

Silicon Variable Capacitance Diode for Electronic Tuning of BS and CS Tuners

Description

The 1T379 is a variable capacitance diode designed for the electronic tuning of BS and CS tuners, and it has a super miniature package.

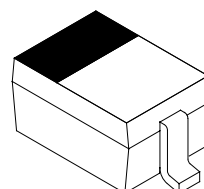
Features

- Super miniature package
- Small series resistance 1.50 Ω Max. (f=470 MHz)
- Large capacitance ratio 12.0 Typ. (C_1/C_{25})
- Small capacitance 0.60 pF Max. ($V_R=25$ V)

Structure

Silicon epitaxial planar-type diode

M-235



Absolute Maximum Ratings (Ta=25 °C)

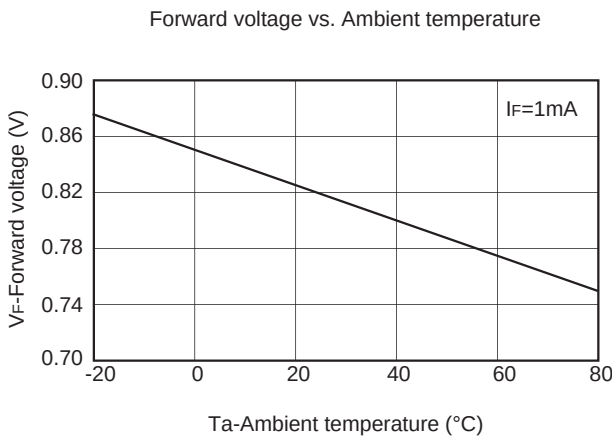
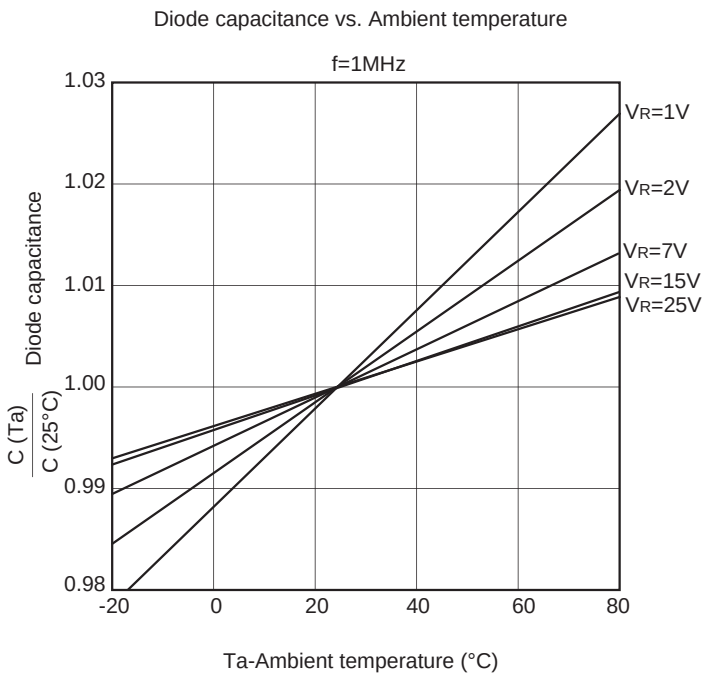
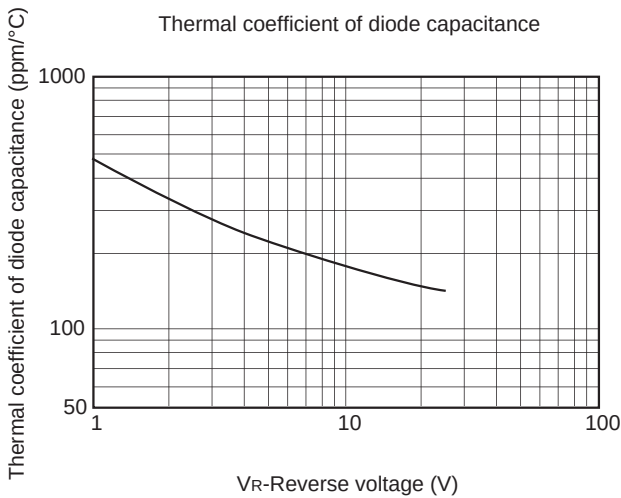
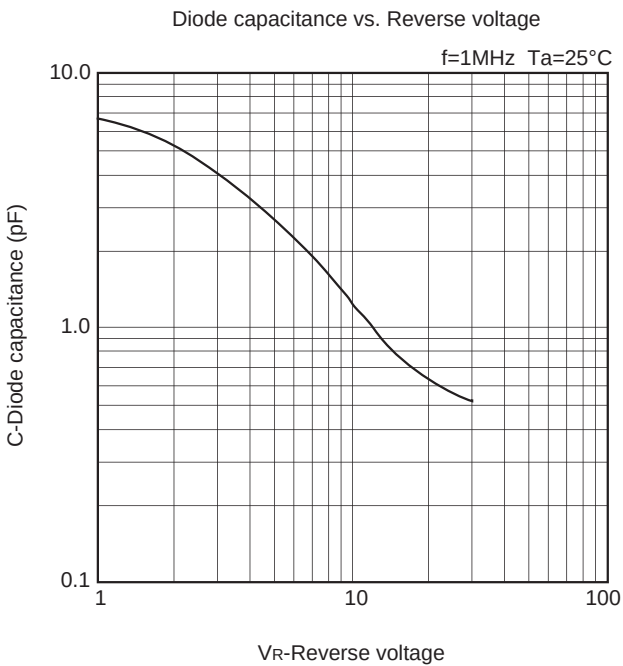
- Reverse voltage V_R 30 V
- Maximum reverse voltage V_{RM} 35 V
($R_L \geq 10$ k Ω)
- Operating temperature T_{opr} -20 to +75 °C
- Storage temperature T_{stg} -65 to +150 °C

