

SONY**1T387****Variable Capacitance Diode****Description**

The 1T387 is a variable capacitance diode designed for electronic tuning of BS and CS tuners using a super miniature package (SMVC).

Features

- Super miniature package
- Low series resistance: 1.5Ω Max. ($f = 470\text{MHz}$)
- Large capacitance ratio: 14.6 Typ. (C_1/C_{25})
- Small leakage current: 10nA Max. ($V_R = 25\text{V}$)
- Capacitance deviation in a matching group: within 6%

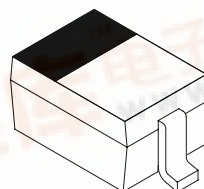
Applications

Electronic tuning of BS and CS tuners

Structure

Silicon epitaxial planar type diode

M-235

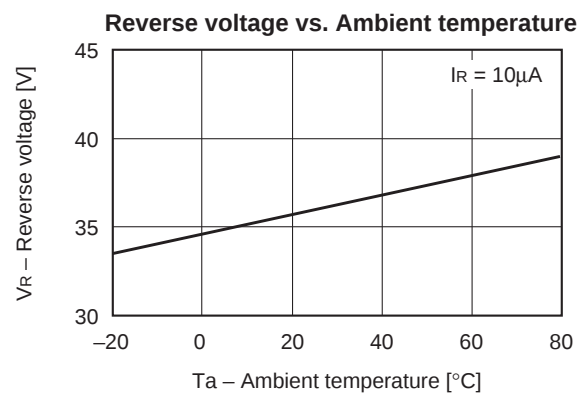
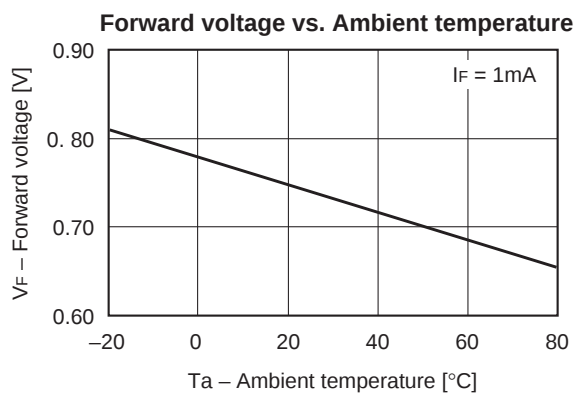
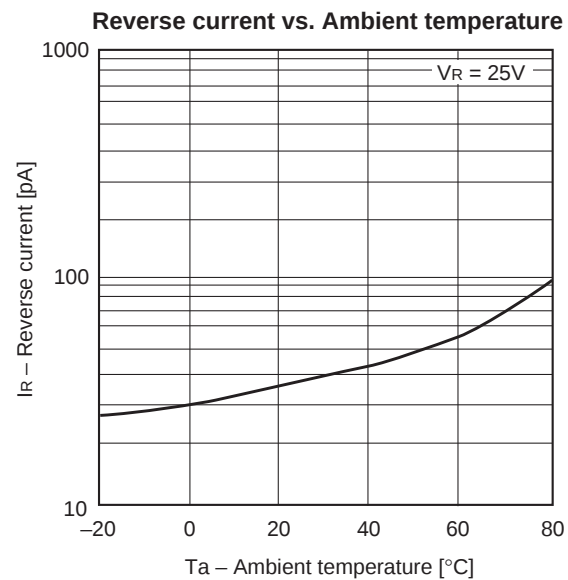
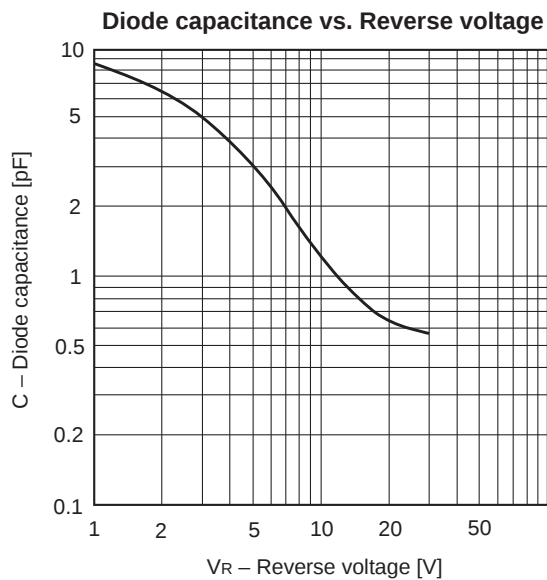
**Absolute Maximum Ratings** ($T_a = 25^\circ\text{C}$)

