|---|---|---|---|
| Reverse Voltage | $V_R$ | $I_R$ = 1μA | 10 | — | — | V |
| Reverse Current | $I_R$ | $V_R$ = 10 V | — | — | 3 | nA |
| Capacitance | $C_{0.5V}$ | $V_R$ = 0.5 V, f = 1 MHz | 7.3 | — | 8.4 | pF |
| Capacitance | $C_{2.5V}$ | $V_R$ = 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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