

Variable Capacitance Diode

Description

The 1T368 is a variable capacitance diode contained in super miniature package, designed for wide band CATV.

Features

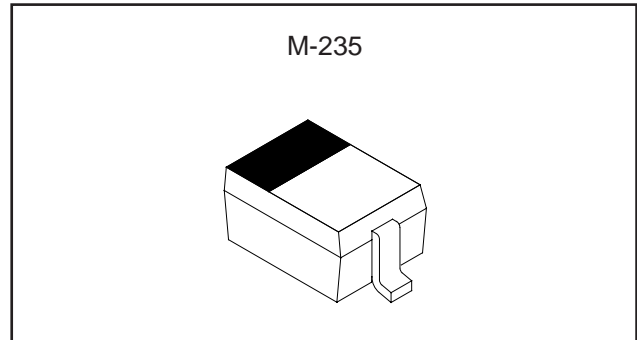
- Super miniature package
- Small series resistance $r_s=0.75 \Omega$ (Max.)
- High capacitance ratio $C_2/C_{25}=11.5$ (Typ.)
- Capacitance deviation in a matching group
2.0 % (Max.)

Applications

Electronic tuning of wide band CATV

Structure

Silicon epitaxial planar type diode



Absolute Maximum Ratings (Ta=25 °C)

- Reverse voltage V_R 30 V
- Operating temperature T_{opr} -20 to +75 °C
- Storage temperature T_{stg} -65 to +150 °C

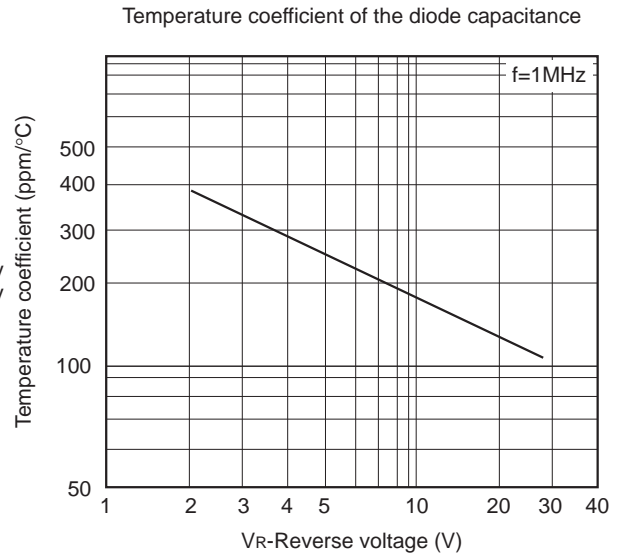
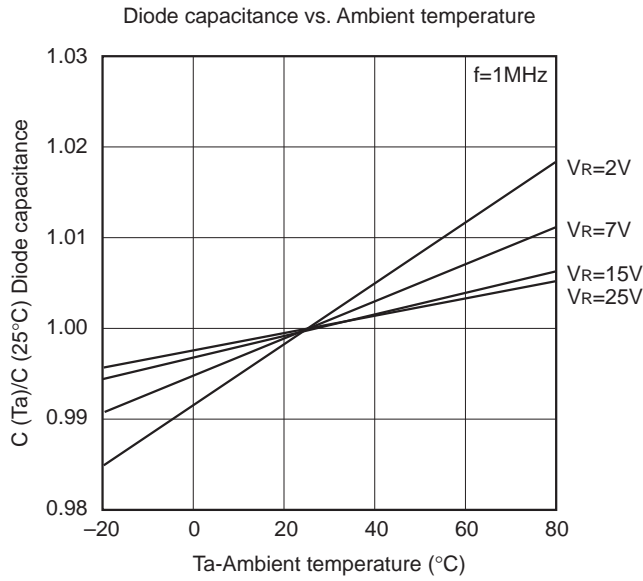
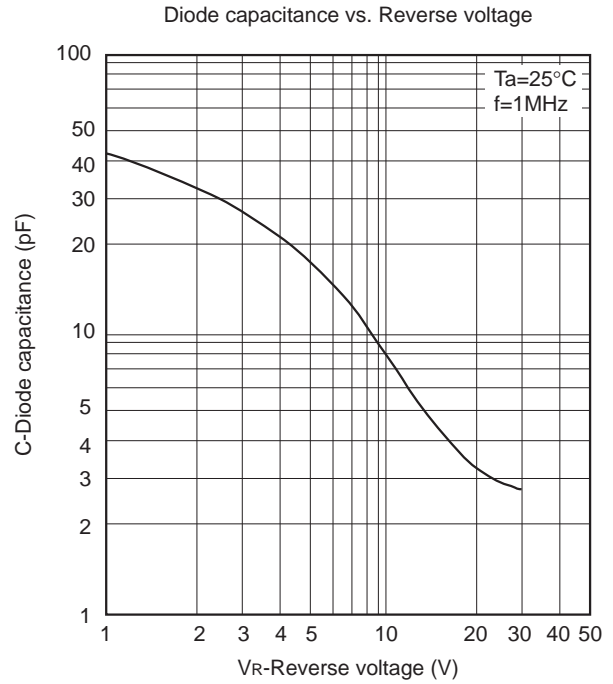
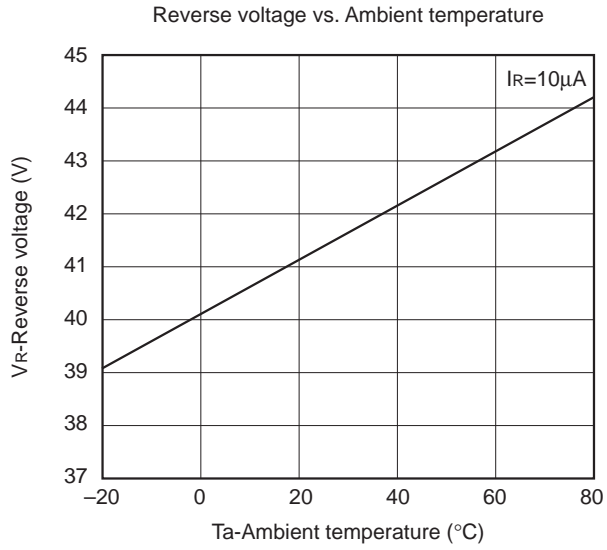
Electrical Characteristics

