

## Variable Capacitance Diode

### Description

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

### Features

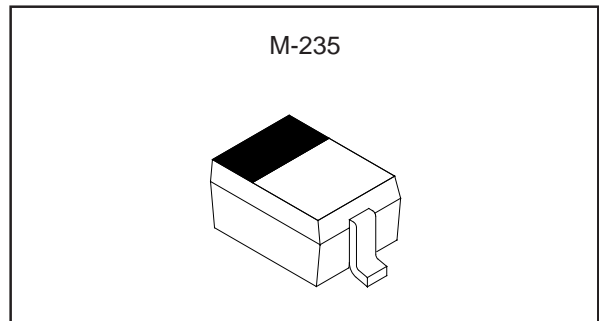
- Super miniature package
- Small series resistance  $r_s=0.75\ \Omega$  (Max.)
- High capacitance ratio  $C_2/C_{25}=11.5$  (Typ.)
- Capacitance deviation in a matching group  
2.0 % (Max.)

### 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

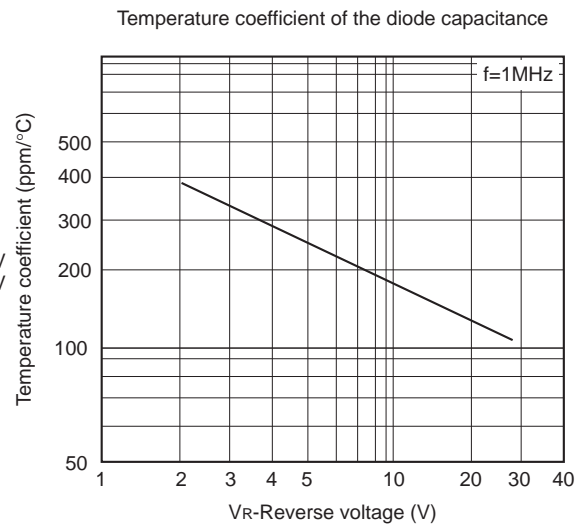
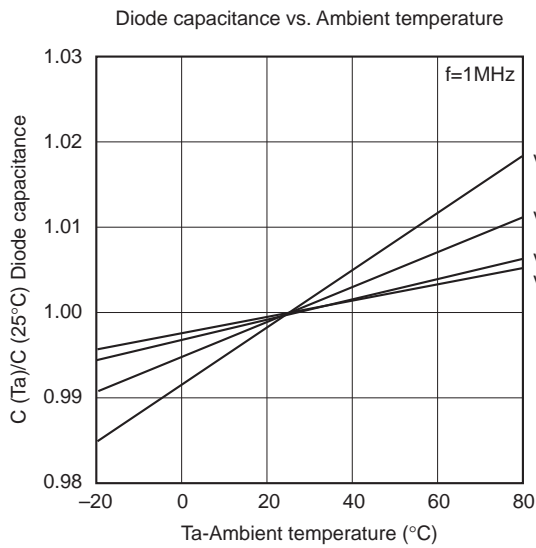
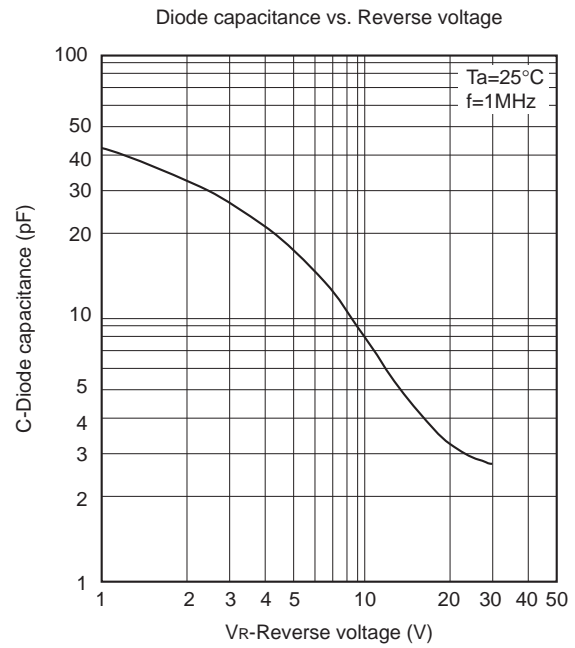
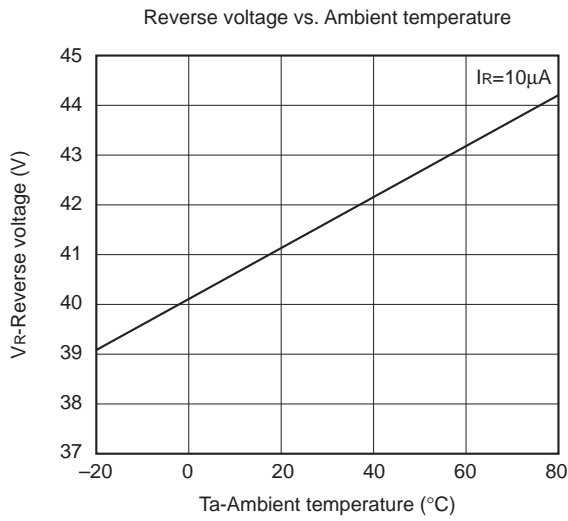
### Electrical Characteristics

