

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

Description

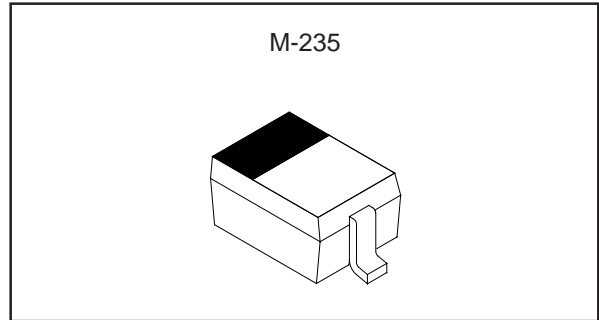
The 1T379 is a variable capacitance diode designed for the electronic tuning of BS and CS tuners, and it has a super miniature package.

Features

- Super miniature package
- Small series resistance 1.50 Ω Max. (f=470 MHz)
- Large capacitance ratio 12.0 Typ. (C₁/C₂₅)
- Small capacitance 0.60 pF Max. (V_R=25 V)

Structure

Silicon epitaxial planar-type diode



Absolute Maximum Ratings (Ta=25 °C)

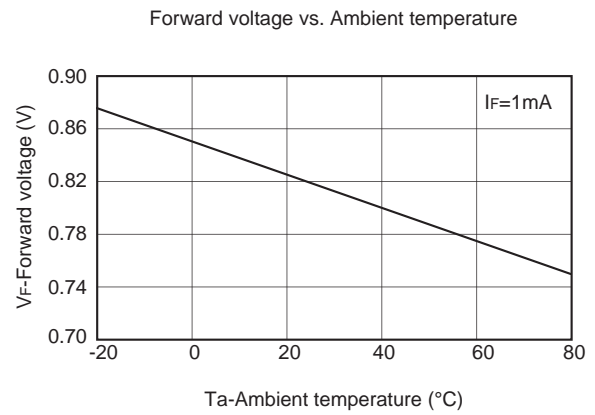
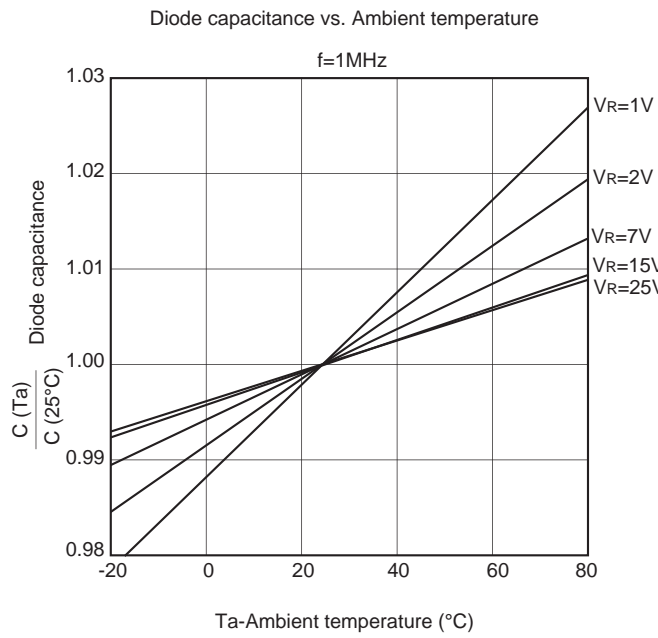
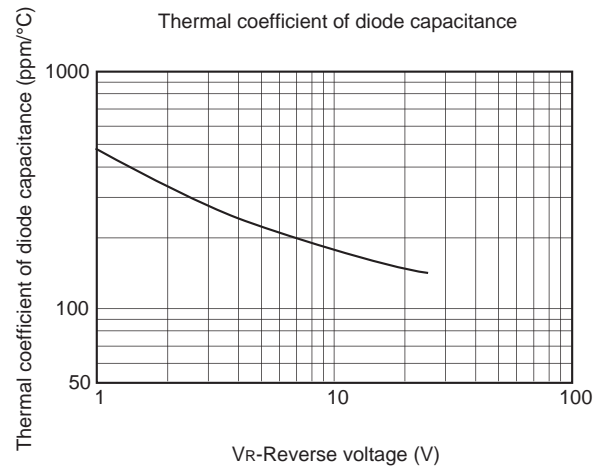
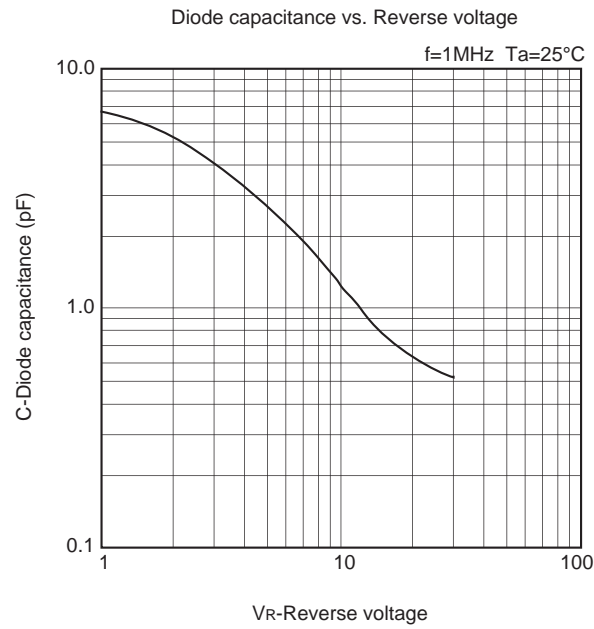
- Reverse voltage V_R 30 V
- Maximum reverse voltage V_{RM} 35 V (R_L≥10 kΩ)
- Operating temperature Topr -20 to +75 °C
- Storage temperature Tstg -65 to +150 °C

