

Silicon Variable Capacitance Diode

Description

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

Features

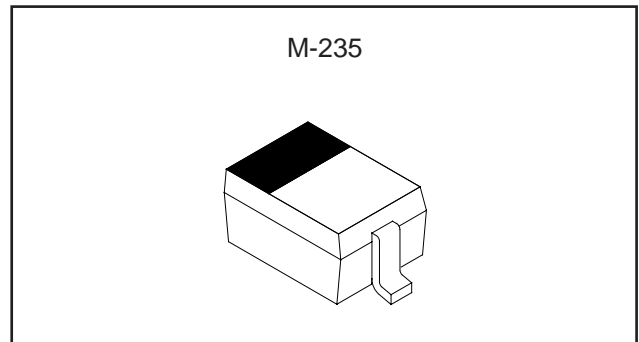
- Super miniature package
- Small series resistance $r_s=1.0 \Omega$ (Max.)
- Large capacitance ratio $C_2/C_{25}=15.5$ (Typ.)
- Capacitance deviation in a matching group
2.0 % (Max.)

Applications

Electronic tuning of wide-band CATV

Structure

Silicon epitaxial planar type diode



Absolute Maximum Ratings (Ta=25 °C)

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

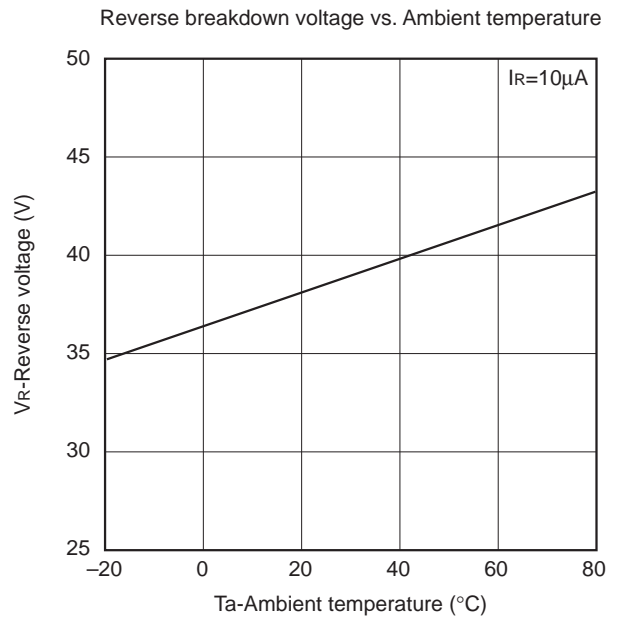
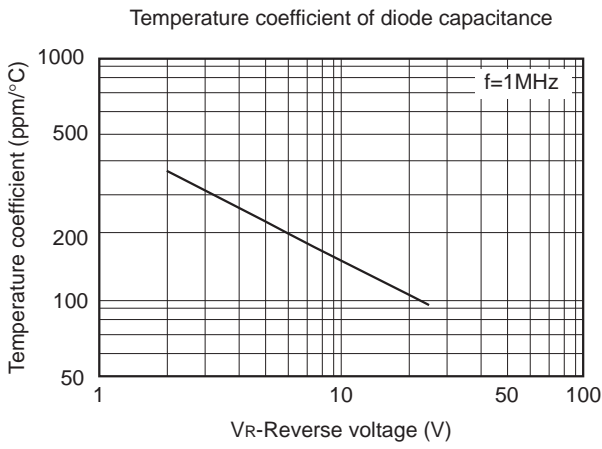
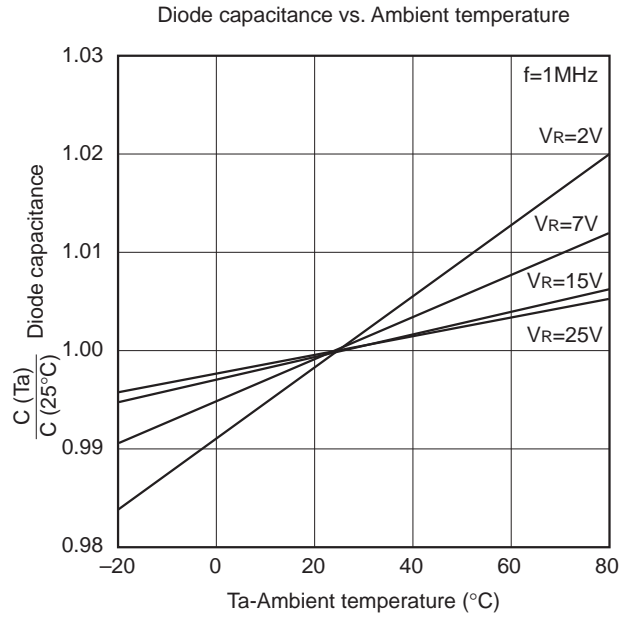
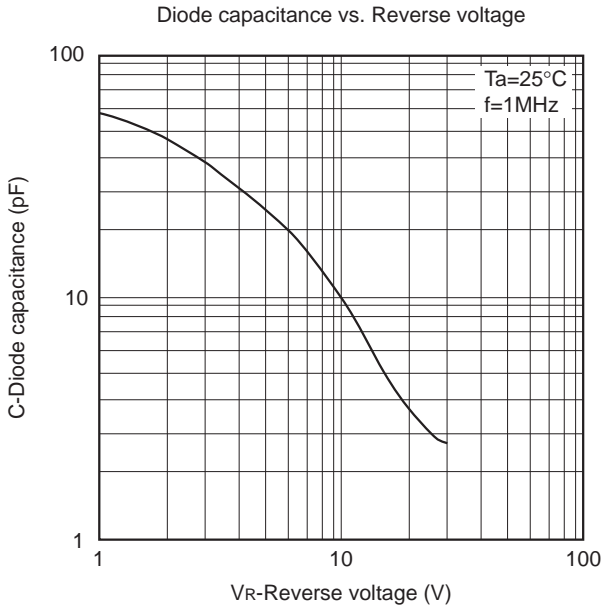
Electrical Characteristics

