

SONY

1T368

Variable Capacitance Diode

Description

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

Features

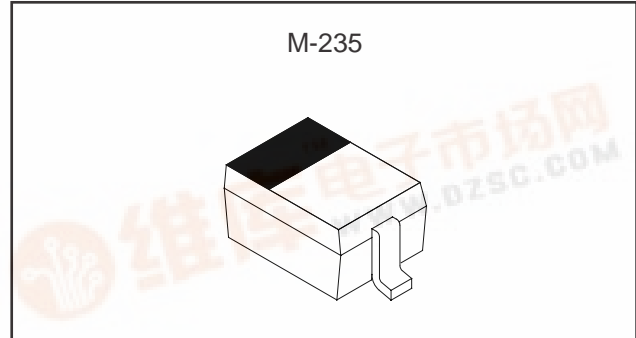
- Super miniature package
- Small series resistance $r_s=0.75 \Omega$ (Max.)
- High capacitance ratio $C_2/C_{25}=11.5$ (Typ.)
- Capacitance deviation in a matching group 2.0 % (Max.)

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

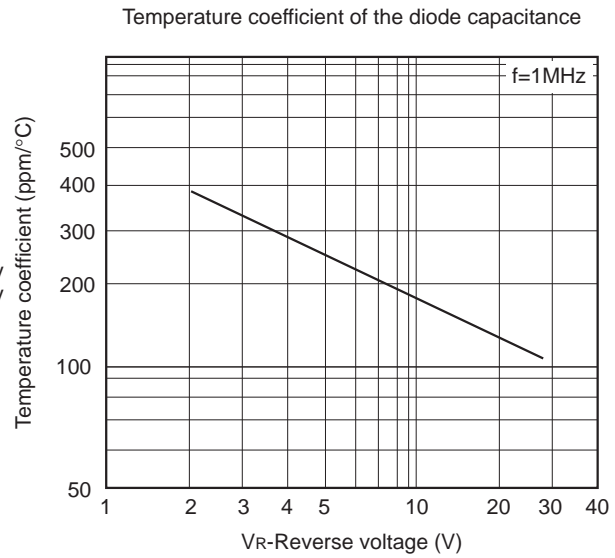
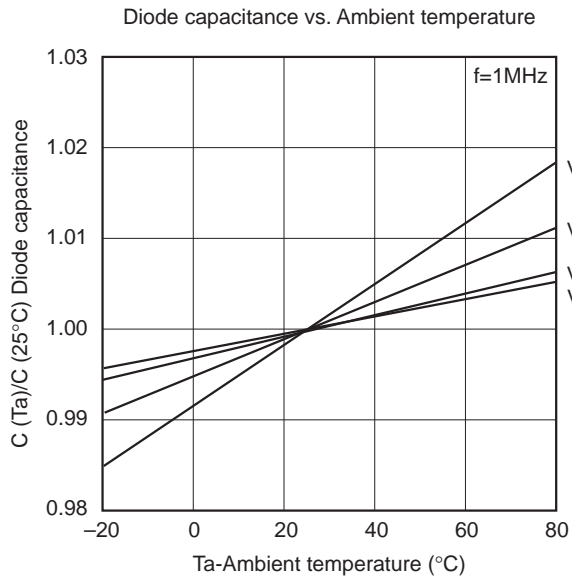
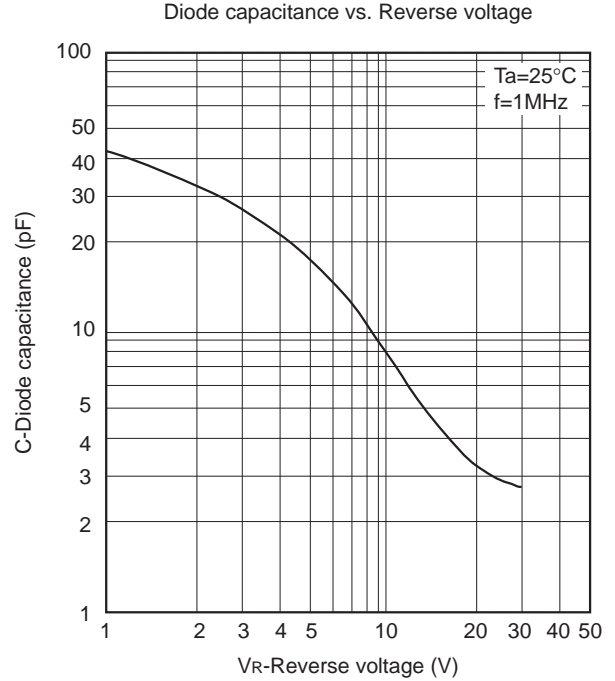
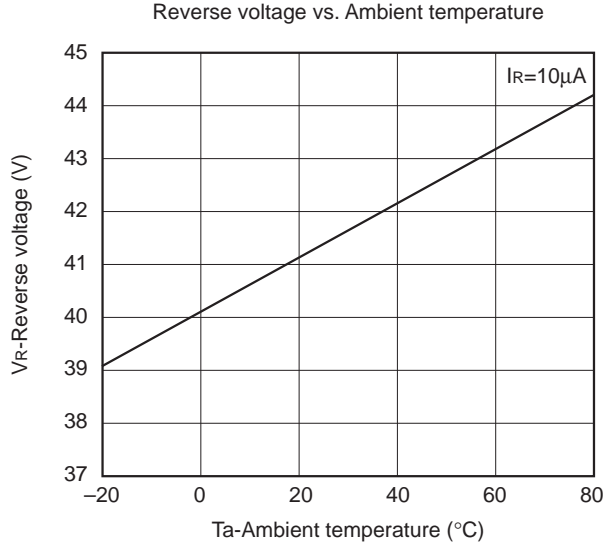
(Ta=25 °C)