Electrical Characteristics

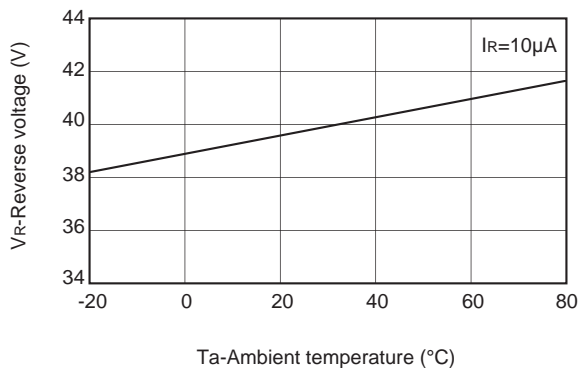
(Ta=25 °C)

Item	Symbol	Conditions	Min.	Typ.	Max.	Unit
Reverse current	I _R	V _R =25 V			10	nA
Reverse voltage	V _R	I _R =1 μA	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	%

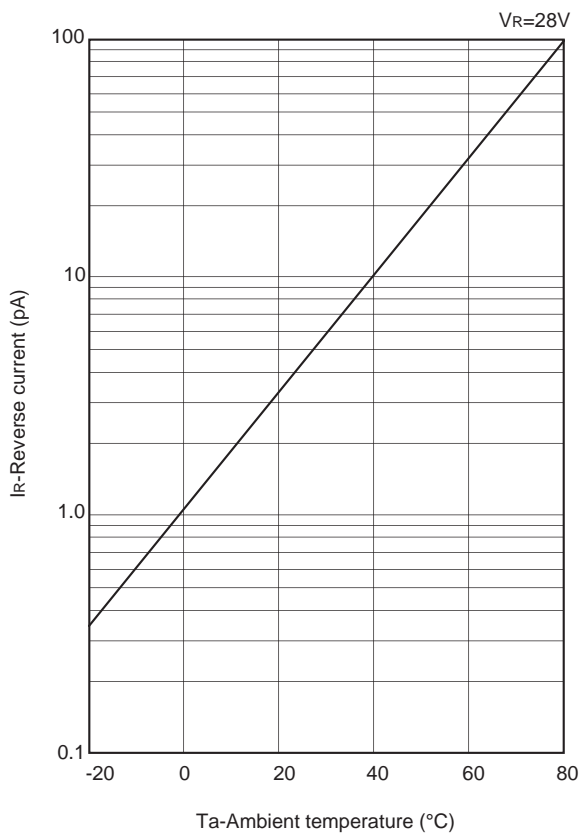
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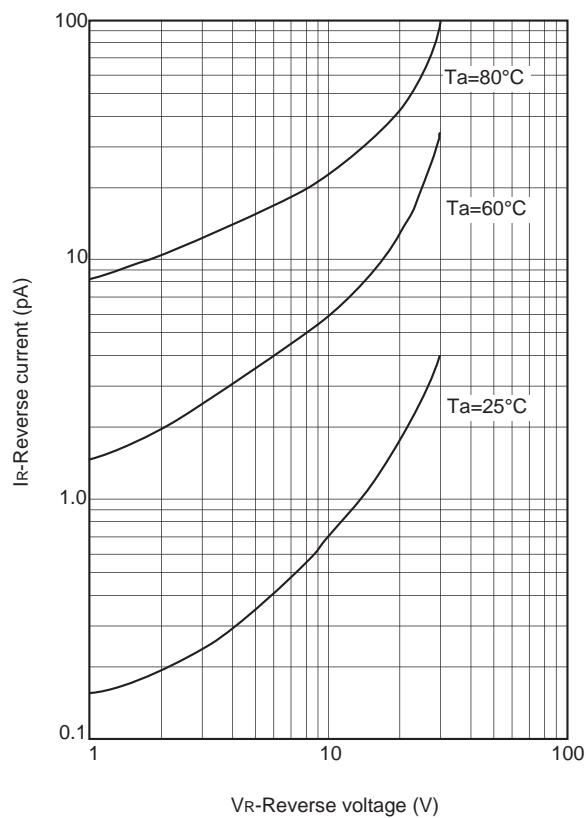