(Ta=25 °C)

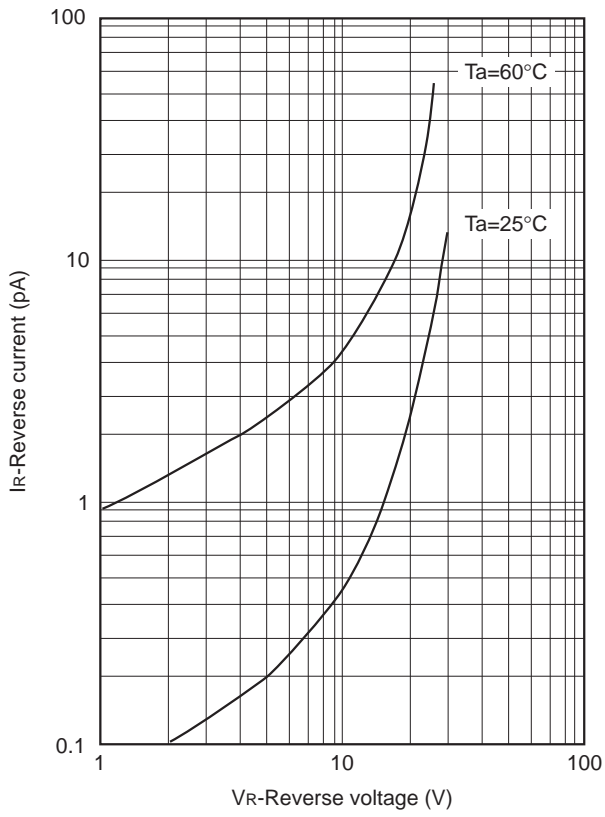
Item	Symbol	Conditions	Min.	Typ.	Max.	Unit
Reverse current	I_R	$V_R=28 V$			10	nA
Reverse voltage	V_R	$I_R=1 \mu A$	34			V
Diode capacitance	C_2	$V_R=2 V, f=1 MHz$	39.5	43.4	47.4	pF
	C_{25}	$V_R=25 V, f=1 MHz$	2.60	2.80	3.03	pF
Capacitance ratio	C_2/C_{25}		14.5	15.5	17.0	
Series resistance	r_s	$C_D=14 pF, f=470 MHz$			1.0	Ω
Capacitance deviation in a matching group	ΔC	C2 to C25			2.0	%