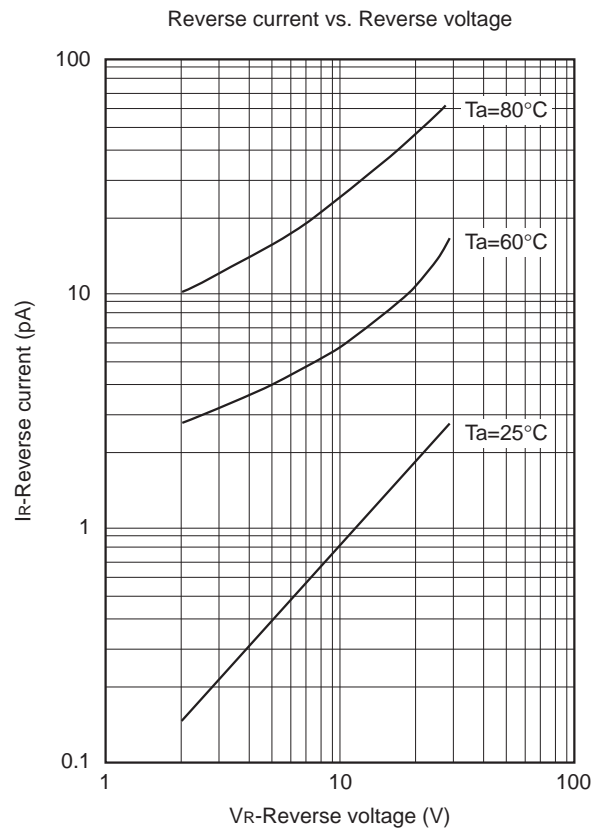
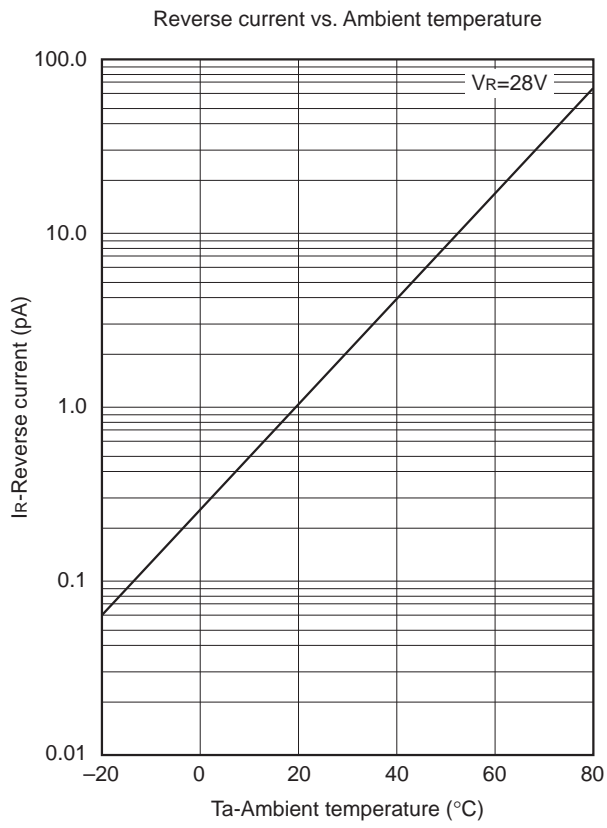
(Ta=25 °C)