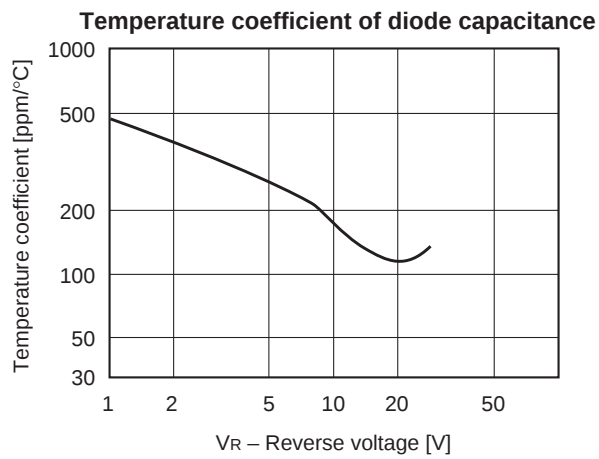
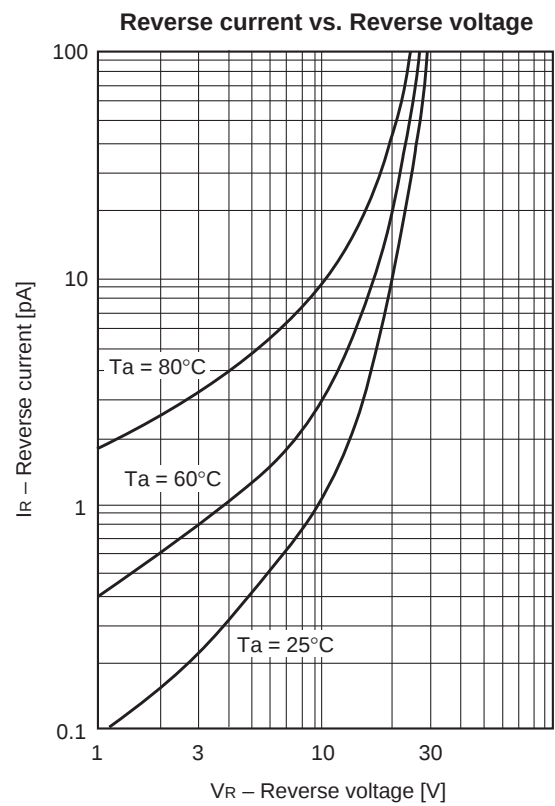
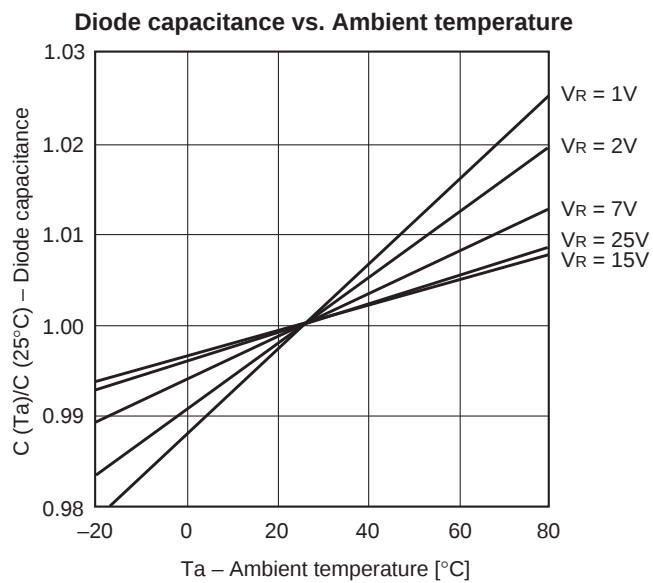
- Reverse voltage V_R 30 V
- Peak reverse voltage V_{RM} 35 V
($R_L \geq 10\text{k}\Omega$)
- Operating temperature T_{opr} -20 to $+75$ $^\circ\text{C}$
- Storage temperature T_{stg} -65 to $+150$ $^\circ\text{C}$

