

## UHF band VCO

**Description**

The 1T367 is a variable capacitance diode housed in super miniature package, designed for UHF band VCO.

**Features**

- Super miniature package
- Small series resistance  
rs=0.3  $\Omega$  (Typ.)

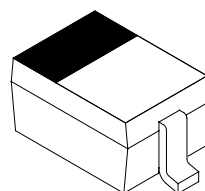
**Applications**

- UHF band VCO
- Local oscillator for telephone
- Local oscillator for cellular systems

**Structure**

Silicon epitaxial planar type diode

M-235

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

|                         |           |             |    |
|-------------------------|-----------|-------------|----|
| • Reverse voltage       | $V_R$     | 15          | V  |
| • Operating temperature | $T_{opr}$ | −35 to +85  | °C |
| • Storage temperature   | $T_{stg}$ | −65 to +150 | °C |

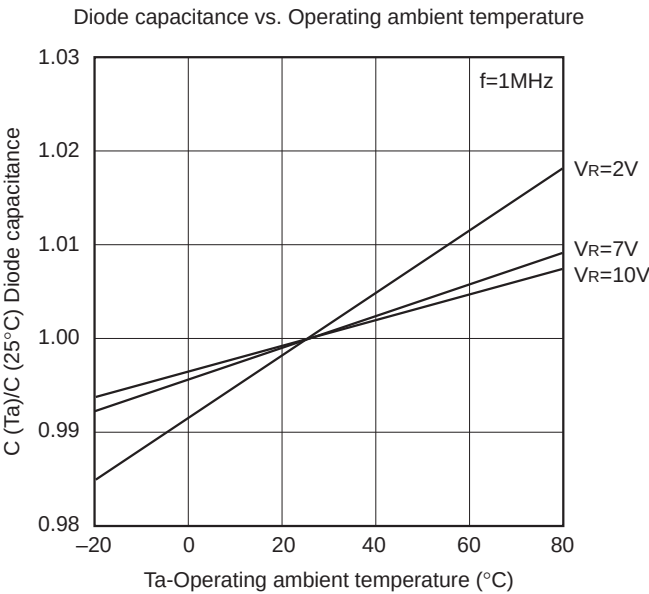
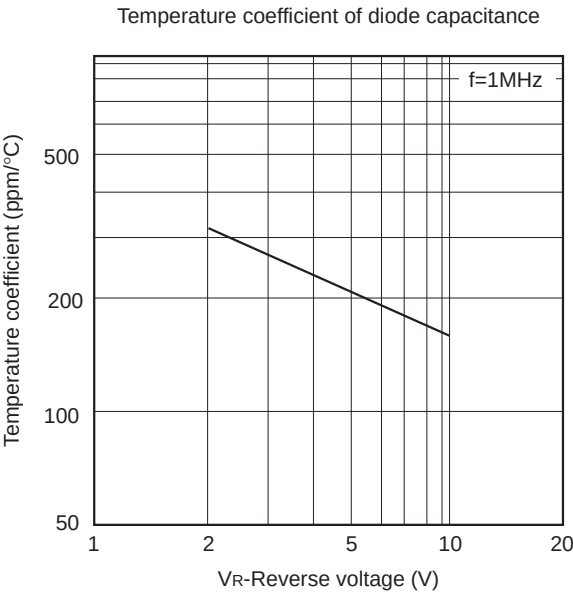
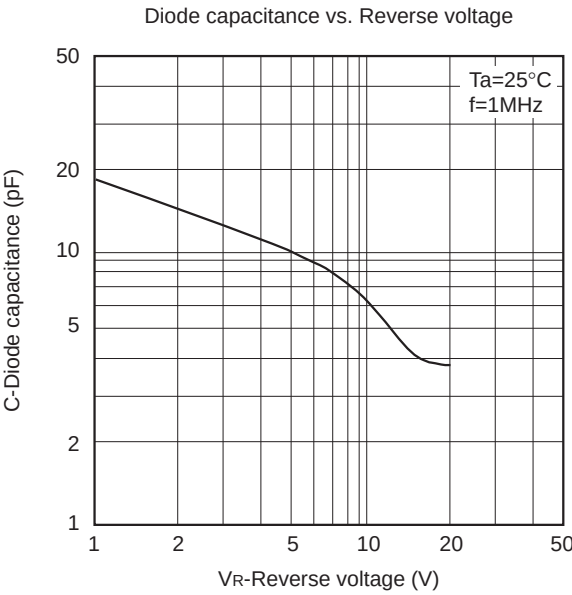
**Electrical Characteristics**

