

TOSHIBA Variable Capacitance Diode Silicon Epitaxial Planar Type

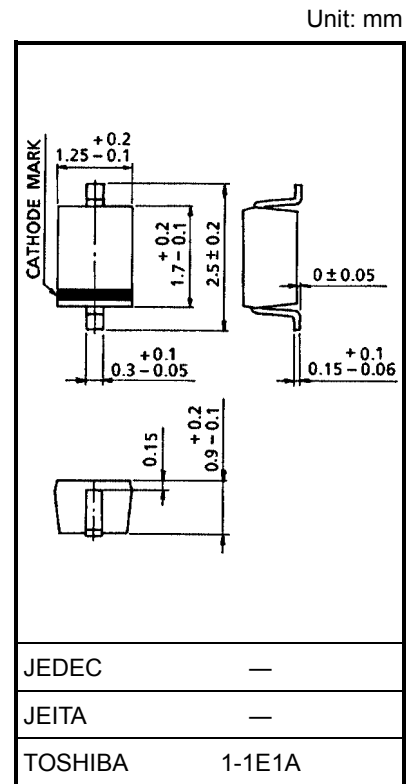
1SV245

UHF SHF Tuning

- High capacitance ratio: $C2 V/C25 V = 5.7$ (typ.)
- Low series resistance: $r_s = 1.2 \Omega$ (typ.)
- Excellent C-V characteristics, and small tracking error.

Maximum Ratings (Ta = 25°C)

| Characteristics | Symbol | Rating | Unit |
|---------------------------|-----------|---------------------------|------|
| Reverse voltage | V_R | 30 | V |
| Peak reverse voltage | V_{RM} | 35 ($R_L = 10 k\Omega$) | V |
| Junction temperature | T_j | 125 | °C |
| Storage temperature range | T_{stg} | -55~125 | °C |



Electrical Characteristics (Ta = 25°C)

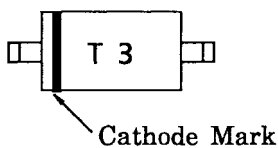
Weight: 0.004 g (typ.)

