

TOSHIBA Variable Capacitance Diode Silicon Epitaxial Planar Type

HN1V01H

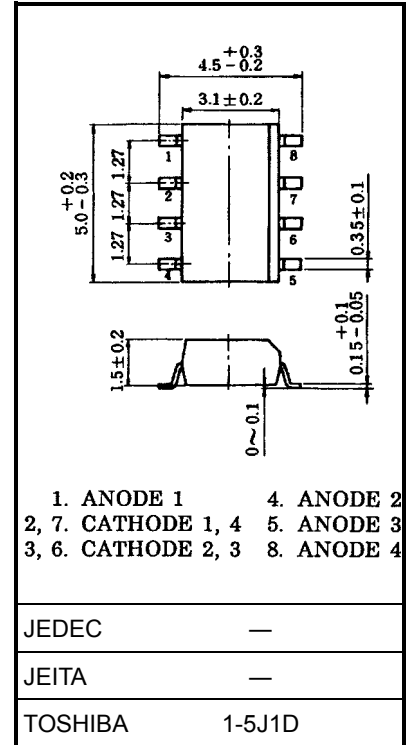
AM Radio Band Tuning Applications

- High capacitance ratio: $C1 V/C8 V = 19.5$ (typ.)
- High Q: $Q = 200$ (min)
- Including four devices in FM8 package (flat pack mini 8 pin)
- Low voltage operation: $V_R = 1\sim 8 V$

Maximum Ratings ($T_a = 25^\circ C$) (D_1, D_2, D_3, D_4)

| Characteristics | Symbol | Rating | Unit |
|---------------------------|-----------|---------|------------|
| Reverse voltage | V_R | 16 | V |
| Junction temperature | T_j | 125 | $^\circ C$ |
| Storage temperature range | T_{stg} | -55~125 | $^\circ C$ |

Unit: mm



Weight: 0.05 g (typ.)

Electrical Characteristics ($T_a = 25^\circ C$) (D_1, D_2, D_3, D_4)

| Characteristics | Symbol | Test Condition | Min | Typ. | Max | Unit |
|-------------------|-------------|------------------------|------|------|------|------|
| Reverse voltage | V_R | $I_R = 10 \mu A$ | 16 | — | — | V |
| Reverse current | I_R | $V_R = 16 V$ | — | — | 20 | nA |
| Capacitance | $C1 V$ | $V_R = 1 V, f = 1 MHz$ | 435 | — | 540 | pF |
| Capacitance | $C3 V$ | $V_R = 3 V, f = 1 MHz$ | 140 | — | 250 | pF |
| Capacitance | $C5 V$ | $V_R = 5 V, f = 1 MHz$ | 50.0 | — | 90.0 | pF |
| Capacitance | $C8 V$ | $V_R = 8 V, f = 1 MHz$ | 19.9 | — | 26.7 | pF |
| Capacitance ratio | $C1 V/C8 V$ | — | 16.2 | 19.5 | — | — |
| Figure of merit | Q | $V_R = 1 V, f = 1 MHz$ | 200 | — | — | — |

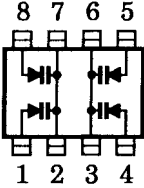
Note 1: Four devices in one package are matched for capacitance to 2.5%.

$$\frac{C(\max) - C(\min)}{C(\min)} \leq 0.025 (V_R = 1\sim 8 V)$$

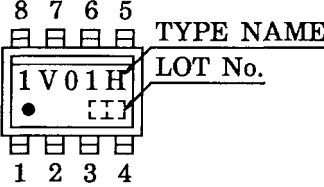
Note 2: $C8 V$ is divided into two classifications as follows.

| Classification | $C8 V$ (pF) |
|----------------|-------------|
| A | 19.9~23.7 |
| B | 22.4~26.7 |

Pin Assignment (top view)



Marking



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