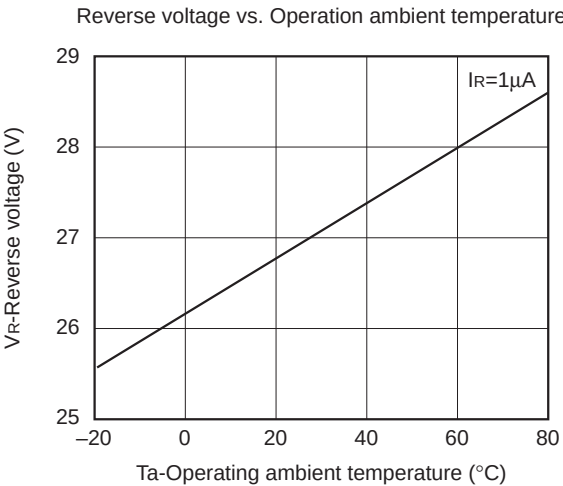
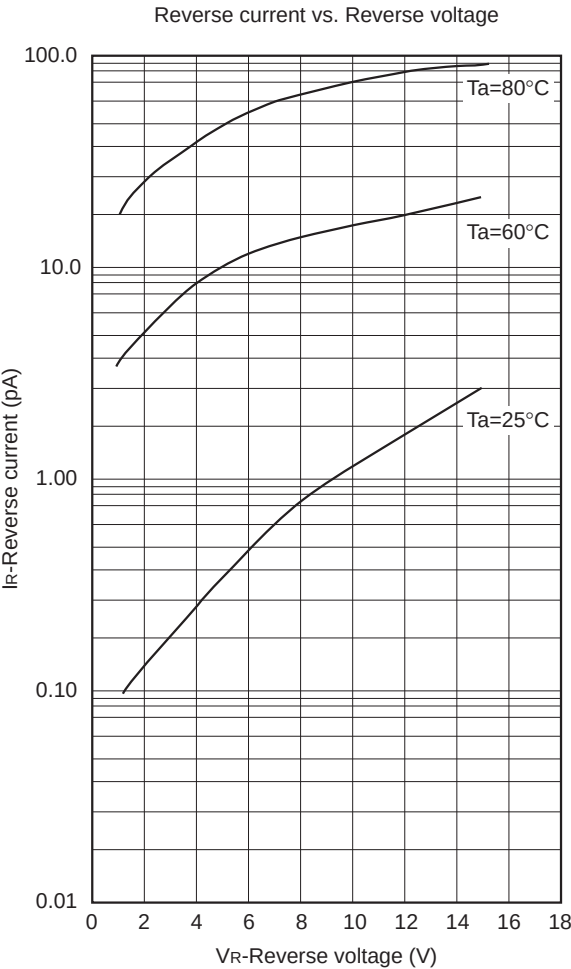
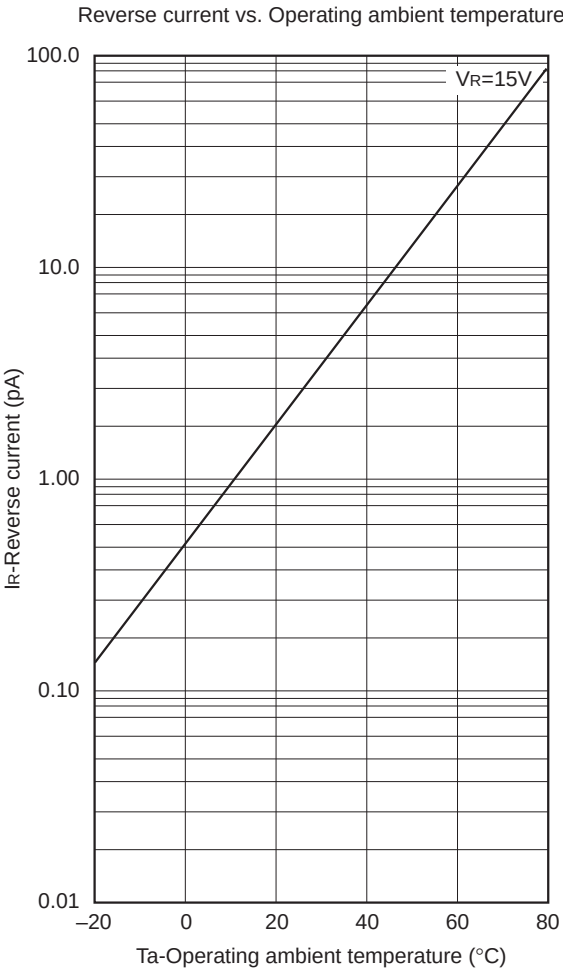
(Ta=25 °C)

