

Variable Capacitance Diode

Description

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

Features

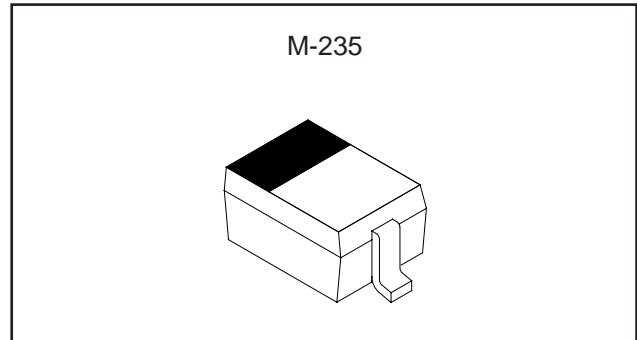
- Super miniature package
- Small series resistance  $r_s=0.75 \Omega$  (Max.)
- High capacitance ratio  $C_2/C_{25}=11.5$  (Typ.)
- Capacitance deviation in a matching group  
2.0 % (Max.)

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

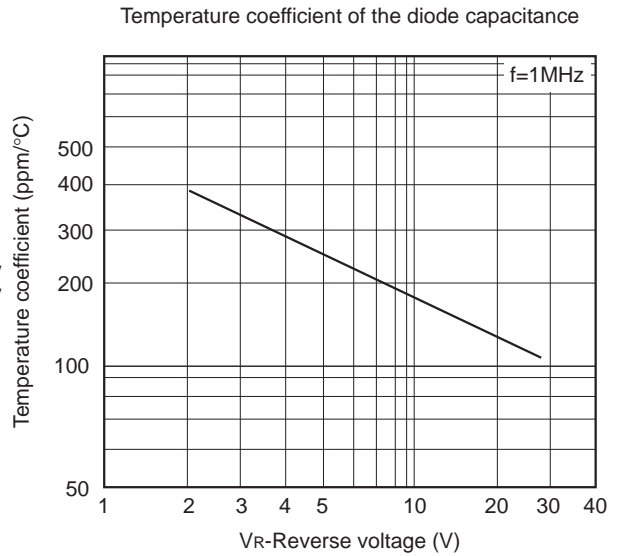
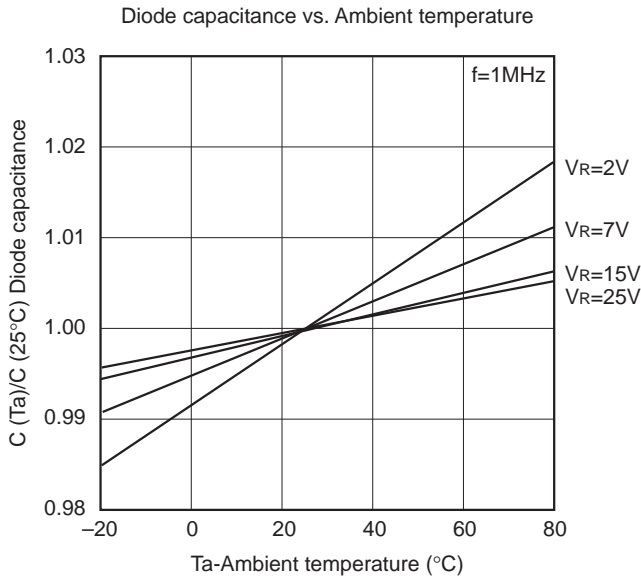
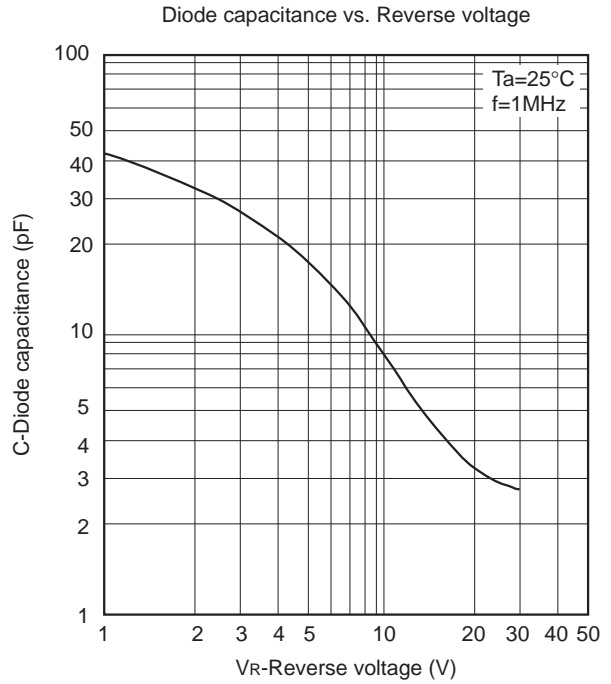
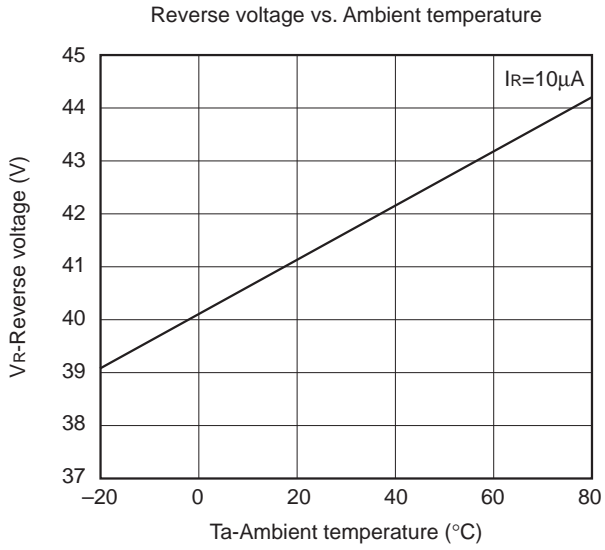
Electrical Characteristics

