

## Silicon Variable Capacitance Diode

### Description

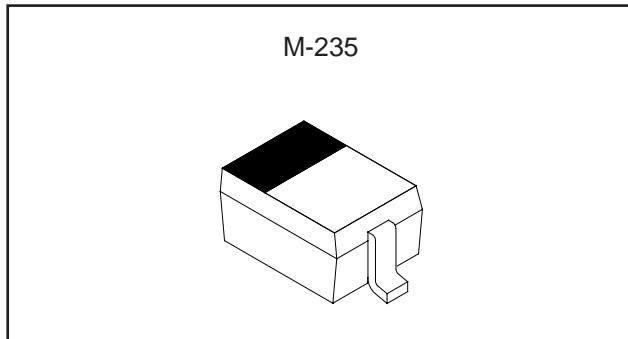
The 1T369 is a super miniature package variable capacitance diode for a wide-band CATV.

### Features

- Super miniature package
- Small series resistance       $r_s=1.0 \Omega$       (Max.)
- Large capacitance ratio       $C_2/C_{25}=15.5$       (Typ.)
- Capacitance deviation in a matching group  
                                2.0 %      (Max.)

### Applications

Electronic tuning of wide-band CATV



### Absolute Maximum Ratings ( $T_a=25^\circ C$ )

- Reverse voltage       $V_R$       34      V
- Operating temperature       $T_{opr}$       -20 to +75       $^\circ C$
- Storage temperature       $T_{stg}$       -65 to +150       $^\circ C$

### Structure

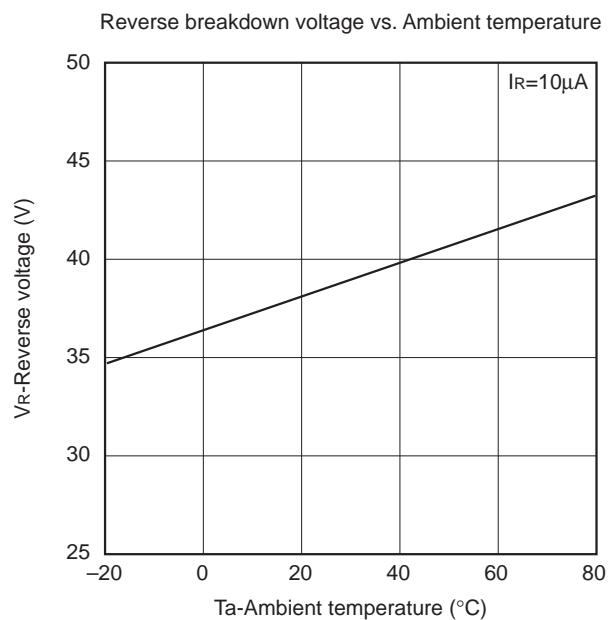
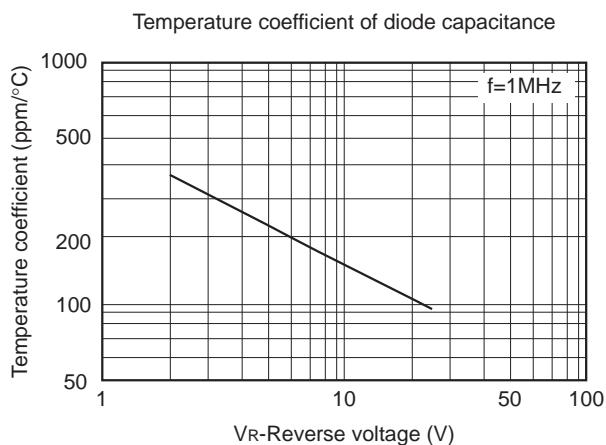
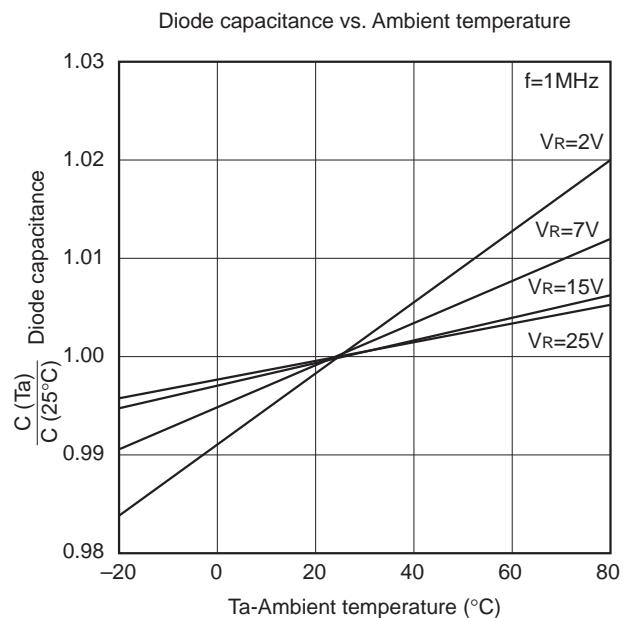
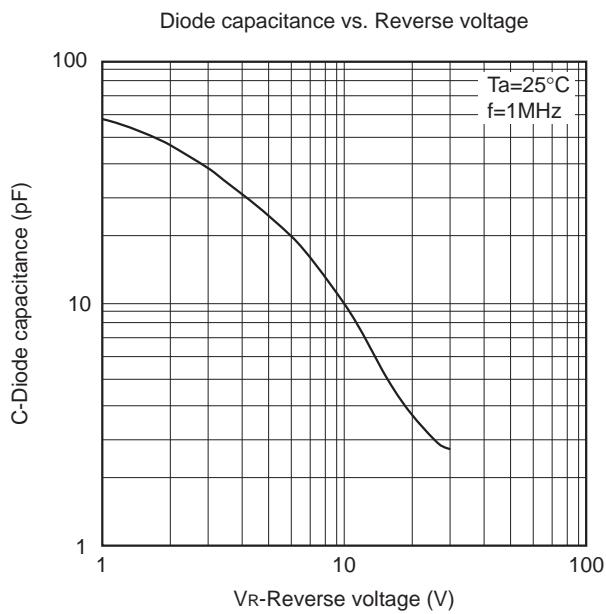
Silicon epitaxial planar type diode