Electrical Characteristics($T_a = 25^\circ\text{C}$)

Item	Symbol	Conditions	Min.	Typ.	Max.	Unit
Reverse voltage	V_R	$I_R = 1\mu\text{A}$	30.0			V
Reverse current	I_R	$V_R = 25\text{V}$			10.0	nA
Diode capacitance	C_1	$V_R = 1\text{V}, f = 1\text{MHz}$	7.84		9.44	pF
	C_{25}	$V_R = 25\text{V}, f = 1\text{MHz}$	0.54		0.64	pF
Capacitance ratio	C_1/C_{25}		12.2	14.6		
Series resistance	r_s	$V_R = 5\text{V}, f = 470\text{MHz}$		1.30	1.50	Ω
Capacitance deviation in a matching group	ΔC	$V_R = 1$ to $25\text{V}, f = 1\text{MHz}$			6.0	%

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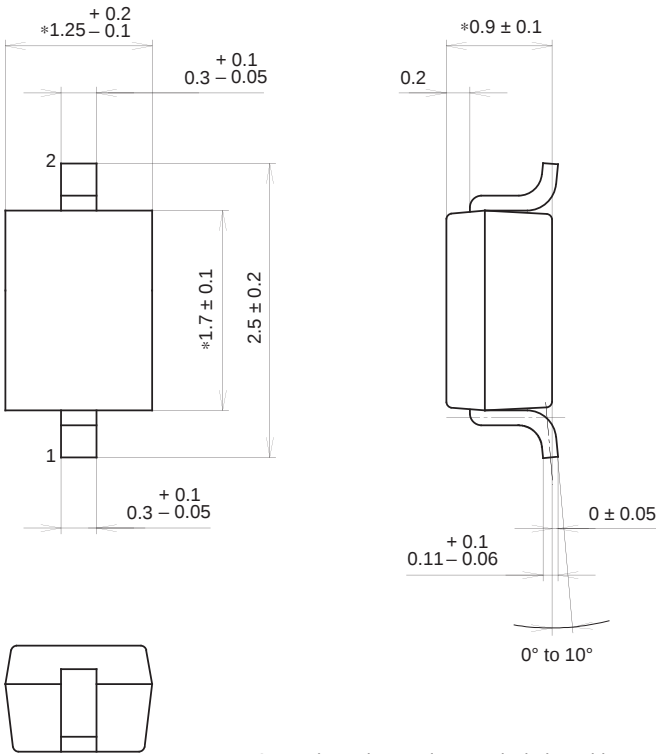




Package Outline

Unit: mm

M-235

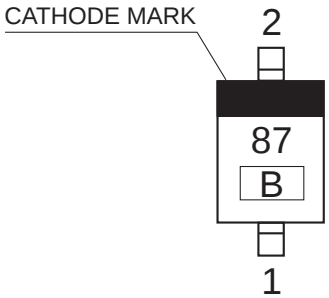


NOTE: Dimension "*" does not include mold protrusion.

SONY CODE	M-235
EIAJ CODE	—
JEDEC CODE	—

PACKAGE WEIGHT	0.1g
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Marking



Note
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.)