SONY

1T362

Silicon Variable Capacitance Diode

Description

The 1T362 is a variable capacitance diode designed for electronic tuning of TV tuners, and the super miniature package allows the tuner miniaturization.

Features

- Super miniature package
- Low series resistance 0.65 Ω Max. (f=470 MHz)
- Large capacitance ratio 6.5 Typ. (C_2/C_{25})
- Small leakage current 10 nA Max. (V_R=28 V)
- Maximum capacitance deviation 3 % Max.

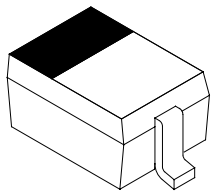
Applications

Electronic tuning for TV and CATV

Structure

Silicon epitaxial planar type diode

M-235



Absolute Maximum Ratings (Ta=25 °C)

• Reverse voltage	V_R	30	V
• Peak reverse voltage	V_{RM}	35	V
		(R_L≥10 kΩ)	
• Operating temperature	Topr	85	°C
• Storage temperature	Tstg	–55 to +150	°C

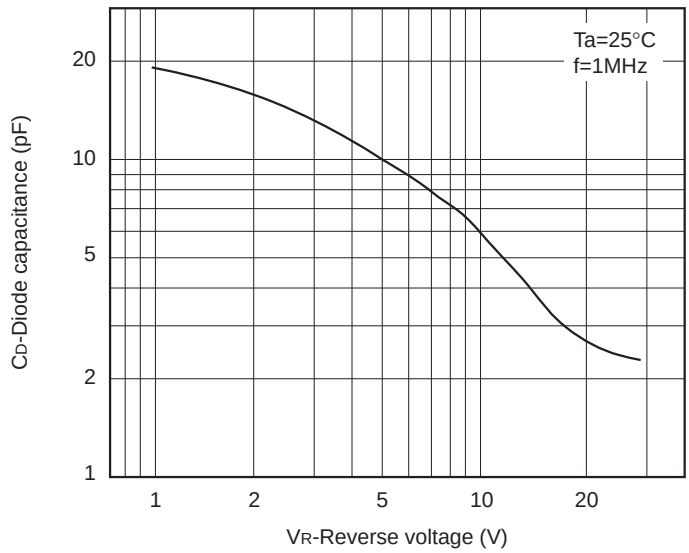
Electrical Characteristics (Ta=25 °C)

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	14.01	15.00	16.33	pF
	C_{25}	V_R=25 V, f=1 MHz	2.10	2.27	2.39	pF
Capacitance ratio	C_2/C_{25}	f=1 MHz		6.5		
Series resistance	rs	C_D=14 pF, f=470 MHz		0.57	0.65	Ω
Maximum-capacitance deviation in the same ranking	ΔC	V_R=2 to 25 V, f=1 MHz			3	%

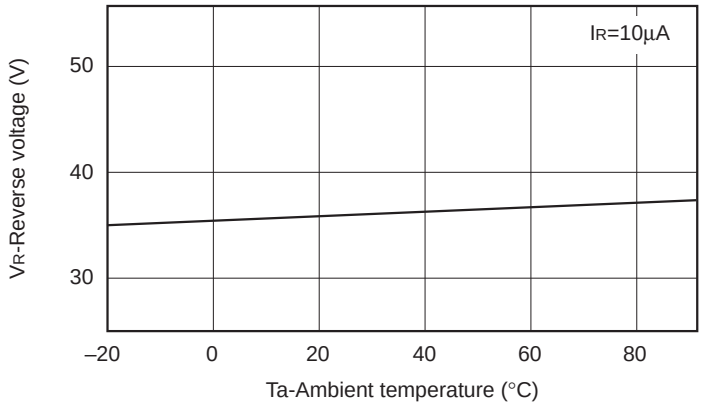
Sony reserves the right to change products and specifications without prior notice. This information does not convey any license by any implication or otherwise under any patents or other right. Application circuits shown, if any, are typical examples illustrating the operation of the devices. Sony cannot assume responsibility for any problems arising out of the use of these circuits.