| Item              | Symbol       | Conditions                            | Min. | Typ. | Max. | Unit     |
|-------------------|--------------|---------------------------------------|------|------|------|----------|
| Reverse current   | $I_R$        | $V_R=15\text{ V}$                     |      |      | 3    | nA       |
| Diode capacitance | $C_2$        | $V_R=2\text{ V}$ , $f=1\text{ MHz}$   | 14.3 | 15.0 | 16.0 | pF       |
|                   | $C_{10}$     | $V_R=10\text{ V}$ , $f=1\text{ MHz}$  | 5.5  | 6.0  | 6.5  | pF       |
| Capacitance ratio | $C_2/C_{10}$ |                                       | 2.2  | 2.5  |      |          |
| Series resistance | $r_s$        | $V_R=5\text{ V}$ , $f=470\text{ MHz}$ |      | 0.3  | 0.4  | $\Omega$ |

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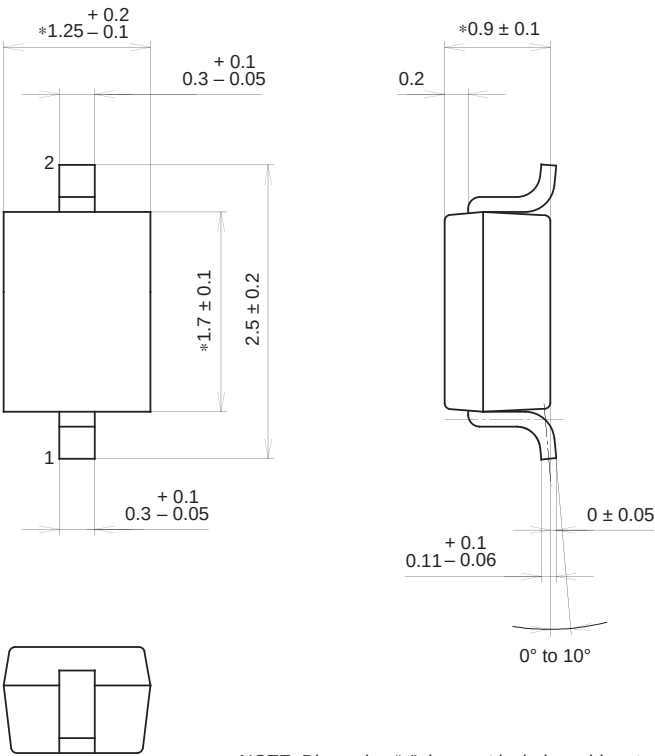
Example of Representative Characteristics





Package Outline Unit : mm

M-235

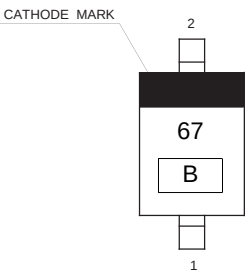


NOTE: Dimension "\*" does not include mold protrusion.

|            |       |
|------------|-------|
| SONY CODE  | M-235 |
| EIAJ CODE  | _____ |
| JEDEC CODE | _____ |

|                |      |
|----------------|------|
| PACKAGE WEIGHT | 0.1g |
|----------------|------|

Marking



Notes  
1) B: Lot No. (Year and Month of manufacture)  
Year; Last one digit  
Month; A, B, C (for Oct. to Dec.)  
1 to 9 (for Jan. to Sept.)