Unit: mm

TOSHIBA Variable Capacitance Diode Silicon Epitaxial Planar Type

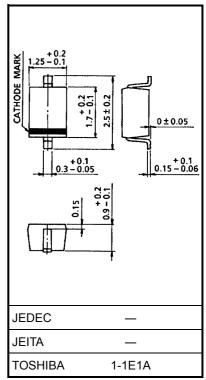
# 1SV214

TV Tuning

- High capacitance ratio: C2 V/C25 V = 6.5 (typ.)
- Low series resistance:  $r_s = 0.4 \Omega$  (typ.)
- Excellent C-V characteristics, and small tracking error.
- Useful for small size tuner.

#### Maximum Ratings (Ta = 25°C)

| Characteristics           | Symbol           | Rating                               | Unit |
|---------------------------|------------------|--------------------------------------|------|
| Reverse voltage           | V <sub>R</sub>   | 30                                   | V    |
| Peak reverse voltage      | V <sub>RM</sub>  | 35 (R <sub>L</sub> = 10 k $\Omega$ ) | V    |
| Junction temperature      | Тј               | 125                                  | °C   |
| Storage temperature range | T <sub>stg</sub> | -55~125                              | °C   |



Weight: 0.004 g (typ.)

### Electrical Characteristics (Ta = 25°C)

| Characteristics   | Symbol         | Test Condition                    | Min   | Тур. | Max   | Unit |
|-------------------|----------------|-----------------------------------|-------|------|-------|------|
| Reverse voltage   | V <sub>R</sub> | I <sub>R</sub> = 1 μA             | 30    | _    | _     | V    |
| Reverse current   | I <sub>R</sub> | V <sub>R</sub> = 28 V             | _     | _    | 10    | nA   |
| Capacitance       | C2 V           | V <sub>R</sub> = 2 V, f = 1 MHz   | 14.16 | _    | 16.25 | pF   |
| Capacitance       | C25 V          | V <sub>R</sub> = 25 V, f = 1 MHz  | 2.11  | _    | 2.43  | pF   |
| Capacitance ratio | C2 V/C25 V     |                                   | 5.90  | 6.50 | 7.15  | —    |
| Series resistance | r <sub>s</sub> | V <sub>R</sub> = 5 V, f = 470 MHz | _     | 0.4  | 0.55  | Ω    |

Note 1: Units are compounded in one package and are matched to 2.5%.

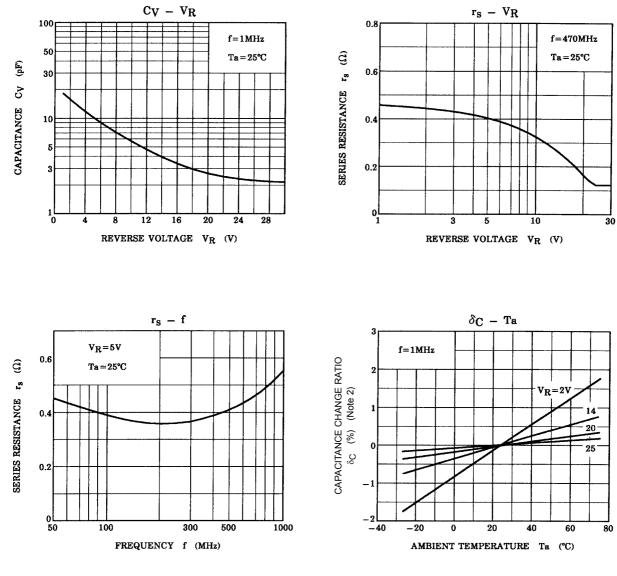
$$\frac{C (max) - C (min)}{C (min)} \leq 0.025$$

(V<sub>R</sub> = 2~25 V)

#### Marking



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Note 2:  $\delta_{C} = \frac{C (Ta) - C (25)}{C (25)} \times 100$  (%)

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