Electrical Characteristics

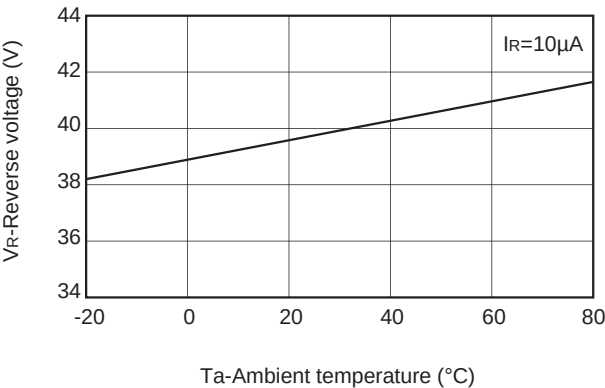
(Ta=25 °C)

Item	Symbol	Conditions	Min.	Typ.	Max.	Unit
Reverse current	I_R	$V_R=25$ V			10	nA
Reverse voltage	V_R	$I_R=1$ μ A	30			V
Diode capacitance	C_1	$V_R=1$ V, f=1 MHz	6.0		7.2	pF
	C_{25}	$V_R=25$ V, f=1 MHz	0.5		0.6	pF
Capacitance ratio	C_1/C_{25}	f=1 MHz	10.0	12.0		
Series resistance	r_s	$V_R=5$ V, f=470 MHz			1.50	Ω
Capacitance deviation in a matching group	ΔC	$V_R=1$ to 25 V, f=1 MHz			6	%