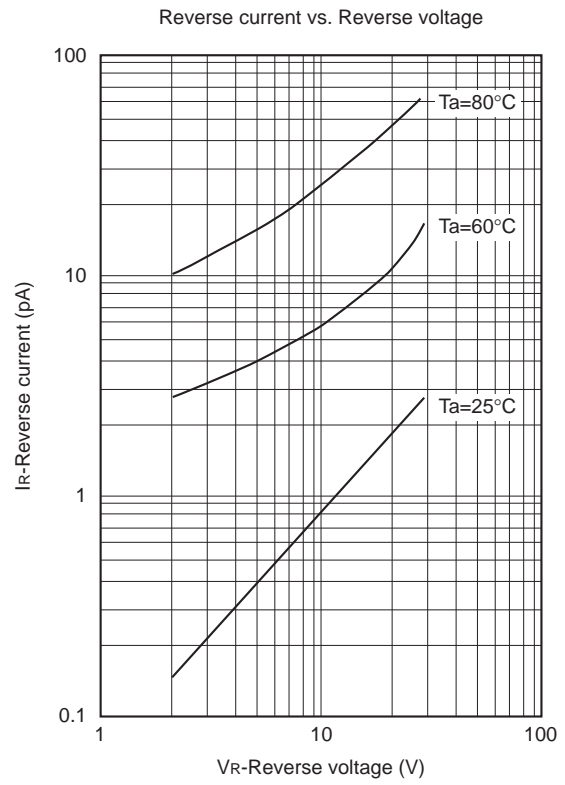
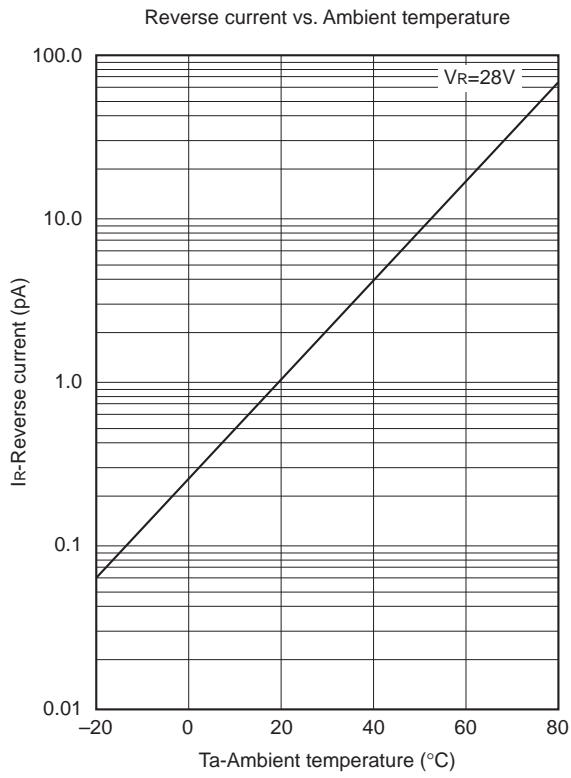
(Ta=25 °C)

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	$\Omega$
Capacitance deviation in a matching group	$\Delta C$	$V_R=2\ to\ 25\ V$			2.0	%

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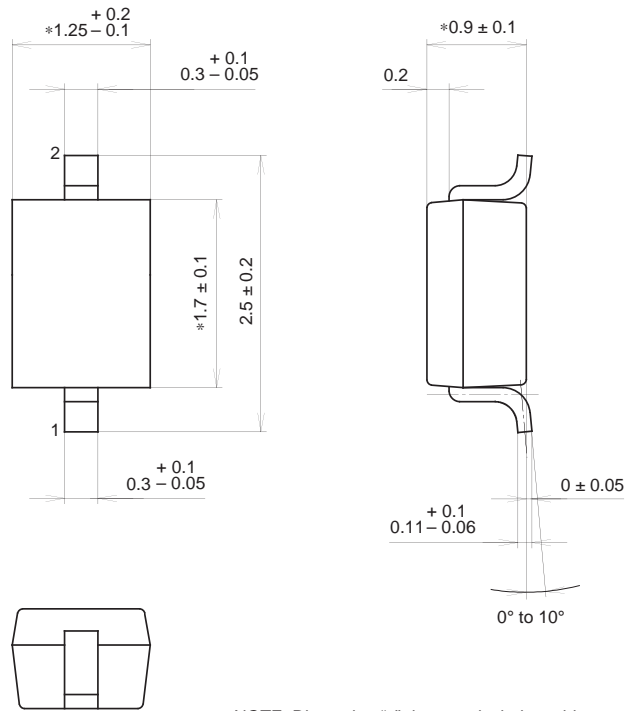
Example of Representative Characteristics





Package Outline Unit : mm

M-235

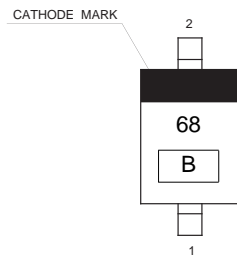


NOTE: Dimension "\*" does not include mold protrusion.

SONY CODE	M-235
EIAJ CODE	—
JEDEC CODE	—

PACKAGE WEIGHT	0.1g
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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.)