Reverse voltage vs. Ambient temperature



Reverse current vs. Ambient temperature

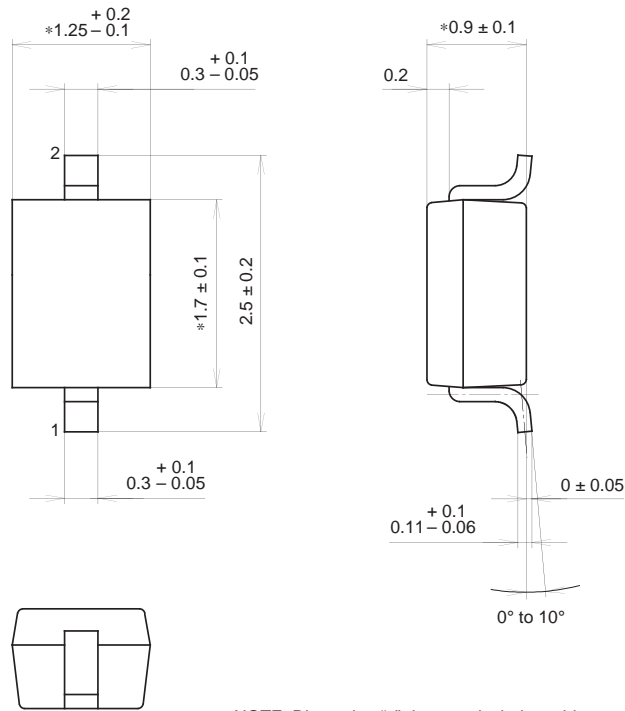


Reverse current vs. Reverse voltage



Package Outline Unit : mm

M-235

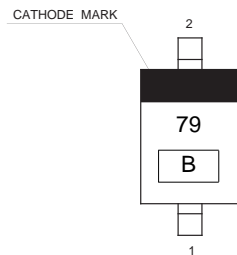


NOTE: Dimension "*" does not include mold protrusion.

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.)