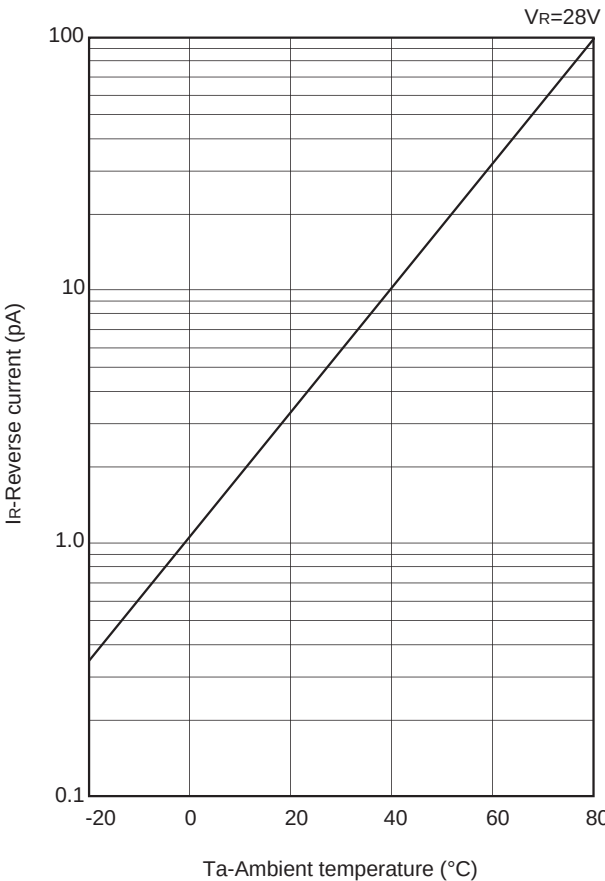
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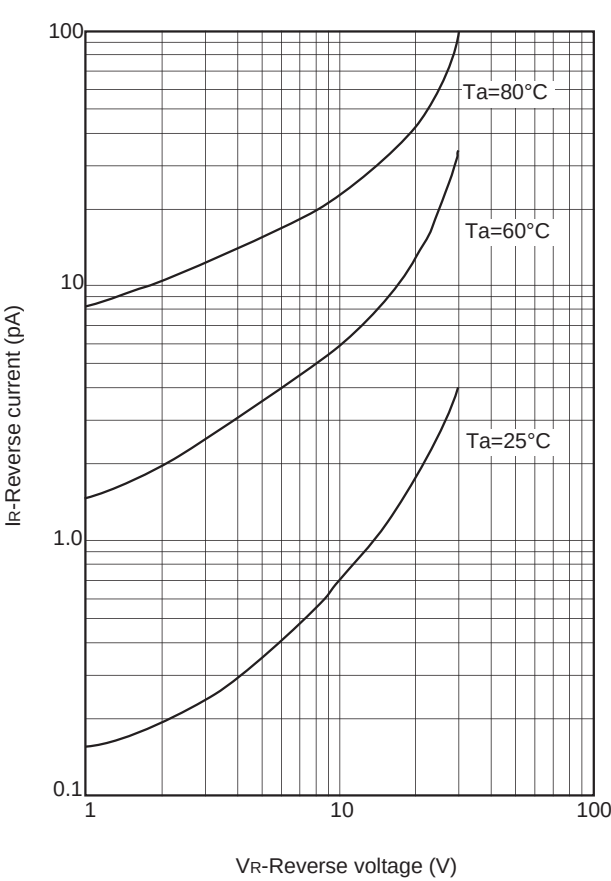
Reverse voltage vs. Ambient temperature



Reverse current vs. Ambient temperature

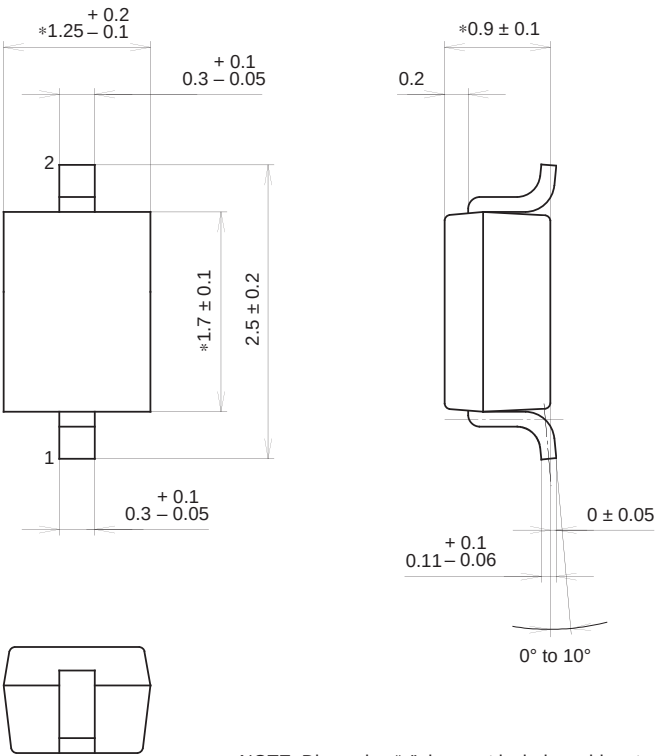


Reverse current vs. Reverse voltage



Package Outline Unit : mm

M-235

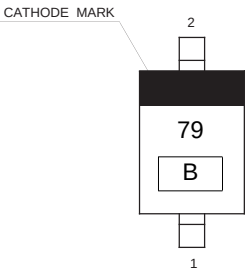


NOTE: Dimension "*" does not include mold protrusion.

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.)