| Item | Symbol | Conditions | Min. | Typ. | Max. | Unit |
|---|--------------|------------------------|-------|------|-------|----------|
| Reverse current | I_R | $V_R=28 V$ | | | 10 | nA |
| Diode capacitance | C_2 | $V_R=2 V, f=1 MHz$ | 29.40 | | 34.30 | pF |
| | C_{25} | $V_R=25 V, f=1 MHz$ | 2.53 | | 2.93 | pF |
| Capacitance ratio | C_2/C_{25} | | 11.0 | 11.5 | | |
| Series resistance | r_s | $C_D=14 pF, f=470 MHz$ | | | 0.75 | Ω |
| Capacitance deviation in a matching group | ΔC | $V_R=2 to 25 V$ | | | 2.0 | % |

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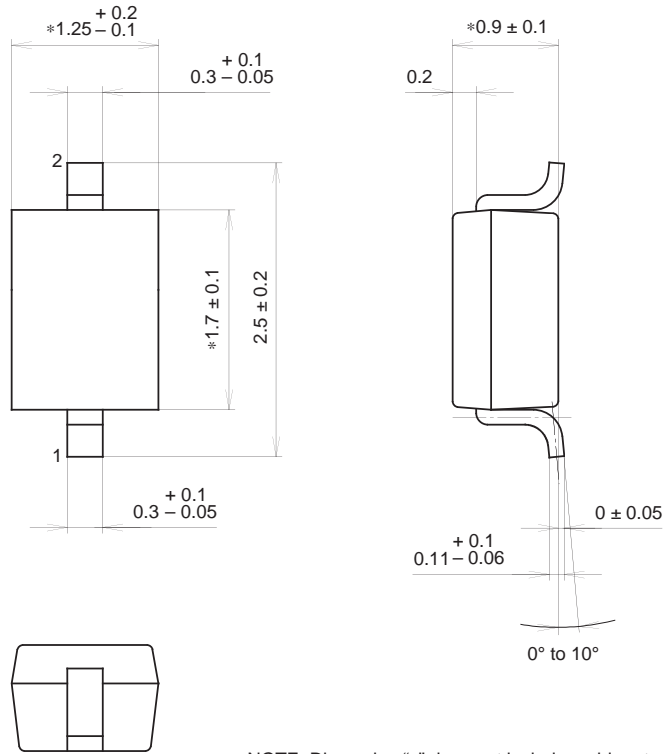
Example of Representative Characteristics





Package Outline Unit : mm

M-235

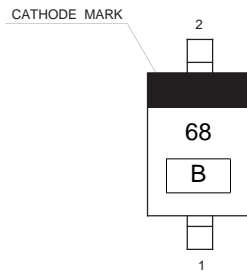


NOTE: Dimension "*" does not include mold protrusion.

| | |
|------------|-------|
| 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.)

This datasheet has been download from:

www.datasheetcatalog.com

Datasheets for electronics components.