

# MA27V12

## Silicon epitaxial planar type

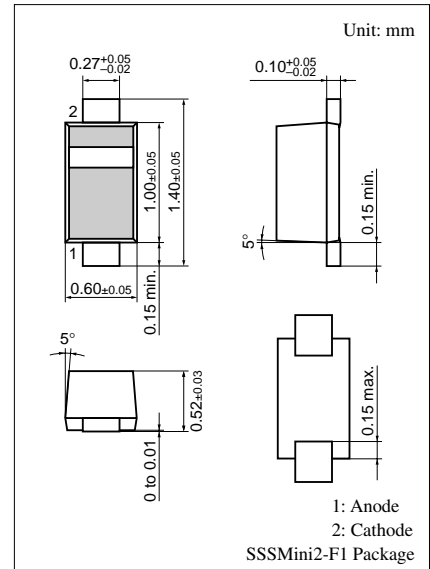
For VCO

### ■ Features

- Good linearity and large capacitance-ratio in  $C_D - V_R$  relation
- High frequency type by this low capacitance
- Ultraminiature Package 1.0 mm × 0.6 mm (height: 0.52 mm), optimum for high-density mounting and high-speed mounting

### ■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

| Parameter            | Symbol           | Rating      | Unit             |
|----------------------|------------------|-------------|------------------|
| Reverse voltage (DC) | $V_R$            | 8           | V                |
| Junction temperature | $T_j$            | 125         | $^\circ\text{C}$ |
| Storage temperature  | $T_{\text{stg}}$ | -55 to +125 | $^\circ\text{C}$ |



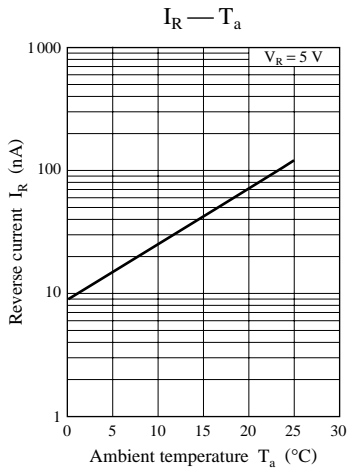
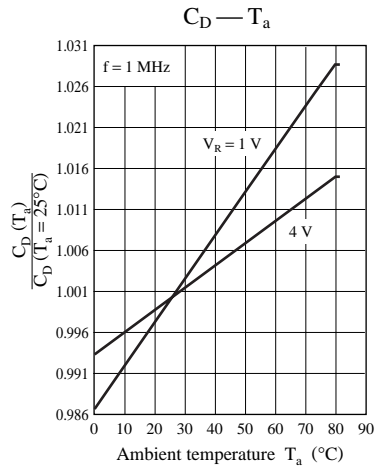
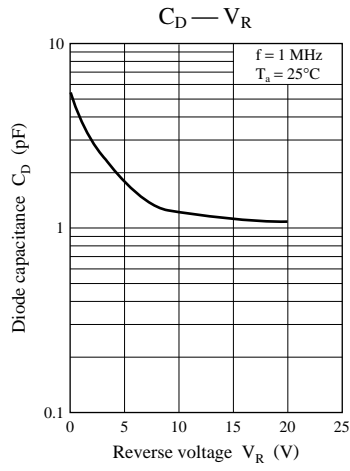
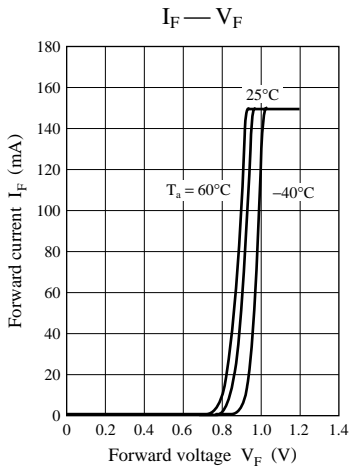
Marking Symbol: E

### ■ Electrical Characteristics $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

| Parameter            | Symbol                | Conditions                             | Min  | Typ | Max  | Unit     |
|----------------------|-----------------------|--|------|-----|------|----------|
| Reverse current (DC) | $I_R$                 | $V_R = 5\text{ V}$                     |      |     | 10   | nA       |
| Diode capacitance    | $C_{D(1V)}$           | $V_R = 1\text{ V}, f = 1\text{ MHz}$   | 3.60 |     | 3.90 | pF       |
|                      | $C_{D(4V)}$           | $V_R = 4\text{ V}, f = 1\text{ MHz}$   | 1.97 |     | 2.14 |          |
| Capacitance ratio    | $C_{D(1V)}/C_{D(4V)}$ |  | 1.75 |     | 1.90 | —        |
| Series resistance *  | $r_D$                 | $V_R = 4\text{ V}, f = 470\text{ MHz}$ |      |     | 0.35 | $\Omega$ |

Note) 1. Rated input/output frequency: 470 MHz

2. \*: Measuring instrument; YHP MODEL 4191A RF IMPEDANCE ANALYZER



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