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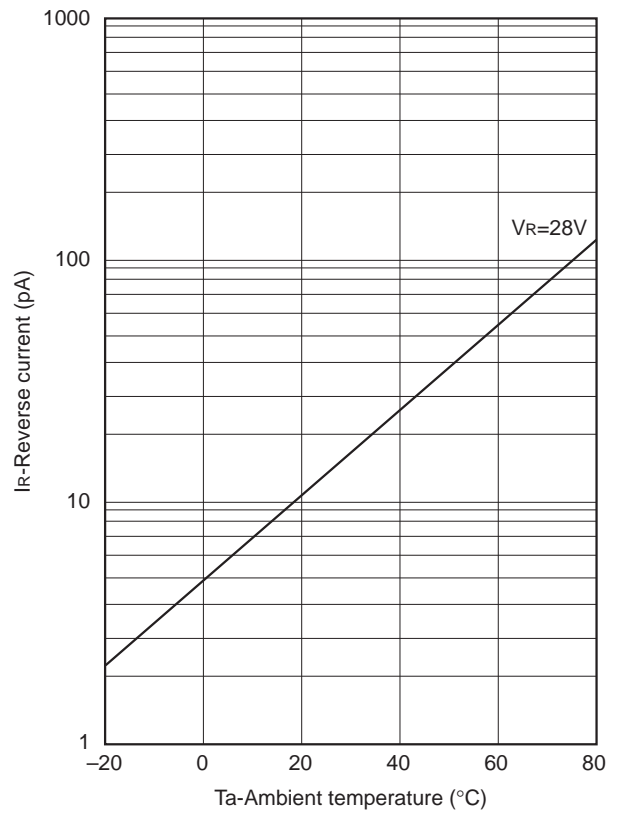
Example of Representative Characteristics



Reverse current vs. Reverse voltage

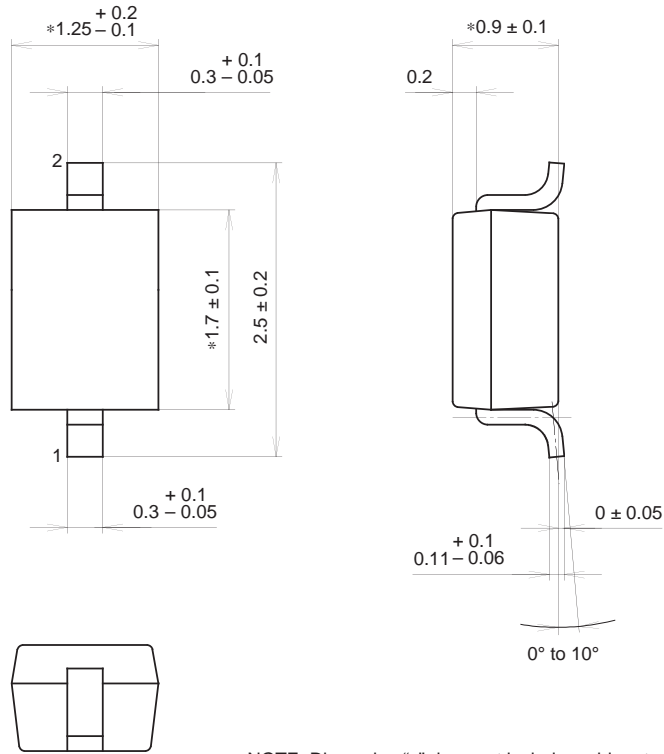


Reverse current vs. Ambient temperature



Package Outline Unit : mm

M-235

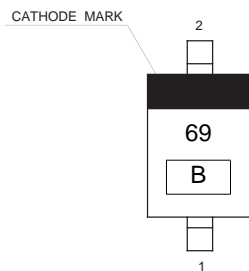


NOTE: Dimension "*" does not include mold protrusion.

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.)