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	%

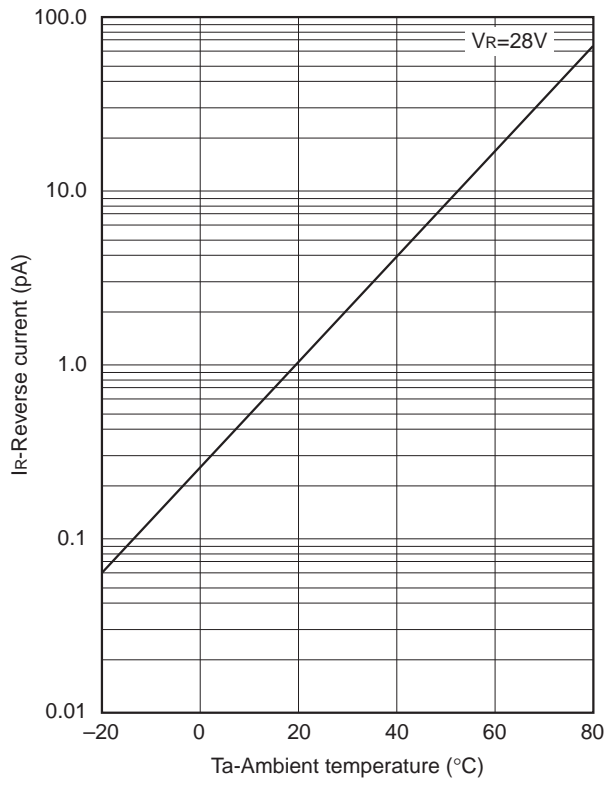
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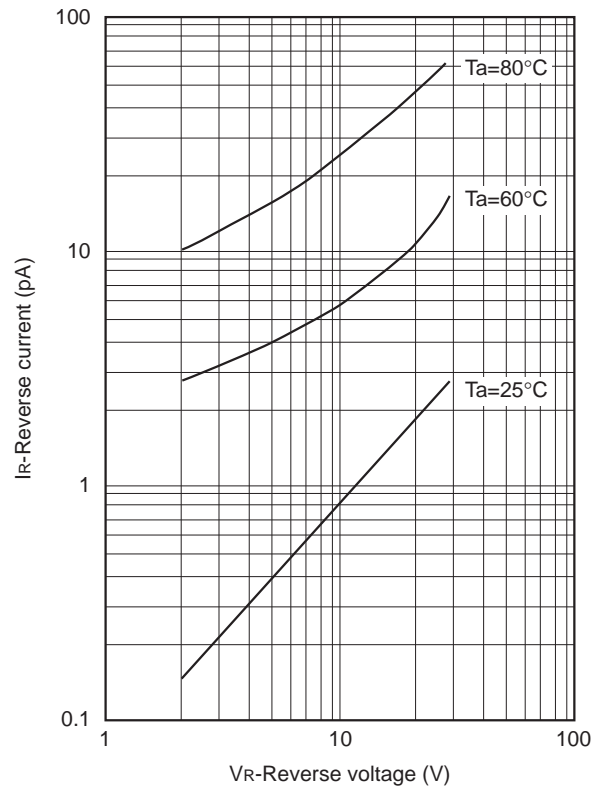
Example of Representative Characteristics



Reverse current vs. Ambient temperature

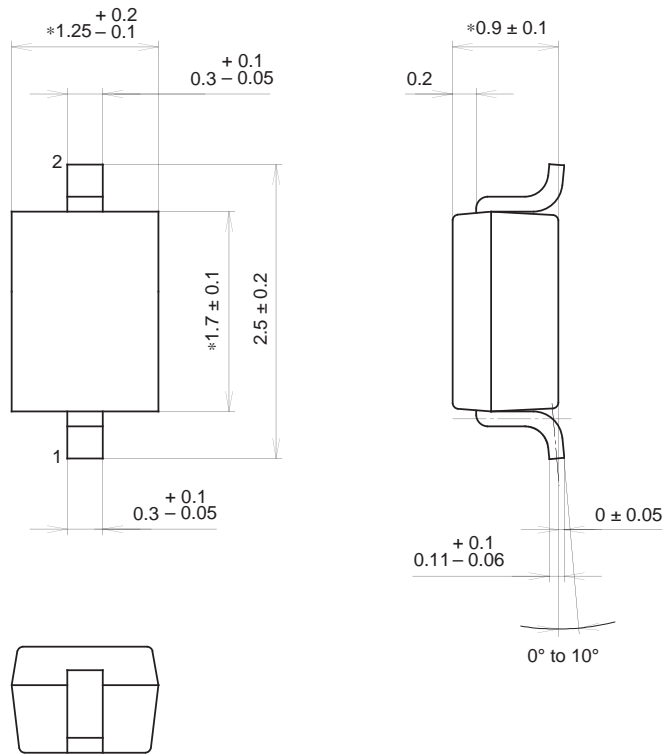


Reverse current vs. Reverse voltage



Package Outline Unit : mm

M-235

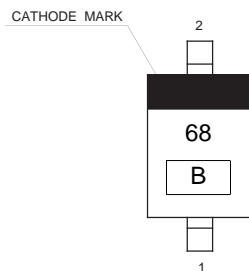


NOTE: Dimension "*" does not include mold protrusion.

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.)