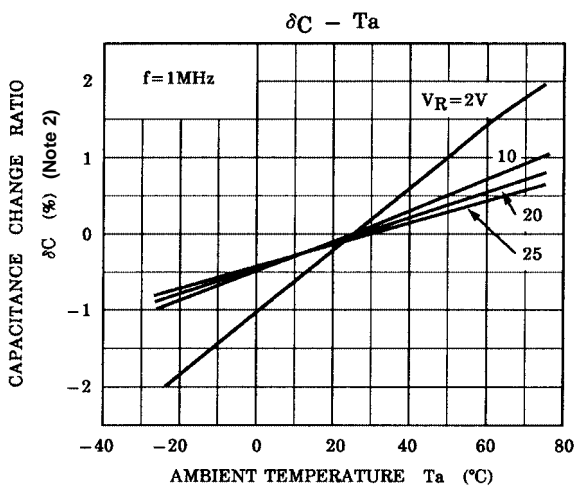
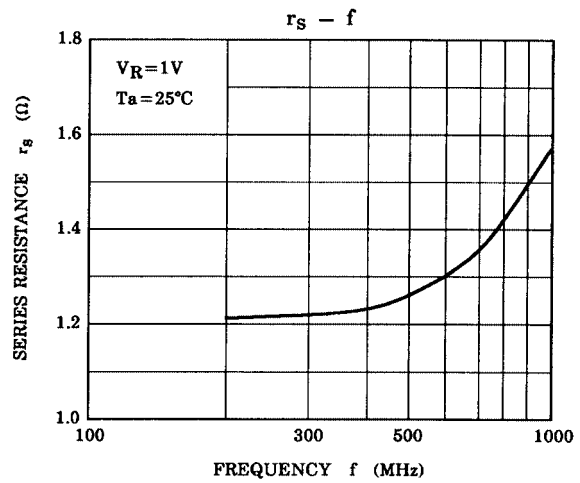
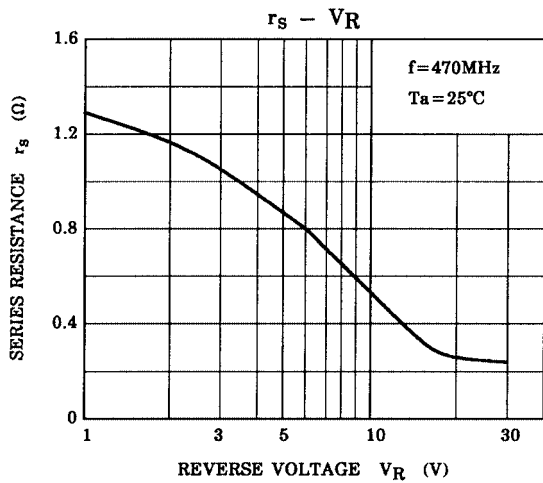
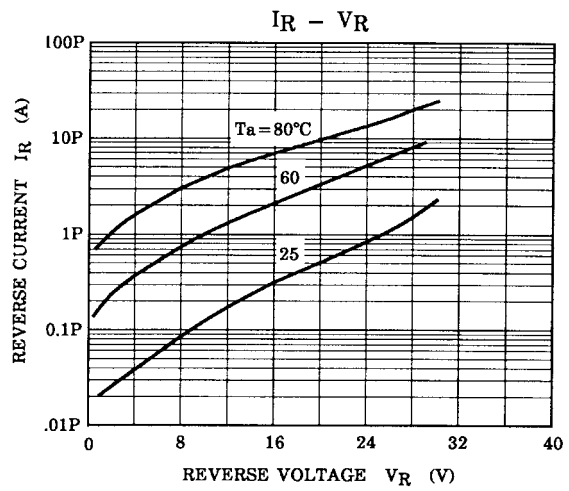
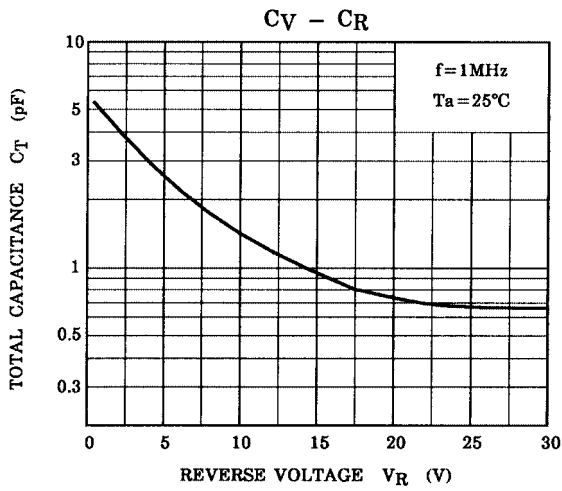
| Characteristics | Symbol | Test Condition | Min | Typ. | Max | Unit |
|-------------------|--------------|--------------------------|------|------|------|----------|
| Reverse voltage | V_R | $I_R = 1 \mu A$ | 30 | — | — | V |
| Reverse current | I_R | $V_R = 28 V$ | — | — | 10 | nA |
| Capacitance | $C2 V$ | $V_R = 2 V, f = 1 MHz$ | 3.31 | — | 4.55 | pF |
| Capacitance | $C25 V$ | $V_R = 25 V, f = 1 MHz$ | 0.61 | — | 0.77 | pF |
| Capacitance ratio | $C2 V/C25 V$ | — | 5.0 | 5.7 | 6.5 | — |
| Series resistance | r_s | $V_R = 1 V, f = 470 MHz$ | — | 1.2 | 2.0 | Ω |

Note 1: Unites are compounded in one package and are matched to 6.0%.

$$\frac{C(\max) - C(\min)}{C(\min)} \leq 0.06 \quad (V_R = 2\sim 25 V)$$

Marking





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

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