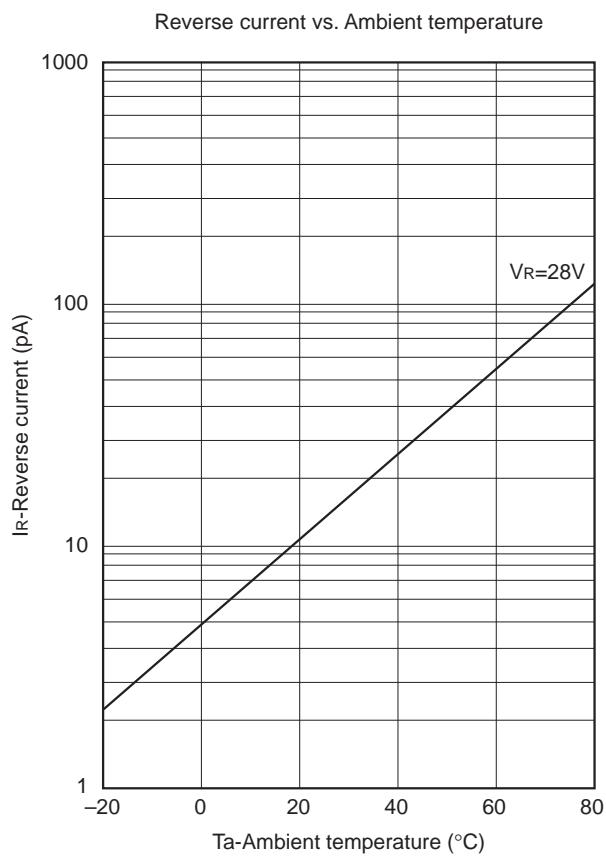
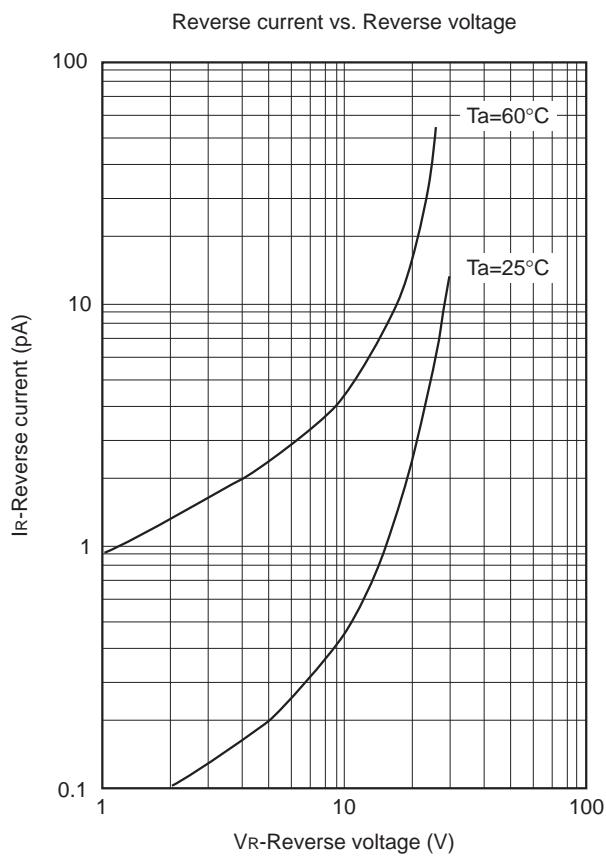
### Electrical Characteristics