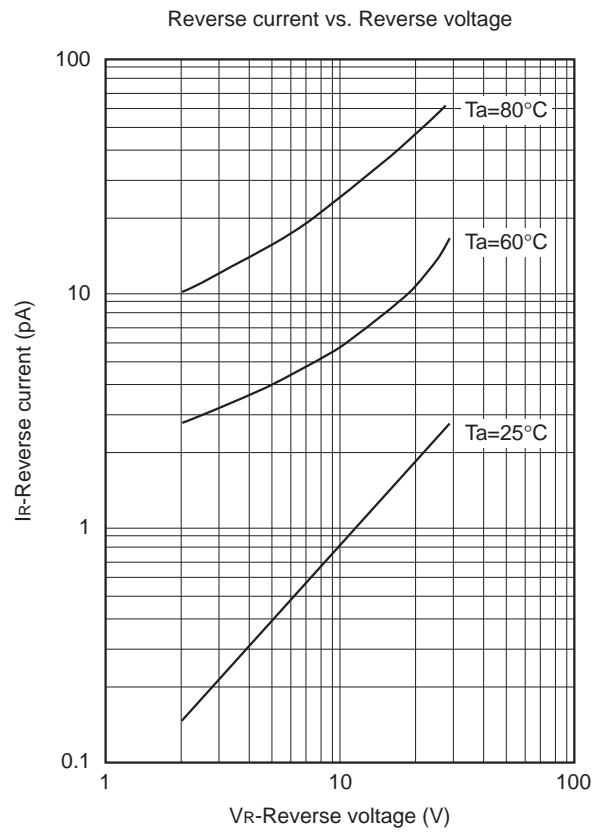
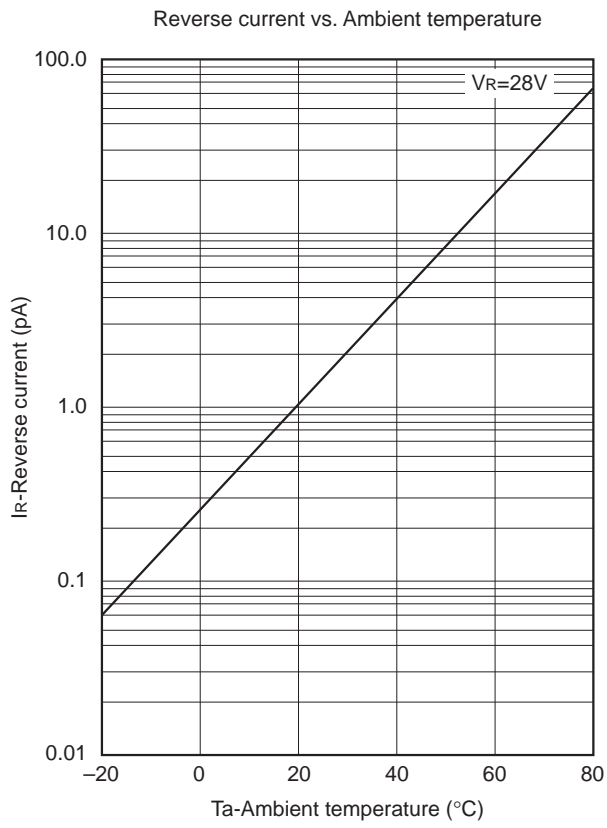
(Ta=25 °C)

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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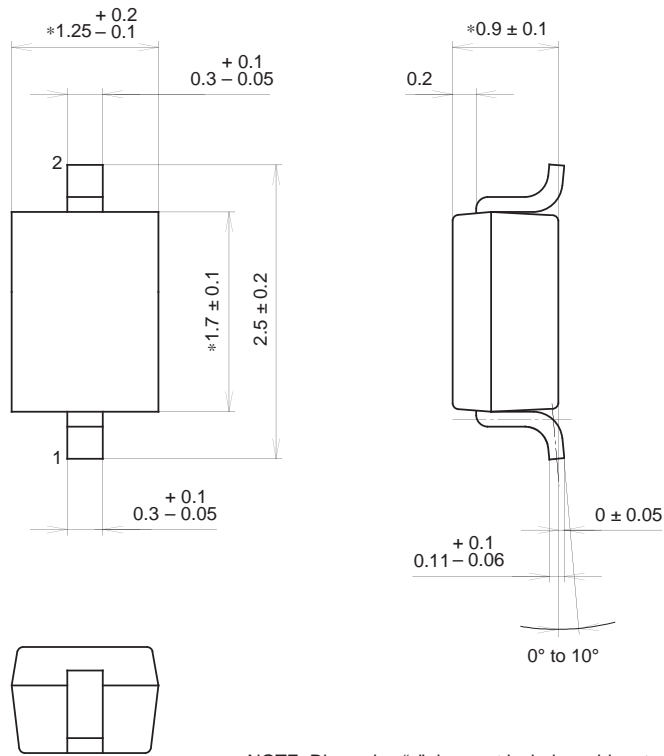
Example of Representative Characteristics





Package Outline Unit : mm

M-235

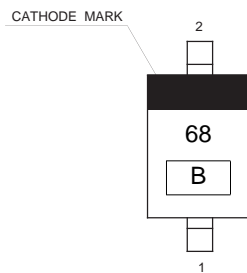


NOTE: Dimension "\*" does not include mold protrusion.

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.)