E89144B83-TE

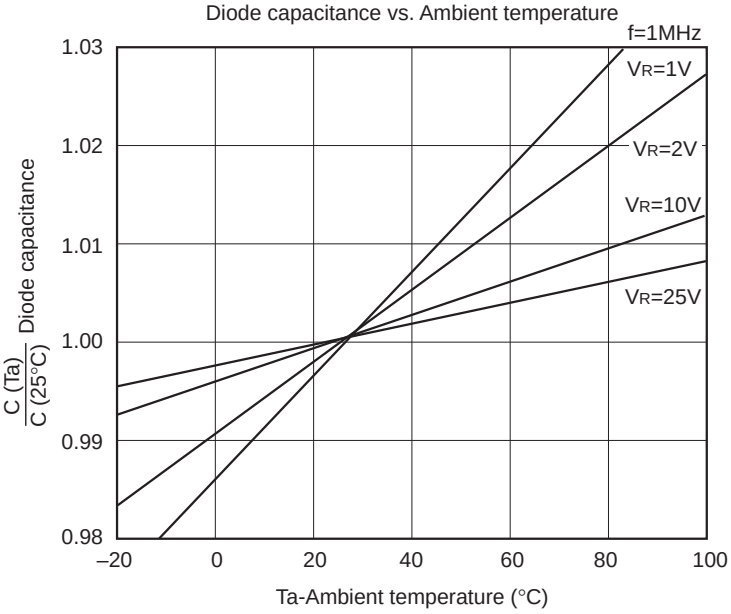
Diode capacitance vs. Reverse voltage



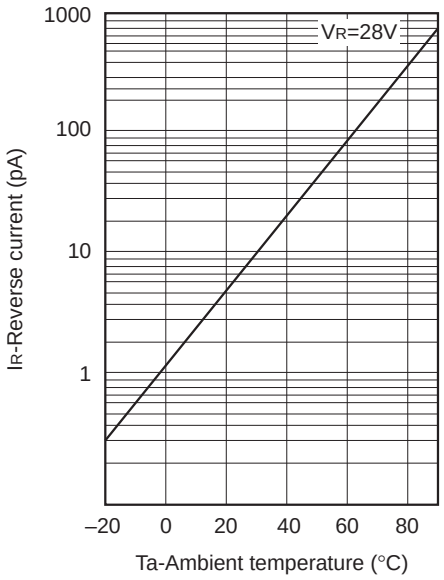
Reverse voltage vs. Ambient temperature



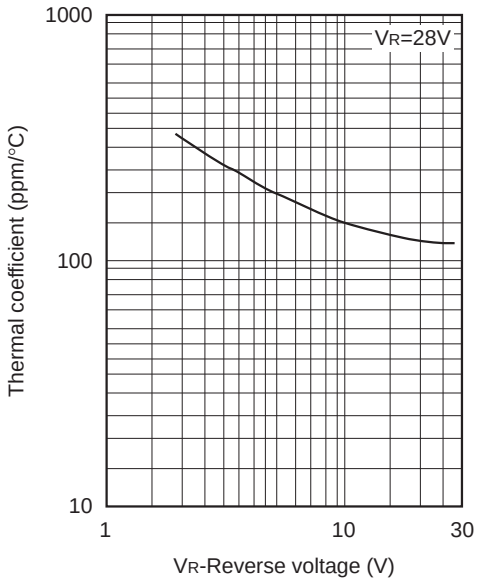
Diode capacitance vs. Ambient temperature



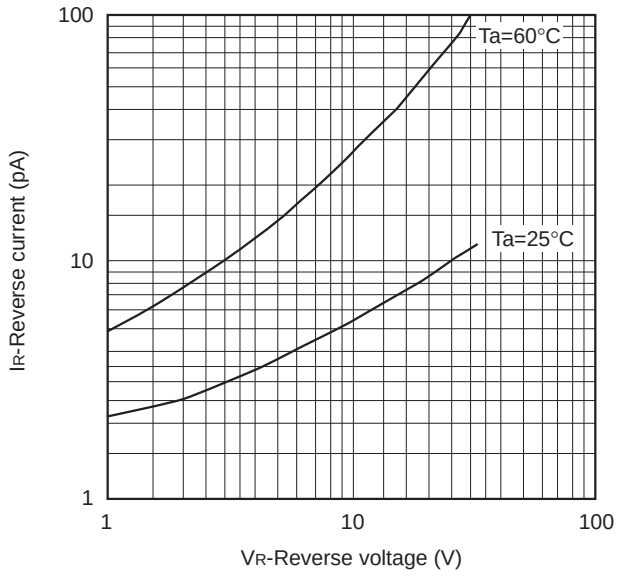
Reverse current vs. Ambient temperature



Thermal coefficient of diode capacitance

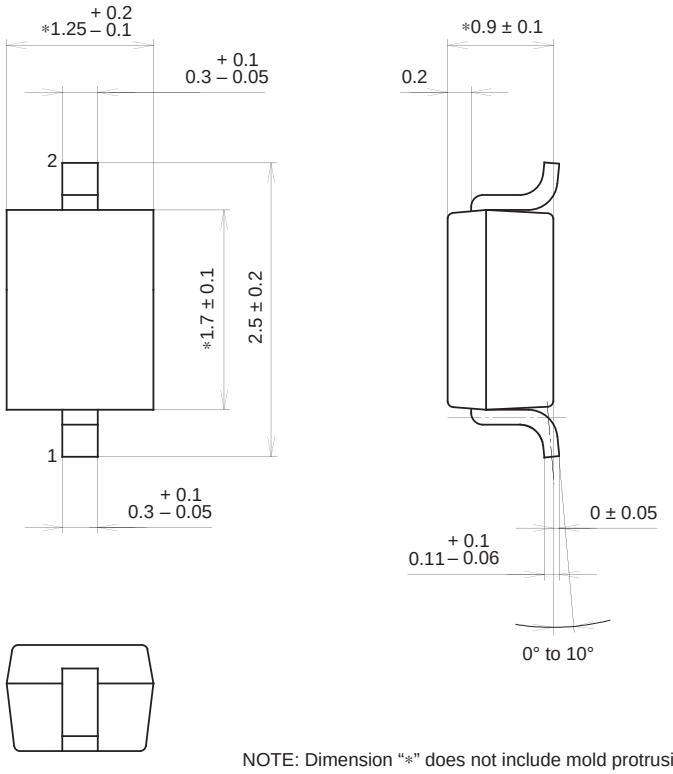


Reverse current vs. Reverse voltage



Package Outline Unit : mm

M-235

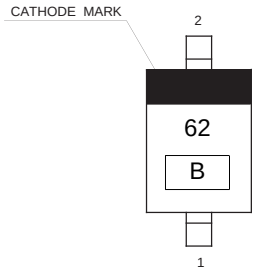


NOTE: Dimension "∗" does not include mold protrusion.

SONY CODE	M-235
EIAJ CODE	————
JEDEC CODE	————

PACKAGE WEIGHT	0.1g

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.)