( $T_a=25^\circ C$ )

Item	Symbol	Conditions	Min.	Typ.	Max.	Unit
Reverse current	$I_R$	$V_R=28 V$			10	nA
Reverse voltage	$V_R$	$I_R=1 \mu A$	34			V
Diode capacitance	$C_2$	$V_R=2 V, f=1 \text{ MHz}$	39.5	43.4	47.4	pF
	$C_{25}$	$V_R=25 V, f=1 \text{ MHz}$	2.60	2.80	3.03	pF
Capacitance ratio	$C_2/C_{25}$		14.5	15.5	17.0	
Series resistance	$r_s$	$C_D=14 \text{ pF}, f=470 \text{ MHz}$			1.0	$\Omega$
Capacitance deviation in a matching group	$\Delta C$	$C_2$ to $C_{25}$			2.0	%

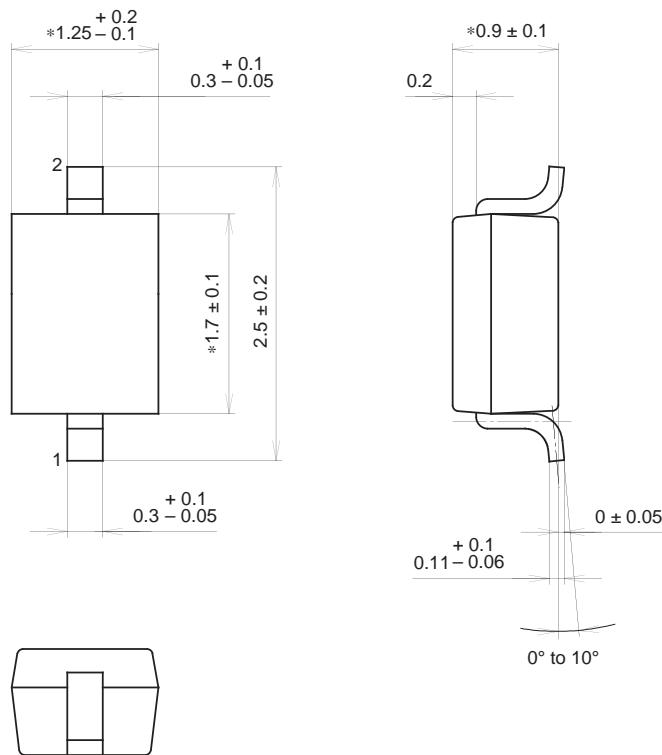
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**Example of Representative Characteristics**



**Package Outline** Unit : mm

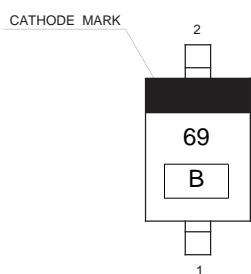
M-235



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

SONY CODE	M-235
EIAJ CODE	_____
JEDEC CODE	_____

PACKAGE WEIGHT	0.1g
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**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.)